Integrating LibCal’s Room Bookings and LibGuides to Enhance Information Management and Services at HAAGA-HELIA Library

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The library of HAAGA-HELIA University of Applied Sciences is one of the libraries that have put a strong emphasis on improving their services. Digitalizing services and enhancing information management have been the highest priority for the library management and staff. For this reason, the library has adopted new platforms, LibCal and LibGuides, provided by Springshare company that develops modern web applications for libraries to secure a high quality of online experience for their users and customers.

Springshare products, and especially LibGuides platform, have been the topic of multiple recent articles, conferences and new books. However, this thesis report is the first report that discusses the integration of LibCal and LibGuides platforms at HAAGA-HELIA library, describing step by step the migration process to enhance the library information management and its services.

LibCal platform, as a web calendaring solution, was used to build up an online room bookings’ system for the three study rooms at Pasila campus library. This new system will be a substitute for the old paper-based reservation system. Furthermore, LibGuides platform, as a Web 2.0 hosted content management system, was used to create two blueprint template guides that will be used by librarians to create new intuitive and consistent guides to replace the old ones.

The aim of this thesis is to report on a successful implementation of the LibCal’s online room bookings’ system and LibGuides, where the usage of booking system and the template guides was explored. First time users’ experience, opinions and feedback, of both products, were collected and analysed. In addition, statistics generated by LibCal STAT on the usage of the room bookings’ system at Pasila campus were provided.

Keywords
LibGuides, LibCal online room bookings, Content Management System (CMS), Web 2.0, library guides, Go mobile.
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Terminology and abbreviations

API: Application Programming Interface
CSS: Cascading Style Sheets
EZ proxy: is a web proxy server used by libraries to give access from their outside network.
HTML: HyperText Markup Language
iCal: Calendar data exchange standard
PDF: Portable Document Format
QR code: Quick Response Code
RSS: Rich Site Summary; often called Really Simple Syndication
URL: Uniform Resource Locator
1 Introduction

From December 2014 to May 2015, the author had the opportunity to work at HAAGA-HELIA University of Applied Sciences Ltd Library as a trainee. The author was assigned the task to perform various activities such as developing LibCal's online room booking system for the study rooms at Pasila campus, using LibCal platform; and setting up online LibGuides in English language for HAAGA-HELIA library staff and students, using LibGuides platform, in addition to various other activities. The two above mentioned tasks were chosen as the primary thesis project objectives. LibCal and LibGuides platforms belong to Springshare products. In the last few years, Springshare Company, established in 2007 has become a dominant web-based applications designer and developer with the purpose of enhancing libraries services and information management.

Therefore, this product-oriented thesis project consists of two parts: the first part is about developing an online room bookings' system for the three study rooms available at the university library at Pasila campus. The online booking system will be accessible to only HAAGA-HELIA and SLK-HBC students. The booking process can be done either by browsing HAAGA-HELIA website and filling the online reservation form, or by using a smartphone through QR code (Appendix 6).

The second part of the project consists of creating LibGuides for HAAGA-HELIA students and library staff from scratch (Appendix 2), using the old printed, PDF or HTML static guides published on HAAGA-HELIA website. Furthermore, the created LibGuides, for both library staff and students, will serve as templates for creating new LibGuides such as subject, teaching and course guides by HAAGA-HELIA staff, after conducting a face to face training sessions, presented and guided by the writer of this thesis. The training sessions will serve as a tool to train the library staff on how to create, update, delete and use both systems: room bookings’ system and LibGuides. Moreover, the project consists of delivering documentation for the library staff on “How to create, edit, delete and use” both products for the library staff; in addition, a documentation on how to use online booking system to self-reserve one study room was designed for Pasila campus and SLK-HBC students.

At the beginning of the thesis project, the online booking system was already created and published on the library web pages using Haaga Helia EZproxy to restrict the rooms’ reservation to only Haaga Helia and SLK-HBC students. However, LibGuides design, implementation, testing and training session were launched during the thesis project process. This thesis focused on the process of carrying out the rooms booking system and the two LibGuides. Users satisfaction will be measured and discussed with reliance on the sys-
tems usage; customers’ satisfaction with the new way to self-reserve the library study rooms; and the library staff opinion about the advantage of creating new LibGuides by using others as a template.

The thesis project report will aid HAAGA-HELIA students and staff familiarizing with the new LibCal and LibGuides platforms. It will also add real value to the library by automating its system for booking its study rooms, modernizing its guides, updating its library resources, and serving as a reference when conducting further studies or research about both platforms, and especially after their integration at HAAGA-HELIA.

1.1 Project idea and objectives

Since Haaga Helia has adopted for the first time LibCal’s online room booking and LibGuides platforms, the idea of the thesis project was developed from the author personnel interest to build up a new web-applications, based on Web 2.0 technology for Haaga Helia library. This will enhance the library services by efficiently using its facilities and making its resources easily accessible in intuitive interface by users.

Before integrating both of the platforms, Haaga Helia staff have relied on traditional methods and tools to deal with their customers and manage their frequent and day to day activities. For instance, before using LibCal’s room booking system, a printed paper sheet, that included details about the study room, was used as a reservation form at Pasila campus library. To book the room, a student had to visit physically the library to write his/her name and the booking time he/she wanted to reserve, if there was available time. This gridded paper was available on study rooms’ wall.

This old reservation method was inefficient and less practical, a long time was required for the library staff to prepare this paper and control the study rooms’ usage to collect statistics. On the other hand, the traditional reservation process was a time consuming for students; for example, to cancel the reserved time, the student had to come again to the library and delete his/her reservation from the paper list, which was not always the case. In addition, the old system faced various problems and decreased usage capacity of the three study rooms at Pasila campus.

By developing LibCal’s online room bookings’ system, the library will enhance its services, save time for both students and staff, in addition to efficiently use the three study rooms. Furthermore, this will increase its customers’ satisfaction since the students will online check the availability of studying rooms they want to reserve through its description and
image. And students will self-book the study rooms they want online from anywhere and at any time without the need to come to the library and fill up the reservation form.

In addition, library staff will focus on other library activities or tasks rather than spending time on preparing the reservation paper and physically control the usage of the study rooms. Furthermore, librarians can easily keep track on the rooms’ usage by collecting accurate statistics generated by LibCal platform and spend more time to fulfil customers' needs.

On the other hand, before migrating to LibGuides, Haaga Helia library first guides were prepared with old methods and tools and they were presented in traditional formats such as printed paper or online PDF guides which were written by the library specialist and they were accessed through links on the library web page. Additionally, other guides were presented as an HTML static pages published on the library web pages which were developed individually by only librarians with HTML, CSS and web expertise.

Crafting, updating and then publishing the library guides in the traditional method was a hard, lengthy process to satisfy all library stakeholders, and a time consuming for the whole library. Using LibGuides platform to create library guides will allow librarians to easily create, and edit consistent guides. These guides will take advantage of the advanced options of LibGuides by embedding Web 2.0 functionality and allowing the library to offer up to date services. LibGuides enable library staff to collaborate when developing and maintaining their guides and create intuitive and ease-to-use guides.

The second primary purpose of the thesis project is to create two LibGuides in English language, one for the library staff using as reference the old library staff Fall 2014 (PDF, 1,2 MB) available on Haaga Helia Intra; and the second one for Haaga Helia students using as a reference the old students’ guides which were available as an HTML static page guides on Haaga Helia public website. These two guides will be used as templates to create further new subject and teaching guides by the librarians. Library staff and students’ guides play a crucial role in ensuring a smooth functioning process of the library and make its user familiar with its services offerings.

The main learning objectives of this thesis are as follows:

- Familiarize with LibCal and LibGuides platforms and master how to create online booking system for self-reservation and how to build consistent pages on LibGuides with the use of advanced features and options of the tools such as Widgets, IPA and RSS feed etc.
- Develop more individual and team work skills.
- Improve and gain academic writing skills when writing the thesis.
- Gain presentation and training skills when demonstrating to the library coordinators and staff how to use LibCal and LibGuides as modern tools to create user-friendly and intuitive online systems.
- Prepare the author for a professional life by putting her skills and knowledge into practice and develop new ones.

By covering and reaching the thesis goals, the thesis report will answer the following question “Does the integration of the LibCal and LibGuides platforms enhance Haaga Helia library services and information management?”

1.2 Scope

The primary scope of this product-oriented thesis was firstly, to fulfil Haaga Helia library requirements which seeks to increase its customers and staff satisfaction, enhance its services and to efficiently use its facilities and space by creating online room booking system using LibCal platform for the three study rooms available at Pasila campus, and then publish it on Haaga Helia library web pages for internal and remote use. In addition, to develop two LibGuides in English language: one guide for the library staff and the other one for the library customers (Appendix 2). These two guides will serve as a templates to create more oriented subject guides in both English and Finnish languages where their frame, layout and content such as boxes, API, RSS feed, widget and search boxes can be re-used and mapped when implementing the new guides.

Secondly, the scope of this thesis project was to introduce Springshare LibCal’s room booking and Springshare LibGuides platforms as a tool based on Web 2.0 technology; in addition, to describe the implementation process of both products and highlight their beneficial features.

Thirdly, the scope of this project was to identify how much Haaga Helia students and library staff are willing to migrate to online usage experience and then estimate users’ satisfaction after using the delivered products. Students’ satisfaction estimation was related to the usage of room booking system as new system to reserve the study rooms. Library staff satisfaction was estimated after the face to face training session which were conducted and guided by the author to start developing new internal and external LibGuides or simply called guides using the author delivered guides as a templates.
Lastly, a detailed documentation about “How to use, reserve, confirm/cancel” room booking timeslot will be provided in Appendix 1.

1.3 Out of scope

It was not within the thesis scope to develop the online booking system and the LibGuides in Finnish language. In addition, publishing LibGuides on Haaga Helia website was out of the scope too. The documentation about how to create, edit and maintain the online room booking system and LibGuides were delivered only to Haaga Helia library and it was out of the thesis scope.

Using a statistical methods to identify how much Haaga Helia students and library staff are willing to migrate to online usage experience and to measure students’ satisfaction after using online booking system were out of the scope to keep the size of such huge project reasonable.

1.4 Deliverables

The thesis project deliverables are as follows:

- The thesis report which defines the introduction part, highlights the literature overview part, summarizes the results and evaluates the work done.
- The online room bookings’ system which was set up by using LibCal platform.
- Students and library staff online LibGuides templates in English language which were developed by using LibGuides platform. (Appendix 2)
- The documentation material in English language “How to use, reserve, confirm/cancel” a room booking. (Appendix 1)

1.5 Thesis report structure

In chapter 1 of thesis chapter 1, is an introductory chapter that highlights the project idea, the aim and the objectives that need to be achieved by the author. Additionally, this chapter discusses the old systems used at Haaga Helia library to reserve the study rooms and how to create guides, and the need to use an innovative platform based on Web 2.0 technology to enhance the library services, facilities usage and meets patrons’ needs. Moreover, chapter 1 states the desired learning objectives, scope, out of scope and project deliverables.

Chapter 2 discusses the methodology applied to achieve the thesis goals which includes various research methods, techniques and tools.
Chapter 3 highlights the theoretical background which begins by a brief introduction of Haaga Helia library and how the library has demonstrated its spirit for innovation to continuously improve its services offerings and keep up with the modern technology. In addition, the chapter 3 presents the substitute solution for the old system which is based on web application, LibCal and LibGuides platforms by Springshare, LibCal to set up an online booking system and LibGuides as a content management system (CMS) to create guides. These tools are used to automate the library operations and increase customers and users satisfactions. The features and advantages of both platforms are also discussed in this chapter 3.

Chapter 4 builds upon chapter 2 and 3, it describes the development process step by step of both of LibCal’s online booking system and LibGuides, and at the same time describes their options and components. The development process includes the planning, design, implementation and testing phases. The utilisation of the sophisticated options of the platforms is applied in this chapter. Chapter 4 serves as a guide for readers on how to best set up and publish online room booking system. Also, this chapter helps readers how to properly administrate, implement and maintain their LibGuides.

Chapter 5 presents the author’s achieved results and evaluation of her thesis project by Haaga Helia library key manager and information specialists. It will also provide feedback, statistics and testimonials which will endorsing the author’s achieved planned goals. In addition to the learning outcomes and Future work.

Chapter 6 covers the summary of the thesis, and finally chapter 7 and 8 present the references and appendices which were used to write this thesis project.

2 Methodology

To carry out this thesis project and understand how to build LibCal and LibGuides solutions, a combination of qualitative methods, various techniques and multiple tools were employed: interviews, face to face questions, questions through emails and online surveys were conducted.

2.1 Data requirements gathering

To elicit the thesis project objectives, the author worked to discover the project requirements by using various techniques. Requirements gathering process started when the author was assigned each of the two tasks: the online room booking system and then LibGuides. Requirements gathering were an ongoing process during the entire thesis pro-
ject. It surged at the beginning of the project during analysis and design phases and then declines with the implementation and testing stages.

By defining the scope of the thesis, the needed requirements were discovered. Then, multiple elicitation techniques were chosen to reach the relevant requirements which were based on the author personnel experience, gained from her previous theoretical and practical courses at Haaga Helia and especially “Requirements analysis” course with its course book “Object Oriented Systems Analysis and Design” by Noushin Ashrafi & Hessam Ashrafi”.

A focused interviews, direct questions or questions via emails at each stage of the LibCal’s online room booking system and LibGuides process development were used as a qualitative method. The interviews and the questions were conducted with the library manager, information specialists and staff. Others questions were asked later to the IT specialist related to the online access restriction of the products.

An online questionnaire titled “Haaga Helia Library Services and Information Seeking Survey” was prepared by Google form and used as a qualitative method to gather requirements. This questionnaire was administrated at early March and before the start of LibGuides implementation, it was posted to Haaga Helia students by using their school emails, in order to collect requirements and build up useful and relevant LibGuides content that fulfils users’ needs.

The questionnaire included 22 different questions of required and non-required responses such as what is the used language when seeking information on the library guides, level of familiarity with the old guides, the important information frequently searched, problems encountered when searching information, and how willing the students are to migrate to subject oriented guides. Its results will be used to organize and prioritize the content of the “Student guide” on its web pages. It is also given to the library manager to create more relevant content guides for students to fulfil their requirements and satisfy their demands. The online questionnaire questions and answers are attached in Appendix 4.

Another online questionnaire titled “Study Room Bookings System: Students’ Satisfaction”, as a qualitative method, was prepared and then sent to Pasila campus students using their school emails at the beginning of May 2015 to evaluate the system usage and the users’ satisfaction. This questionnaire contained 15 of required and not required questions; it was designed to estimate students’ satisfaction about the use of the new booking system. This questionnaire is available in appendix 5.
2.2 Familiarity with LibCal and LibGuides platforms

Haaga Helia is integrating for the first time both LibCal and LibGuides platforms. Setting up online rooms booking system and LibGuides were assigned independently to the author. There was a need to get familiar with the two platforms and check the online Springshare tutorials, in order to figure out how to set up rooms booking and LibGuides, and practicing the systems. In addition to the LibCal and LibGuides platforms, which were used as tools to create these thesis products, Photoshop, Paint, MS-office and others tools were deployed to achieve the goals of this project.

2.3 Data collection and analysis

The thesis project was carried out based on online and paper based sources such as, journals, articles, internal and external websites, and books. In addition to these resources, the thesis report was based on Springshare library community, Springshare online documentation and tutorials. The gathered data was analysed, ordered and presented in chronological order to help readers understand the thesis report content.

2.4 Springshare support and community help

During the thesis process, the author took advantage of the customer support and the community help features via the Springshare Lounge. These features are provided to Springshare customers when they have any issue with LibCal and LibGuides products, they can simply contact the customer support line to guide them and find solutions for their challenges. During the thesis period, the Springshare customer support was very helpful and responsive every time when the author sent her inquiries.

2.5 Testing and training

Functionality and Usability testing were an essential part during the development process of the thesis to ensure that the deliverable products will be usable and user friendly. The target audience before products’ delivery were the library manager, information specialists, staff and customers. After the delivery of the two LibGuides and publishing the online booking system, the target audience were both, the library staff and students.
3 Theoretical background

The following chapter will give an overview of Haaga Helia library as one of the libraries that have put a strong emphasis on improving its services by introducing modern technologies, as well as discussing the importance of going mobile for today's modern libraries. This chapter will also cover Springshare LibCal's room bookings' system and LibGuides. Finally the chapter will discuss the beneficial features of linking both platforms, LibCal and LibGuides.

3.1 HAAGA HELIA library and technology

According to HAAGA HELIA UAS website, Haaga Helia library is a modern library of the university that offers a wide range of diversified services. The library is an active centre for its students, teachers and researchers demands. Moreover, the library services are managed by 19 managers, information specialists and assistants, divided on the six library campuses of the university. In addition to the library internal services that are offered only to Haaga Helia students and staff, the library offers different other services to its external customers. (HAAGA-HELIA 2015.)

With the technology's advances over the two past two decades, a growing need becomes required to satisfy customers' needs and expectations, more rapidly and in an efficient way. (Casey & Savastinuk 2007, 73.)

Haaga Helia library is one of the libraries that have put a strong emphasis on improving its services. Centralizing and digitalising its collections and resources have been the priority number one of Haaga Helia library' staff and management. The library has illustrated its spirit of innovation to keep up to date by adopting new technologies and automating its services in order to make them easily and quickly accessible for users. (Gray & McMullen 2012, 673.)

Fortunately, various affordable technologies based on Web 2.0 functionality can be adopted to efficiently serve libraries, retain their current customers and reach new potential ones, in addition to offer the old services in a modern way. Indeed, the new integration of the Web 2.0 functionalities has significantly changed the way that the libraries operates and offers their services. (Casey & Savastinuk 2007, 73.)

Greg R. Notess, 2006 found that “ More concisely, the nebulous Web 2.0 concept represents a second wave of web techniques to create more interactive and easy-to-use web-
sites using new technologies or using older technologies in a new way”. (Greg, R. Notes 2006, 40.)

Among the new embraced technologies by multiple libraries based on Web 2.0 functionality, Springshare products, and especially LibCal’s and LibGuides which are the most popular products of Springshare Company. According to Springshare website, Springshare is a fast growing company founded in 2007. Its mission is to create web applications that allow libraries to enhance their services, publish their resources and share knowledge with the community. Currently, Springshare serves 4800 small and large libraries in 78 countries (Springshare website 2015.)

HAAGA HELIA UAS Ltd. has started the integration of LibCal and LibGuides platforms at the beginning of 2015, after purchasing the products licence in late 2014. By integrating Springshare products, Haaga Helia library aims to align its online environment with its users demand and expectations. (Eeva Klinga-Hyöty 18 March 2015.)

3.2 The importance of going mobile for libraries

Mobile devices are now considered as a crucial part of people’s daily lives. These new devices such as smartphone, tablet, and iPad are how library users are accessing resources and information today and the means for adapting old services and developing new ones for the mobile users. (Clark, Jason & Kroski 2012, 1). The increase of the mobile platform has its roots to Apple’s release of the iPhone on June, 19 2007 (Clark, Jason & Kroski 2012, 2). As a result, people prefer to utilize their mobile devices rather than a desktop computer to access information. (Nowlan 2013, 143)

According to a recent study by the Pew Research Centre, 39 percent of cell phone users operate on a smartphone platform, and 87 percent of them access e-mail and internet through their mobile phone. (Eshleman, Henry & Moniz 2014, 47.). Moreover, during the five past years, smartphone ownership has dramatically increased among students at universities as a primary tool of communication. (Nowlan 2013, 143). Given the number of smartphone users and how mobile applications is becoming embedded to people’s everyday lives, libraries must take the challenge seriously, and pay more attention to tailoring information and services for the mobile users, in order to improve the information delivery, and satisfy the library users’ demands. This is can be achieved by expanding the ability to provide resources anywhere and at any time and to get questions answered quickly when the need arises.
Going mobile is significantly expected to play a major role of an embedded librarians and students, in addition to help providing information and services in a unique and deeply connected ways.

Haaga Helia library continuously invests time, efforts and money to make its resources and services part of the mobile ecosystem and provides improved services for its users ever increasing demands. The library aims to use innovative ways to better connect its users and resources, and enables its patrons to access information anywhere, at any time and more efficiently. (Eeva Kling-Hyöty, interview, 18 March 2015)

Recently, HAAGA HELIA has adopted two new platforms which are mobile user friendly, LibCal and LibGuides by Springshare. The platforms are highly adaptable to mobile use since Springshare, the producer, provides a quick and easy functions for turning theses platform into a mobile ready-product. (Bomhod 2014, 343.). Librarians can easily learn how to create smartphone-friendly web-applications and subject guides. (Dobbs & Sittler 2013, 271). Likewise, LibCal detects the patron’s mobile device and automatically routes the user to the mobile-optimized display. (Springshare website 2015.)

3.3 Springshare LibCal’s room booking

According the Springshare website, LibCal’s room booking is a powerful point-click calendaring tool and an awesome time management application which is used to create online room booking system for the individual or group library rooms, to allow users efficiently manage their studies, meetings and conferences. LibCal platform as a complete calendaring solution is used by 1600 libraries worldwide. Moreover, LibCal enables the customers to quickly check library space availability, self-reserve rooms booking, and gives accurate statistics about the usage of the library rooms which make library patrons very satisfied in keeping track on their library services and improve them when needed. (Springshare website 2015.)

In addition to the online room booking’s calendar, LibCal platform has three other calendar based tools which are the following (Springshare website 2015.):

- Event Calendars w/Event Management calendar
- Staff appointment Schedulers
- Manage Opening/Closing Hours calendar
LibCal's, with its four calendar-based tools, represents a complete solution for libraries to online schedule their events, offer room bookings online, use efficiently their space and manage their opening and closing hours. (Springshare website 2015.)

3.3.1 LibCal room booking features

According to Springshare website, LibCal features are crafted only to fit special customers’ requirements and needs. The Springshare team developed just the suitable amount of features to easily get library daily activities done by using point-and click options. The powerful functionalities of the room booking system facilitate users to online book their library room and from any place, especially because LibCal is mobile-friendly, so users are able to take advantage of the beneficial features of the system. There is no need to visit the library in order to only reserve a room. “No more room sign-up sheet and messy bonder” (Springshare website 2015.)

LibCal’ room booking has multiple options to build up a user friendly reservation system such as uploading rooms’ image, displaying the room description and rules, customizing the registration form to fit the library needs and enrolment, in addition to collecting room booking statistics of any desired period of use.

LibCal’ online room bookings system has the following advantageous features (Springshare website 2015.):

- **Point-and-click interface**
  Customers are quickly able to navigate through the available rooms and check each room’s description and facilities. Reservation can be done by using any web-enabled device such as library computer, laptop, tablet or smartphone.

- **Set up group of rooms or individual rooms**
  LibCal's online room bookings’ offers the opportunity to build up online booking systems for group or individual rooms depending on the number and the purpose of rooms available in the library. In the case of creating a group rooms, a set of policies are established to ensure a better management and ease of bookings. The established policies include room pictures, description, rules and which facilities and devices the room contains to facilitate the team work.

- **Customizable registration form**
  LibCal’ online room bookings’ allows users to create a registration form where it is pos-
sible to add a maximum of 10 required and optional questions but with keeping the two default questions about the user name and email which are both required. The system allows librarians to add multiple types of questions such as: radio buttons, checkboxes, drop-down, single line text and multi-line text. The option to copy the form from existing one is also provided by LibCal's room bookings' system.

- **Room usage statistics**
  Statistics about the rooms' usage are easily collected and checked when using the STATS option. The obtained statistics represent how much the rooms were occupied, room page hits, total group room hits and which room was the most used during a predefined interval of time. In addition, information about the confirmed and cancelled bookings either by the customer or by the library staff for some urgent purposes is also provided by using STATS option.

  Furthermore, when filling the registration form such as name, emails, number of the group, etc., the entered data are saved by the system, and they are used later for statistics purpose. Likewise, the LibCal flexible registration option lets library managers keep track and communicate with everyone who had used the library rooms. “With Room Bookings you will have a definitive proof!” (Springshare website 2015.)

- **Embed room booking, booking widgets**
  The booking widgets enable librarians to embed the room bookings' options on any LibGuides, or any external or internal webpage.

3.3.2 **Room booking explorer function**

This feature allows the library patrons exactly to lookup on which rooms were reserved in a specific period. The booking explorer can pull data from all the filled fields by the student when using the registration form. The collected data is used to identify the target audience or the frequent users of the library space “flyers”. In addition, the gathered data defines users by booking status (confirmed, cancelled either by the system or the user). Booking explorer is a useful tool to identify individually which user has used the booking module.

  The gathered statistics can be printed or exported in different format such as Excel, PDF to serve various purposes, surveys, detect target audience, which room are most requested and booking status.
3.3.3 QR and exporting function

LibCal’s room booking system provides a QR code option which can be used in “anywhere” to allow quick access to the booking system. After building up the online booking system, The QR code is generated when just clicking on “Display QR” link option which is available on the system. However, the QR can also be provided by using an external QR code generator in the case where the library or the institution wants to change the room booking link generated by LibCal to restrict its access. For example, use the EZproxy to give access from outside the library’s computer network.

In addition, LibCal platform offers three options to export the confirmed, user/system cancelled bookings of any date range. The exporting formats are: Print, Excel and iCal. (More detail under QR and exporting title in Chapter 5: Software development process)

3.4 Springshare LibGuides

3.4.1 Library guides overview

One of the important challenges that face libraries is how to manage, organize and present the extensive amount of their electronic resources and collections. (Verbit & Kline 2011, 21). Libraries resources and collections should be organized in a simple, intuitive and user friendly interface to enable both students and librarians take advantage of them.

Over the past years, Library guides have had a different names and forms, the first guides were paper pathfinders of the 1960s and 1970s to more modern and intuitive guides of today. The main purpose for developing guides remain a same over the years, is to connects librarians and customers with the library resources and improve the user experience. (Dobbs & Sittler 2013, 27.). Reitz (2010) defines a guide as a “Printed or online resources that provide detailed information, instruction, and advice concerning the best strategies, techniques, and resources for research in a subject or field of study”. (Yeo 2010, 38.)

Library online environment, resources, services and assistance have increased day after day introducing sophisticated option to create interactive and user friendly guides, LibGuides are an advantageous solution for libraries to build up simple, intuitive, ease-to-use and cost effective guides. Multiples platforms and tools are used to create guides such as CMS solution, HTML static webpages, and open sources. However, many libraries have chosen to turn to LibGuides solution by Springshare. Haaga Helia library is one of those
libraries that have decided to integrate LibGuides as a remote-hosted tool to create dynamic guides and manage its resources. (Dobbs & Sittler 2013, 30)

3.4.2 Content Management System

A Content Management System (CMS) is a system to manage huge amount of web-content that avoids the burden of coding each page by hand in HTML. (Seadle, M. 2006, 5). Typically, CMS software is so powerful and it consists of two main parts: the Content Management Application (CMA) and the Content Delivery Application (CDA). The CMA permits its users who are with or without expertise of HTML, to create, edit, or delete the web content from a website. And this is can also be done without the need of a webmaster. The CDA component utilizes and compiles that content to update the website. (SearchSOA website)

Nowadays, Content Management Systems have become a must for libraries to manage the exponentially growing amounts of their web-based information. Because the sheer mass of their web presence has attained the level where maintenance is a serious problem. (Seadle 2006, 5.).

CMS is considered as an ideal solution for libraries to escape the burden of technical and administrative problems, and for repository content with speedy delivery in a reliable way when creating and updating their guides. (Goans, Leach & Teri 2006, 30.). It provides a centrally managed system with a real-time interface to display the content in order to assist conformity, consistency and branding which remains under control by librarians. (Seadle 2006, 5). CMS systems, will have a very promising market at affordable cost for libraries that need to keep under control their web presence. (Seadle 2006, 7)

Haaga Helia library is one of the libraries that desire to enforce consistency when customizing their look and feel, as well as making their guide sites more readily accessible to all their users. And this can be achieved by adopting new opportunities to migrate their old guides to a web content management systems such as LibGuides. (Eeva Kling-Hyöty, interview, 18 March 2015)

3.4.3 Why LibGuides?

LibGuides is a web-authoring and Web 2.0 hosted software content management system for publishing platform for libraries designed by Springshare for the library community LibGuides, and they are used to create intuitive multimedia sites to share knowledge, infor-
Springshare has defined their LibGuides as the following:

LibGuides is an easy Content Management System used by many thousands of libraries worldwide. Librarians use it curate knowledge and share information by creating online Guides on any topic, subject, course, or any process. LibGuides saves you a lot of time and effort by enabling sharing of content locally (within your guides or within your institution) and globally (reusing guides in LibGuides community). (Springshare website 2015.)

According to LibGuides homepage, LibGuides is the most popular web publishing platform used by thousands of small and large libraries worldwide and over 600,00 librarians have built up about 400,000 LibGuides. (Springshare website 2015.) LibGuides solution are continuously being enhanced upon by Springshare in response to its intensive community demands by incorporating new intuitive web-applications and sophisticate modern widgets to elaborate an attractive user friendly interface. (Dobbs & Sittler 2013, 32.)

Additionally, the content of the guide can be expanded significantly by the inclusion of different widgets such as Really Simple Friendly Simple Syndication (RSS) feeds which allow the integration with library resources like video, instruction audio links, electronic resources, books from catalogue combined with HTML editing software and other social networking tools. In addition, Librarians are able to gather feedback through ratings polls, surveys and comments, as well as collect statistics of the guides’ usage from the provided build-in user statistics offered by LibGuides. (Griffin & Lewis September 2011, 5; Breseler, Coffta, Magolis, Neyer & Yelinek 2010. 353. & Dobbs & Sittler 2013, 32.)

LibGuides platform simplified the skills needed to create consistent web pages and navigation, so all the librarians, regardless their technological expertise, could create a customized guide for library patrons without aid of a technology or system librarians.

### 3.4.4 LibGuides features

LibGuides are designed in a way that no high level of technical expertise is required to start using them and publish useful content. Librarians can easily manage working with the system to build up user friendly guides. However, librarians can use the advanced options provided by the platform when needed. In this case, an extensive content and
tutorials documentation can support their process of building up guides. Questions can be asked to the customer service to help find solution. (Verbit & Kline 2011, 23-24.)

- **No download needed**
  Start working with LibGuides, it is sufficient to just sign-in to the system with your username and password. In addition, users can use LibGuides on any web-enabled device and any operating system or browser. (Becker June 2014, 20.)

- **User friendly design and customization**
  LibGuides are simple and easy to use. The platform use WYSIWYG editor that can be customized with knowledge of basic HTML. (Dobbs & Sittler 2013, 31)
  LibGuides customization interface gives the “look and feel” of the guide and helps to promote the library resources. (Brandon, Sattler & Tobias June 2011, 16). In addition, to the inclusion of third-party widgets, makes it appealing for librarians with a wide range of technology skills. (Dobbs & Sittler 2013, 31.)

- **Customer service and help support**
  LibGuides' parent company, Springshare, offers excellent help and extensive step-by-step documentation on the LibGuides help website (support.springshare.com) by providing online assistance in creating, editing, updating and maintaining LibGuides. Librarians can receive help either by email or via an online lounge (springsharelounge.com) for discussion and interaction among users of the community. (Dobbs & Sittler 2013, 49.)

LibGuides customer support line is considered as one of Springshare’s strongest asset. Also the company’s customer service staff is known as responsive and knowledgeable. LibGuides tutorials and documentation are powered by FAQ for users. (Verbit & Kline 2011, 24). As pointed out by Daniela A. Becker: “I’ve needed to email tech support once, and they were extremely helpful and quick to respond. They were also very informative and responsive when I signed up for my trial subscription.” (Becker June 2014, 21.)

### 3.5 Linking LibCal to LibGuides and vice versa

There are several ways to link LibCal to LibGuides and vice versa, this can be achieved, for instance, by adding LibCal room booking system as a simple link or as a link box to LibGuides. On the other hand, LibGuides can be also connected with LibCal, for example, by adding a LibGuides box to LibCal homepage, and this is can be made possible by adding the box ID from LibGuides to the desired column to display it on the homepage. (LibCal FAQ website 2015.)
4 Software development process

The next chapter will cover software development process of LibCal’s online room booking system and LibGuides, and the key features and areas that made the project of LibCal and LibGuides integration at Haaga Helia Library successful.

4.1 LibCal’s online room booking system

Haaga Helia library at Pasila campus has three study rooms (3205, 3206 and 3207). Each room is equipped with the necessary facilities such as computer, printer, table & chairs, board etc. These rooms’ space is used by student groups during the library opening hours to efficiently conduct their team work, projects, and meeting. Haaga Helia library has adopted for the first time LibCal’s online room bookings to automate its old system which was based on paper sheet reservation. The purpose to migrate to LibCal’s online room booking is to enhance the library services and meet the students’ needs. In addition to keep the library staff focused on library needs rather than spending time preparing the reservation paper and controlling the use of the three study rooms.

The online booking system entire development, creation and set up, was assigned to the author individually and the author was the administrator of the LibCal’s platform during the whole thesis project. The development phases were basically based on the library manager “Eeva Klinga-Hyöty” requirements.

4.1.1 Requirements and design

Since the LibCal’s online booking system was integrated for the first time at Haaga Helia library, and no one from the library staff was familiar with the platform, the design phase was preceded by an intensive consultation and reading of a documentation and FQA available on the platform website provided by Springshare, concerning how to start using the tool, how to create user friendly online reservation system, customization, features, etc., in addition to checking the similar online booking system created by other universities and institutions where they used the same platform, LibCal’s online room bookings.

After getting familiar with the platform, the author started the design phase. Many points were important to think about when designing the booking system:

- Language: Finnish or English, because the LibCal’s platform does not allow to set up the system in both languages.
- How to organize the library study rooms
- Who will the target customers
- Access restriction (private, public, remote use, etc.)
- Reservation form required/not required fields and questions' type
- The information needed to add for users who will book the rooms (booking system description, room description, rooms’ pictures, facilities & equipment, library rules)
- Reserved time duration and advanced booking time
- Confirmation/cancellation processes

By taking the above notes into consideration, the design of the new room booking system will take advantage of the various features and options provided by the LibCal’s platform. (Figure 1)

**Room bookings’ system language:** Since Haaga Helia students are both, Finnish and English speaking students, and most of the Finnish students understand and speak English language, Haaga Helia library manager decided to create the online booking system for the three study rooms in English language.

**Group rooms & access:** Because Haaga Helia library at Pasila campus has three similar study rooms which are designed for the same purpose, to ensure its students team work. Also, the rooms have the same capacity (2 to 8 students) and all have the same rules of usage, conditions, restrictions and availability, so the author decided to design only one group for the three study rooms. LibCal’s room bookings’ platform offers the option to organize rooms in groups to make it easy for the library patrons recognise what kind of room they need to reserve.

For the access, and based on the requirements, the room bookings’ system should be accessible on HAAGA HELIA network and through remote use by using EZproxy access.

**Group study rooms’ description, rules and availability:** Based on the requirements, the description and the rules of the system written by the author were added later when implementing the system. The group study rooms are available for use during the library opening hours.

**Rooms’ description:** Based on the requirements such as clear description of the rooms with their picture and facilities will be added to the system by taking advantage of the LibCal feature, for example display the room description by using “i” button in full browser mode.

**Reservation form:** The LibCal’s platform offers a default reservation form with only Name (required) and E-mail (required) fields. This form can be customized to fit the need by add-
ing up to ten more questions to collect additional information from the users. Haaga Helia library wanted to add other required questions to the reservation form.

**Reserved time/timeslot duration:** Based on the requirements, each group of students can reserve maximum 3 timeslots per day, and each timeslot is equivalent to one hour.

**Booking confirmation/cancellation:** the system will take advantage of the LibCal platform confirmation/cancellation emails’ system to confirm or cancel the booking by using the automatically received email. However, based on the requirements, the users must confirm their booking within 30 minutes and no restriction is applied on the pre-cancellation time.

### 4.1.2 Implementation

LibCal’ online room bookings ‘system implementation includes all the required steps to set up the booking system, Setting up group study rooms, creating rooms inside the group, setting up/deleting availability times and finally customizing reservation form. (Figure 1)

![Figure 1: Room Bookings tabs](image)

**LibCal Dashboard**

The Dashboard is the starting place to set up any of the four calendar-based tools of the platform, online events’ calendars, My scheduler, room bookings and opening/closing hours. In addition, the dashboard is the place where a summary of important information and alerts are displayed. (Figure 2)
Step1: General settings

System settings: General settings are needed before creating the group study rooms, and admin users can create accounts, customize the look and feel of the LibCal’s site, set up groups/rooms, delete groups/rooms, in addition to edit or modify the settings. However, based on the requirements, Admin and also Regular account holders can set up the availability times, access to inputs and delete functions of the online room bookings system. (Figure 3)

Confirmation/cancellation emails:
Because it was decided to use English as a language on the online system, the templates of Confirmation/cancellation email bookings provided by LibCal’s platform, will be used without any customization of the code or changes the email text syntax. LibCal’ tool provides various email templates, However, the following email templates will be used to create the online room bookings’ system:

- “Confirm your Booking” email template
- “Confirmed” email template
- “Cancel booking” email template
The “Confirm your Booking” email is sent automatically to students when they have booked a time slot to confirm their booking within 30 minutes (based on the requirements). The use of email body tags dynamically pulls information from student’s online room booking reservation form. (Figure 4)

Figure 4: “Confirm your Booking” email template

Another confirmation email “Confirmed” email is sent to students when they confirm their booking from “Confirm your Booking” email which is received initially after filling the reservation form and submitting it. (Figure 5)

Figure 5: "Confirmed" email template
"Cancel Booking" email is sent automatically by the system when the admin/LibCal has cancelled the booking time slot. (Figure 6)

![Image of email template](image)

**Figure 6: "Cancel Booking" email template**

**NB.** When the student cancels his/ her booking time slot, no cancellation email is sent.

**Step 2: Setting up group study rooms**

Group study facilities for Haaga Helia library contains three rooms (3205, 3206, and 3207). The name chosen for this group is “HAAGA-HELIA Library Room Bookings”. Furthermore, the group is used to organize the similar rooms for easy maintenance, in addition to help students browsing rooms when booking. (Figure 7)

![Image of group creation](image)

**Figure 7: HAAGA-HELIA Library Room Bookings group creation**

After HAAGA-HELIA Library Room Bookings’ group creation, a set of settings on that group were needed such as group visibility, friendly URL, description (written by the author), pre-advance time to book, maximum booking duration, etc. Entering these settings was based mainly on the requirement as follows:

- Visibility: visible to everyone on HAAGA HELIA network or remote use.
- Friendly URL: http://libcal.haaga-helia.fi/booking/hhrooms
- Description & conditions and rules as a rich text.
- User must book: Before slot’s starting time.
- User must cancel: 0 hours prior.
- Booking form: To book time slots using the online system, a booking form is needed to fill up “HAAGA-HELIA Library Room Bookings” form (customized by the author)
- Time slot duration: 1 hour.
- Selected time slots: 3 time slots per booking as a maximum.
- Public calendar booking: available 8 weeks in advance (2 months).

By saving the entered required information, HAAGA-HELIA Library Room Bookings is created and ready to add the three study rooms. (Figure 8)

![Figure 8: HAAGA-HELIA Library Room Booking creation](image)

**Step 3: Creating rooms**

The three study rooms of Haaga-Helia library at Pasila campus (3205, 3206, and 3207) were added to the created group in the same way to meet the requirements.

Adding a room needs the following information:

- Room name & capacity: the name of the room is required. The rooms have all the same capacity: 2 to 8 students
- Description: the description is optional, but it is required for the requirements. It includes general description of the room with its available facilities and furniture. The description is popped up when a student click on the “i” icon which is available on the room’s name.
- Image: the room picture is optional, but it is required for the requirements.
- Room status: Room status should be “active” to make the room visible and available for students.
After adding the rooms, their update and delete are possible by Admin and regular users. (Figure 9)

Figure 9: Room 3205 creation/update and delete options

At this stage, the group study rooms is complete and it is ready to set up the availability for the three rooms.

Step 4: Setting up/deleting availability times

Set up availability time: to set up rooms’ availability page, it is important to take into consideration the following:

- Library opening hours: which allow students to use the study rooms (start time & end time)
- Library exceptions: where the library is opened only for few hours
- Weekend and holidays: where the library is closed
- Date range: the time frame that Haaga Helia library wants to make the online bookings’ system available for their students.
- Time length for each time slot.
- Padding between time slots

Haaga Helia library wanted to set up rooms’ availability from 12th of January 2015 and to 31th of December 2015, and because the three study rooms are used for the same purpose, setting up availability in hourly slots and without padding, has been done all at once for the entire group of rooms, which means adding availability for the three rooms from 9 am to 7 pm which is repeated weekly, and then went through to set library exceptions,
weekend and holidays; delete days when the library is closed and remove time slots for
days with limited availability hours. The only option to setting up exceptions, deleting days
is to do it manually. Choosing the option time repeated “weekly”, allowed the author to
exclude weekend days from the availability calendar, rather than went through each week
and deleted Saturdays and Sundays of each week (closing days for Haaga Helia library at
Pasila campus). Setting up availability is done under Room availability tab of the Room
Bookings. (Figure 10)

![Figure 10: Setting up room availability](image)

Delete availability times:
There two ways to delete availability times (Figure 11):
- Manually by admin/regular users, delete slots one by one by just clicking on the
time slot the admin/regular wants to delete.
- Delete range of slots all at once, by clicking “Bulk Delete Availability Times” option
which is available at the button of the availability calendar. Bulk deletion requires
filling a form that appears after clicking “Bulk Delete Availability Times” button.

![Figure 11: Delete availability time slots](image)
Both deletion options were applied on the availability calendar of “HAAGA-HELIA Study Room Bookings” group to fit Haaga Helia library opening hours.

**Step 5: Customizing reservation form**

Students are required to fill the reservation form to complete their bookings. The reservation form is a powerful method to gather information about the online booking system users. The different fields of the form are searchable via the Booking Explorer that is used to collect statistics about the users. The default booking form provided by LibCal’s platform has two default fields, Full Name and E-mail, and both are required. It is possible to customize the booking form by keeping the default required fields and add new required/not required questions to the form. A maximum of 10 mixed questions are allowed to be included on the form such as radio button questions, check box questions, drop down list questions, single or multi-lines’ questions. (Springshare Documentation & Support website 2015.)

Haaga-Helia Library Booking Room’s form has changed several times, after the deployment of the system in order to ensure efficiently the use of the study rooms and to fit their customers’ needs (more details is found on the Testing part of LibCal’s online booking system). The current fields of the form are as follows (Figure 12): Full name, e-mail, how many members are in your group? and Group member names.

![Figure 12: HAAGA-HELIA Library Booking Room's reservation form](image-url)
4.1.3 Testing

Testing was done to ensure the right functioning of the entire online bookings’ system. System functionality was tested when users used the link of the system’s link available on Haaga Helia library web pages, and also when they book through QR code when using smartphones.

The testing was also done to check that the system is available for booking only on HAAGA HELIA network and through remote use, by using the university EZproxy access. In addition, the confirmation/cancellation emails were tested if they are correctly received and if they are functioning on any email domain (school emails and own emails) when the student make a time slots’ reservation on the availability calendar of the system. Library staff was the target audience for the testing phase before publicizing the room bookings’ system.

4.1.4 QR code and exporting

**QR code:** LibCal provides librarians with QR code which can be used anywhere to allow for quick access to the online room bookings’ system. (LibCal Help & Documentation website 2015.) However, the QR code used to access HAAGA-HELIA Library Room Bookings’ system was generated by an external QR code generator, since HAAGA HELIA EZproxy extension is added to the link of the online system provided by LibCal. This QR code is printed on a sheet paper and it is available on the wall of each of the three study rooms at Pasila campus. (Appendix 6)

**Exporting:** LibCal provides three options to export bookings (LibCal Help & Documentation website 2015.):

- **Print:** This option is used to print the confirmed room bookings for any day.
- **Excel:** This option is applied to export room bookings on excel sheet for any wanted day.
- **iCal:** This option is used to add confirmed bookings to any existing calendar program or any calendar program that accepts iCal, such as Outlook, Google calendar by copying and pasting the provided address into any calendar. (Figure 13)
4.1.5 Admin view

Admin users can see the available and confirmed time slots (green and pink time slots) on the availability calendar period which is previously set up. In addition, administrators can perform the following tasks (Figure 14):

- check student information if needed by clicking on the confirmed time slots (pink time slots)
- Add bookings if admins receive a request from HAAGA HELIA or SLK-HBC students, and this by clicking on Add Booking button.
- Edit bookings if needed or asked by students.
- Delete the booked time slots by clicking on delete button, and in this case, an automatic cancellation message is sent to the student to inform him/her about the cancellation of his/her booking by the system. In addition, admin users may cancel the bookings if the room has not been occupied within 10 minutes of the start time.
- Delete a range of time slots by using “Bulk delete Availability Times” option.
4.1.6 Public view

Students can have access to their online booking system either by browsing Haaga Helia library webpages and clicking on the system link (http://ezproxy.haaga-helia.fi:3098/booking/hhrooms) or through QR code of the system by using their smartphones. The QR code is available on the rooms' wall at the library (Appendix 6). HAAGA-HELIA Library Study Room Bookings’ system is available on the university network and also on remote use where students need to use their school usernames and passwords to sign in.

The availability calendar is composed of three rows of available time slots, each row is reserved for one study room. The description, image and the mixture facilities detail of each room is shown when putting the cursor on the "i" button (blue icon). A public calendar booking window on the left side of the system is available to choose the day of the desired booking. This calendar window is restricted to 10 weeks during which student can book in advance. (Figure: 15)

![Public view](image)

Figure 15: Public view

More details about the public view and how to use the system are found in Appendix 1.

4.1.7 Publicizing and deployment

Since LibCal's Room Bookings system is a web hosted service by Springshare Company, publishing HAAGA-HELIA Library Room Bookings’ system is done by using the provided
link by LibCal's platform and by adding to this link the EZproxy extension to allow only HAAGA- HELIA students use the reservation system and book library group study rooms. Haaga Helia library manager has decided to publish the link on MyNet and Haaga Helia Library public web pages (http://www.haaga-helia.fi/en/news/online-reservation-group-study-rooms-pasila-library#.VVS0t-_9nIU), in addition to print the QR code of the system on paper and affix it on the rooms' wall. (Appendix 6)

4.1.8 Requested improvements

During the thesis process and after making the online system in use, two main requests to improve the system were asked. For instance, after publishing the system on Haaga Helia library webpages, one student asked the author to improve the reservation form by omitting the field that required a re-confirmation of the email again in order to speed up the booking process and make the form easy to fill. To ensure the efficient use of HAAGA-HELIA Library Study Room Bookings' system and fulfil the students demand, the author immediately discussed this request with her manager. As a result, the library manager accepted to do the necessary change, and the form was simplified for easy and quick use. (Figure 16)

![Reservation form before and after testing](image)

Figure 16: Booking system reservation form (before and after)

Furthermore, to make sure that the three study rooms are not for individual use but they are designed for only groups of 2 to 8 students, the library staff asked the author to clearly mention this in the study rooms’ rules text by highlighting the sentences in attractive color
and make it bold. In addition, the library staff put a clear text in paper on the door of each study room which announces that the rooms are only for groups and not for individuals.

4.1.9 Maintenance

The maintenance of HAAGA-HELIA Library Room Bookings’ system is about the general upkeep of this system by administrators, such as (LibCal Help & Documentation Help website 2015):

- Cancel a booking: Admin users can cancel a confirmed booking, by selecting the group or a room, then clicking on this booking and deleting it by clicking on “Delete Booking” button available on admin view.
- Manually add bookings: Admin users can add bookings if requested by clicking on the “Add Booking” button, then selecting the required time slot and date and finally enter student information in the reservation form to manually book a room for a student.
- Inactivate a room: Make a room inactive means that this room can no longer be used but without losing its usage statistics, and this is can be done by changing the status of the room from active to inactive in the “Edit window” of the room. (Figure 9)

4.2 LibGuides development process

HAAGA HELIA website is weighted down by content-heavy various guides with long displayed pages on its library web pages. These guides are organized by subject or are for teaching purposes such as staff guides, student guides, search guides, tutorial guides, etc. The displayed pages of these guides are in general very long. Thus, users face difficulties to find what they search for because they need to scroll down through these intensive content long pages. On the other hand, the library guides are not really consistent and they have different formats (PDF, HTML, static pages). To build up a consistent, dynamic and intuitive guides, Haaga Helia library adopts and for the first time LibGuides platform by Springshare.

During this thesis project, the author acted as an administrator of the content management system, LibGuides platform. The author was tasked to create two subject LibGuides templates (Student guide and Library staff guide) that will be used by the library staff to create new guides by either using the layout or reuse the content, widgets and API of these template guides.
4.2.1 Requirements

The author was given a link to the old staff guide in English language called “Library and information services for staff guide” which was available on HELIA HELIA Intra in PDF format, to design and start crafting a new dynamic Staff guide, by using LibGuides platform. In addition, the author was asked to find more information on HAAGA HELIA public and intra web pages to create Student and Library Staff guides. Both guides were asked to be in English language. Furthermore, the author had the full freedom from her library manager, “Eeva Klinga Hyöty”, to design and then build up these two LibGuides, either starting from scratch or using LibGuides from Springshare community templates to create the requested guides.

All the requirements to creating LibGuides were mainly gathered from the library manager and sometimes from the library information specialist “Tuula laurila, information specialist in Malmi campus”, and also the library assistants. The requirements were gathered by short interviews, face to face question, questions through emails and also during the library meetings. In addition, when the author needed help, she asked the IT specialist “Pasi Tukiainen” through emails, or contacted LibGuides customer support to help and find or suggest solutions for a given problem.

Furthermore, to gather requirements and build up right and relevant content LibGuides “Student guide”, the author used the information collected through the online survey titled “Haaga Helia Library Services and Information Seeking Survey”, she sent at the beginning of the thesis project to HAAGA HELIA Students, especially to add relevant contents, divided it and organized between the guide’ pages to fulfil students’ needs and demand. (Appendix 4)

4.2.2 Design

To design the first guide “Library Staff guide”, the author printed out the old guide “Library and information services for staff guide” to find out the following important points:

- The most important content and information the library staff used more often
- Which chapter had the highest volume of text (or information)
- What part in the old guide included links to direct the users
- Where will be possible to add embedded widgets or dynamic content to more efficiently use the guide such as video, audio, feedback options, RSS feed, etc.
Where to use LibGuides searching options to easily find information by staff such as searching box, Google search.

To design the second guide “Student guide”, the same principle was followed by using the information content of the old student guides available on HAAGA HELIA website, in addition to the information available on the library webpages.

As LibCal, LibGuides platform is adopted for the first time by Haaga Helia library, and because no one from the library staff was familiar with the platform, an extensive reading of the online guides and tutorials offered by LibGuides platform, preceded the implementation phase. In addition, the author checked various LibGuides of other libraries worldwide through Springshare community. During the first period to getting familiar with LibGuides as content management system to create and manage web pages, it was important to take into consideration the followings (Springshare documentation & support):

- **LibGuides components**: Before starting to use LibGuides platform, it was essential to know what are the LibGuides made of. Moreover, LibGuides are considered as Matryoshka dolls, they are made up of pages (2nd Matryoshka doll); the pages made up of boxes (3rd Matryoshka doll); and these boxes have 4 different types: simple (general), tabbed, picture gallery and user profile boxes. Boxes contain content such as text, images, links, widgets, catalogues, etc. (Figure 17)

![Figure 17: Guide blocks (Springshare Documentation & Support, LibGuides: Getting started)](image-url)
- **Layout:** LibGuides platform offers two main basic layouts that are called templates:
  
  - Tabbed navigation template
  - Slide navigation template

  These two templates can be modified to fit librarians’ needs by playing on their HTML code.

  For both LibGuides, Library Staff and Students guides, the author consider the tabbed navigation template as the appropriate template to build up these guides. Therefore, the tabbed navigation template gives a lot of flexibility in how to organize and reorder the guide’s pages, where the user can have from 1 to 4 columns on each page to add content, instead of the side navigation template that has only two columns (navigational menu column and content column). For Staff and Student guides, the layout of 3 (25/50/25) and 2 (50/50) columns has dominated all the guides’ pages.

- **Subject associations and Tags:** Subjects associations and Tags are ways for guiding creators to arrange the guide content, and make it easier for users to search information and find guides. Subjects associations are added by admins only. However, Tags can be added by admins and guide creators. In addition, the added Subject associations and Tags are browsable for the guide homepage to find more relevant information and speed up research.

  For each of Library Staff guide and Student guide, the author assigns Subjects and Tags at the top of each guide. The subject and tags were added after studying carefully the content of each guide to find out the relevant ones.
- **Reusability:** When designing, the author took into consideration what content, boxes or page can be reused either in the same guide or between the two guides, since LibGuides offer the option to reuse almost everything even the entire guide. There are two ways to reuse (Figure 18):

  o **Mapping:** this is the default of LibGuides. It means that the reused content is tied to the original, and when updating the original, the mapped content is automatically updated.
  
  o **Copying:** here the copied content is independent from the original. When updating the original content, the copied content does not changed.

<table>
<thead>
<tr>
<th></th>
<th>Map</th>
<th>Copy</th>
</tr>
</thead>
<tbody>
<tr>
<td>Guides</td>
<td>No</td>
<td>Yes</td>
</tr>
<tr>
<td>Pages</td>
<td>Yes</td>
<td>Yes</td>
</tr>
<tr>
<td>Boxes</td>
<td>Yes</td>
<td>Yes</td>
</tr>
<tr>
<td>Databases</td>
<td>Yes</td>
<td>No</td>
</tr>
<tr>
<td>Other content (widgets, book, etc)</td>
<td>Yes</td>
<td>Yes</td>
</tr>
</tbody>
</table>

Figure 18: LibGuides reusability

- **Create Library Staff and Student guides as a blueprint guides:** As mentioned before, at the beginning of the project the author was assigned to create two dynamic and consistent guides to replace the old PDF format and HTML static pages guides on Haaga Helia web pages. However, this scope was changed by the library manager and the library information specialists, so rather than creating LibGuides to be entirely published on HAAGA HELIA website, the scope was changed to build up two blueprint LibGuides to reuse their contents, databases, widgets, etc. Blueprint guides create user experience consistency and allow librarians to easily create new ones because they are focused on the content, and not the structure of the guides, and this is an important factor for success.

After checking all the documentation, analyzing the available resources and the old guides, the author decided to build up Haaga Helia library own LibGuides from scratch, and not use any other LibGuides that are available on the platform’s community as a template. The new guides will be empowered by using HAAGA HELIA logo conventional colors as the main colors on their pages (banner, active and inactive tabs background, link buttons, etc.) to create continuity for the library guides’ users.
4.2.3 Implementation

Building up a guide from scratch means that there will be no banner or content in the guide when it is created. When creating a guide from the LibGuides dashboard that is the starting place of settings to create, customize, set up look and feel and embed widgets (Figure 19), the author started with one empty default page that has only her profile box.

![LibGuides Dashboard]

Figure 19: LibGuides dashboard

During the implementation of LibGuides, the author took advantage of the platform options and features to build up the guides.

1. Guides status

LibGuides platform offers the following three guide status options (Springshare documentation and support):

- Unpublished: unpublished status is invisible to the public, not indexed by search and it is only accessed from the admin interface.
- Published: published guide is visible to everyone and it is indexed for search.
- Private: private guide is only accessible to people who have its URL and it is not indexed by search.

During the thesis project, the guides are kept in unpublished status. However, private status was used when sending the guides to the library manager and information specialists to check or test them. (Figure 21)

2. LibGuides Look and Feel

The author started to customize the Look and Feel of the LibGuides from the principal that says “Simplicity is beautiful”, in addition to match HAAGA HELIA website colors to create continuity for users. The following Look & Feel settings are made as a default design for all new guides, but the guide owners is able to customize their guides and override the default settings:
- **Customizing banner (Page header in public view):** The implementation phase started by designing a standard banner image for all Haaga Helia library LibGuides, and then upload it to the page header of the guide. Photoshop and Paint were used to make the banner by choosing its right size and getting the similar colors of HAAGA HELIA logo.

- **Page footer:** the default footer is kept without customization

- **Customizing tabs (LibGuides' pages):** Photoshop was used to determine the active and the inactive colours of the page tabs by using HAAGA HELIA logo colors as a reference as follows (Figure 20):
  - Active background: #89bb26
  - Inactive background: #6d98d1
  - Tab shape: Round (selecting this feature)
  - Font and size: Arial, 10

- **Customizing boxes:** Setting up the guide boxes, was done by just selecting alternative among the offered options as follows:
  - Shape: Round
  - Border width: 1
  - Header background: #f0eded
  - Header font: #4d4444

A good practice was followed by the author which was changing the generated URL (sequence of numbers) to a friendly URL (descriptive URL) that is easy to remember, right after creating a new guide or new page. For example, the original URL for the library Staff guide was: http://libguides.haaga-helia.fi/c.php?g=221981. Changing the friendly URL of “library-staff-guide”, makes the URL http://libguides.haaga-helia.fi/library-staff-guide.
3. Adding pages

The author started adding pages with descriptive titles in each guides by using the “plus sign” available on the tabbed navigation of the new guide. For each page, the author changed the provided URL to a friendly-user URL, by choosing short and descriptive words that reflect the general content of each page. In addition, the author omitted the default profile boxes from each page, because these boxes were not needed. However, one profile box was kept on the homepage of the "Staff Guide" to be demonstrated during the face to face training session with the library staff.

LibGuides platform offers the choice to locate the page at top level-page or subpage. Thus, the position of each page was assigned to fit the purpose and the content of the page. Sometimes, after adding content to each page, the page content items were reordered in order to organize the content and make it easily accessible by users. Reordering page content items were done by using LibGuides “Reorder / Move” option of the page.

Moreover, subpages on each page can be added as a drop down list from the page title to reduce scrolling down the page. This feature was used on the guides with empty subpages to present it to the library staff and show them how to create subpages and what is their purpose.

Furthermore, the author used “Prev / Next Links” option to automatically insert the links’ button at the bottom of each page which bring folks to the previous or next page in the guide, rather than use the mouse to browse between the previous or next pages. (Figure 21)

Figure 21: LibGuides adding pages and customization
4. Adding boxes

Boxes are named and added to each column on the page guide to add any desired content. The author was tasked to present the static content of the old guides in a dynamic content webpage guides. For this reason, and after organizing and prioritizing the content of the old guide and taking into consideration the library manager requirements and the results of the online survey “Haaga Helia Library Services and Information Seeking Survey”, the author added content to each new boxes. Boxes type was chosen to meet the content purpose and its amount. Therefore, here are the different types of boxes offered by LibGuides platform:

- **Standard box**: a standard box was the most used type by the author on both guides. By using this box, it was easy to add any kind of content within the box such as: Rich Text/HTML content, widgets, links, RSS feed, document/files, polls, Google Search Boxes, etc. Also it was possible to add these various types of content in the same box.

- **Tabbed box**: a tabbed box is used in several tabs of content in the same box. This type of box is suitable to add huge amount of content to avoid scrolling down the page or taking up a lot of space. Tabbed box was used by the author in the created guides as an empty tabbed box to clearly demonstrate and explain how to create, edit, add content, update or delete this type of box during the library the face to face staff training session, in addition to stating its purpose.

- **Gallery box**: a gallery box is used to create a box of rotating images. The author did not use this type of boxes on the created guides, but she presented to the library staff during the training session.

- **Profile box**: a profile box is used to add user profile on any page guide, where users can add their pictures, contact information, links to social media, etc. The author illustrated this box type during the library staff training session.

If needed, all the above box types can be reorder within the page by using “Reorder / Move option” of the page settings. This feature was used by the author when needed to put boxes in the right order. Because the guide was not published during the thesis project, the “Draft mode” to not share the boxes when working on them, was not used. After adding the suitable box type, it was time to start adding contents.
5. Adding content to the guide

In both guides, Staff and Student guides, and after choosing a suitable layout for each page and adding boxes of each columns; the author started to add different kind of content assets and images by taking advantage of the LibGuides platform options and functionalities. Indeed, the content was divided on the guides’ pages after prioritizing it to fulfil the old guides’ main content and purpose. In addition, the gathered requirements were carefully taken into consideration. For example, the most important and requested content such as opening hours, library card registration form, available databases, library facilities and equipment, etc. was added entirely on the homepage or matched as a clear links to other pages on the same guide or to other web page on HAAGA HELIA website. Furthermore, the content of the old guides was added on LibGuides by choosing one of the ten asset types offered by the platform, which suits and nicely presents the content.

The various assets used when creating LibGuides are as follows (Springshare Documentation & Support 2015):

- Rich Text/HTML: The author used this asset type to add texts, lists, images, hyperlinks, etc. This asset was highly used in each page of the guides. This asset is the standard WYSIWYG text editor.
- Database: This asset is used to add a link to a database that is already added in the A–Z database list.
- Media/Widget: This asset is a very useful asset to add dynamic content and embedded widget like video, search boxes, or any other widget that can be embedded. The added widget can be reused within the same guide or another external guide by using LibGuides platform mapping features.
- Document/File: This asset type is a very handful option to upload any format document (PDF, Word, Excel, etc.) which allows users to quickly download and access the document content.
- RSS feed: The author took advantage of this option by downloading HAAGA HELIA RSS feed on the guides to display the news.
- Poll: The author used Poll option on the Student guide to gather feedback about the most useful database by students, for example.
- Google Search: This asset allowed the author to easily add Google search box (standard search, Google Books, Google Scholar, or Google Patents) when needed on any page in the guides.
- Link, Book from the Catalog, Guide List: these assets were not used in the created guides. However they were explained during the training session.
The author also used other external options and tools to add content/ widgets to the guides such as making a map for HELIA HELIA UAS Ltd. with its multiple campuses by using Google Map Maker and using Photoshop to prepare good quality and size of images.

After adding the content to each box and complete the page, the author sometimes reordered boxes content by dragging and dropping them to the new location on the same page. In addition, reuse, edit, update and delete asset, box, or page content were also possible after adding any type of content assets. Also, the author used the “Mapping” and “Reuse” functions of the platform to map or reuse pages, boxes content and widgets between the created guides such as RSS feed, campuses map, important links box, etc.

Finally, depending on the guide content, relevant Tags and Subject Associations were added in each guide to help users find the searched information as quickly as possible.

6. Adding A-Z databases library as an asset

One of the requirements of the library manager was to create a new A-Z Databases list as an asset by using LibGuides platform 2.0, to replace the old A-Z Database list that was available on Haaga Helia library website and migrate over the new 2.0 version. To do this, the author, by taking advantage of the internal library of A-Z databases asset to allow centralized control and maintenance (Hernandez & McKeen 2015, 10); added manually one by one all the available databases on the old list to LibGuides internal library.

For each database, the author added its vendor/provider, name, URL, type, English description, tutorial use links and indicate whether access to the database required use of the library proxy. Subject associations were carefully assigned to each database by using both options, “Make this database a “Best Bet” for the chosen subject or also “associate this Database with other Subjects”. These two options help user to quickly access and find the searched subject of the databases in the list. Moreover, each database added to the list was mapped to a relevant guide, to enable users search database within the guide.

During the thesis project, library information specialists have contributed by adding new databases to this A-Z Databases list and also by writing the Finnish description to the databases that are displayed in Finnish language. After completion, the A-Z Databases list was published at the beginning of May 2015 on Haaga Helia library webpages and replaced the old A-Z Databases list. This new list offers modern look and more advanced
and organized options of searching like search database, by Subject, by Database Type or by Vendor/Provider. (Figure 22)

Figure 22: Haaga-Helia old and new A-Z Databases list

4.2.4 Testing

The target audience when testing the two created guides were Haaga Helia library manager, information specialists and assistants. To test the guides, the author used to send the guides links to the testers through emails after changing the guides’ status from “Unpublished” to “Private” to allow only testers to have access and check the guides.

Usability, design and content testing was during the whole process of LibGuides development and it is intensified after adding few content pages on the guides, customizing the banner, adding the active and inactive background colors of the navigation tabs, choosing the font size, the box header font and background, in addition to the employed images which are taken from HAAGA HELIA pictures internal bank.
LibGuides testing was mainly concerned by:
- The Look & Feel of banner, the homepage and guide pages with the used pictures.
- The guides’ structure and how the content of the old guides is distributed on each page on the new guides and how it is presented.
- How the simple links and the images links are used and linked to a content page on Haaga Helia website.
- The need or not of embedded widgets (videos, Google search, general search boxes), uploaded documents, files and audio.

The author worked to improve the Look & Feel and content of the guides after receiving each comment or feedback from the testers. A maximum number of options and functionalities provided by LibGuides platform were used on the new guides to help later the library staff easily create new guides by using these guides as templates.

4.2.5 Deployment: Library staff training sessions

At an advanced stage of LibGuides development, the author was asked by her library manager to conduct a face to face training sessions for the library staff and information specialists of Haaga Helia library campuses, and present how to create, customize, edit, update, add content assets, widgets, etc. The training sessions’ purpose was to enable the library staff create easily and quickly new consistent guides using the created guides as templates. In addition, allowing the library to successfully launch the new platform.

During the training sessions, the librarians enthusiastically participated and asked various questions about the followings:
- Guides basic creation steps and design
- How to add content assets
- Guides’ features and functionalities
- Recommended layout and box types
- A-Z databases list (how to add new database, its maintenance and updates)
- Basic and advanced options of the platform (embedded widgets, API, RSS feed, etc.)
- How to edit, update or delete guides, etc.

After the training sessions, the library members started building their own guides, they had many questions that were answered by the author through emails or directly, in addition, a request for documentation guidelines was asked from the author to support the creation of
development process of the LibGuides. As a result, everyone in the training team tried out to create her own LibGuides, and very quickly, the first new guides in Finnish and English languages has been created and published on Haaga Helia library webpages at the end of May 2015. They were for “Library and information services for staff” and “Using e-resources in teaching”. These two guides were done by the information specialist Tuula Laurila. (Appendix 3)

5 Results and evaluation

This chapter will discuss the author achieved results for her thesis project as a complete success. It will provide feedback, statistics and testimonials which will prove the success of the two main planned goals of the project. The first primary goal was to set up an online booking system to the three study rooms at Pasila campus library by the LibCal’s platform to enable Haaga Helia students to online self-book the study rooms. The online system is called “HAAGA-HELIA Library Group Study Room Bookings”.

The second primary goal was to build up two guides' templates by LibGuides platform, “Staff and Students Guides” that help library staff to create easily and efficiently new guides. Likewise, this chapter will explain how the two new implemented products have enhanced information management and library services at Haaga Helia UAS Library, and detail how the integration of the online booking system and LibGuides provide the library with beneficial advantages and time saving.

5.1 Success of setting up online room booking system

The first primary goal of this thesis project was to fulfil Haaga Helia library requirements by creating an online room bookings system with LibCal platform for the three study rooms available at Pasila campus. This goal was successfully achieved and the online reservation system has been implemented and published on Haaga Helia website and MyNet in spring semester of 2015. Likewise, the students have quickly started utilizing it to self-book the study rooms from any computer on or off campus, in order to perform their group projects and accommodate their team discussion during the library opening hours. (Figure 23)

HAAGA HELIA Group Room Bookings’ system can be accessed through Haaga Helia EZproxy at https://idp.haaga-helia.fi/idp/Authn/UserPassword by either navigating the library web pages or facilitated through QR code displayed on each study room.
In addition, a documentation on “How to use and maintain LibCal’ room bookings’ system was delivered to the library manager and staff.

Figure 23: Haaga Helia old and new rooms’ booking system

5.1.1 Library staff satisfaction

From the library management point of view, the library manager, “Eeva Klinga-Hyöty”, has clearly expressed her satisfaction about the new reservation system and how it is easy to maintain it and how efficient it has become to control the rooms’ usage. In addition feedback questionnaire was sent to the information assistant “Pia Päivänsalo” who is assigned to maintain and control the system and below are her replies:

When the author asked how the new online bookings’ system has enhanced the library services:

“Students can reserve group rooms or check the availability even when they are not at the school.” (Pia Päivänsalo, information assistant at Pasila campus, 28.5.2015)

The information assistant agreed that the new system helps a lot to control the rooms’ usage and it is extremely easy to maintain:

“As students have to fill in group members’ names, it may prevent reservations made for one person only. In addition, only Haaga-Helia’s
students can reserve the rooms. Earlier anyone could make a reservation. And we can check the reservation situation from our computers, we don’t have to go and check every room’s list.” (Pia Päivänsalo, information assistant at Pasila campus, 28.5.2015)

The author wanted to know how the difference between the new online room bookings system and the old system, the information assistant believed that the new system is better that the old paper sheet based system:

“It is clear advantage for students that they can use the reservation system anywhere. Yet, some students have said that they prefer old system as it was so easy to use (they did not have to use computers/mobile phones etc. and did not have to log in and send emails). It’s easier for staff to maintain and set availability for longer periods.” (Pia Päivänsalo, information assistant at Pasila campus, 28.5.2015)

The information assistant affirmed that the new online system adds value to the library:

“It is much easier to take library’s exceptional opening hours into account long beforehand. The rooms are only available for Haaga-Helia’s students.” (Pia Päivänsalo, information assistant at Pasila campus, 28.5.2015)

5.1.2 Students’ satisfaction

After more than three months of using the new online booking system, the author decided to make an online survey because she felt that such survey could offer more accurate snapshot of the new system from its first users. The survey questions were sent to Pasila campus students through their emails’ school explaining the purpose and inviting them to participate and give their level of satisfaction. A total of 41 students responded to this survey, since the survey was administrated in a short time due to the limited timeframe needed to finalize this project and the limited contract of the author with the library.

Various responses were received, and the majority of respondents stated that they are satisfied or very satisfied (30 students) with the new booking system, because it is: easy to use, save time, guarantee space after reservation, user friendly and more practical compared to the old system. In addition, the majority of students (31 students) agreed that
the new system adds value to the library and enhances its services. Furthermore, it is faster and accessible from anywhere.

However, other students claimed they are not familiar with the new system and they do not know that this system exists (11 students). Therefore, they suggested to properly advertise the launching of such beneficial system in the library to adequately promote it and make it known to all students. The questions and the results of this survey are attached in Appendix 5.

5.1.3 LibCal STAT results

LibCal STAT feature was used to check the three study rooms’ usage statistics. View how often rooms were reserved, for how long they were occupied and also break down reservations by months to find out which room and when it is in high demand. To analyse these criteria, the figures below were (Figure 24, and Figure 25) obtained from LibCal STAT:

Figure 24: LibCal - Room Booking Statistics

During the usage period, from 12th of January 2015 to 30th of May 2015, the above figure, LibCal-Room Booking Statistics, shows how many hits each of three rooms had monthly and the total hits of the three rooms.
The QR code hits' number is not automatically calculated by the system, because Haaga Helia library does not directly use the QR code provided by LibCal platform; however, the library has used an external QR code generator, since its EZproxy extension has added to the QR code provided by the LibCal platform.

The number of HAAGA-HELIA Library Bookings hits has slightly increased during the cited period and this means that students are getting more and more familiar with the system and start to use it. The small decrease during the month of April and May, occurred because most of students were more focused on their individual studies and exam. (Figure 25)

![Figure 25: Haaga Helia room bookings details (generated in May 2015)](image)

From the table above, the author noticed that the number of occupied hours for room 3205 was 519 and this room was the most occupied by students during the mentioned period. This can be explained that the room is the only one that is equipped with a smart board necessary for facilitating team works and tasks.

5.2 Success of creating LibGuides

5.2.1 How LibGuides enhance library information management and services?

Library staff are working to create new guides that are converted from the old ones or building completely new ones. This is a strong indication of the simplicity of use of the LibGuides platform. (Yeo 2010, 53)
5.2.2 Library staff satisfaction

The library manager and information specialist members showed complete satisfaction about the work done and they explicitly expressed their appreciations about the author template guides’ versions, in addition they agreed to start using them to create all the library guides in order to maintain consistency. Moreover, during the training sessions the library staff stated how easy and fast it was to create guides from ready templates with LibGuides platform. In addition, the new guides, with their user-friendly interface and their consistent pages, were easily maintained. Another important point is that Librarians with the new platform, have the possibility to collaborate on any guide in real time by speeding up guides’ creation rather than creating individually the guides or sharing it and then combining the results.

Also, adding Web 2.0 content and features was very simple and LibGuides’ platform characteristics were exactly what the library was looking for. For example, searching guides after adding the equivalent Subjects associations and Tags, as a result, this has met the needs of the library staff and students who wished to find quickly what they search for in interacting way. More importantly, the new A-Z databases list helps staff and students to quickly find the needed material.

In addition to the previous opinions of the library manager and staff, the author had also gathered feedback by sending questions to the library key personnel who believe that the project has been successful. Below are the replies:

When the author asked the library members how they found the created guides templates, all the members stated that they were a success and very helpful to creates new ones:

“Very helpful. It's been easy to start creating new guides based on the templates.” (Tuula Laurila, information specialist at Malmi library campus, 19.5.2015)

“They were a good starting point for our LibGuides.” (Eerika Kaasalainen, Information specialist, Haaga library campus, 22.5.2015)

“It was easy to use the created guides as templates.” (Jaana Kurko, Information assistant, Pasila library campus, 22.5.2015)
The library information specialists and assistant believe that the guides’ templates were a good starting point after integrating LibGuides template for the first time at Haaga Helia library:

“The templates have given us a good starting point. They have helped us create a unified look for the various guides. They've also given us an idea of all the different elements available in LibGuides.” (Tuula Laurila, information specialist at Malmi library campus, 19.5.2015)

“It was helpful to have a Haaga Helia layout.” (Eerika Kaasalainen, Information specialist, Haaga library campus, 22.5.2015)

“Those really helps.” (Jaana Kurko, Information assistant, Pasila library campus, 22.5.2015)

The library information specialists and assistants confirmed that the training sessions, presented by the author, were really useful and helped to have a general understanding about what all the LibGuides is about:

“The training session was really helpful. We were introduced to all the necessary functions of LibGuides. It was easy to start creating new guides after the training.” (Tuula Laurila, information specialist at Malmi library campus, 19.5.2015)

“Really, were very helpful.” (Eerika Kaasalainen, Information specialist, Haaga library campus, 22.5.2015)

“I got useful information on those matters.” (Jaana Kurko, Information assistant, Pasila library campus, 22.5.2015)

The library information specialists and assistants agreed that the new guides are very user-friendly and easily manageable compared with the old ones:

“The library hasn't had similar guides before. We've only had the public library website (www.haaga-helia.f/library), the MyNet pages for students and the Intranet pages for personnel. In addition, we have had some pdf guides (Staff Guide to Library and Information Services and a brochure for new customers) available in print and on the website. They have been very labor-intensive to update, print and distribute. The LibGuides are much easier to
update. And it's easier to utilize existing LibGuides in creating new guides for various purposes.” (Tuula Laurila, information specialist at Malmi library campus, 19.5.2015)

“I believe they are easier for our customers to use and they look visually better.” (Eerika Kaasalainen, Information specialist, Haaga library campus, 22.5.2015)

“LibGuides is excellent innovations and those are user-friendly to customers. That must be the reason why those are so popular nowadays.” (Jaana Kurko, Information assistant, Pasila library campus, 22.5.2015)

The library information specialists and assistant believed that the LibGuides will enhance the library services and information management:

“I think LibGuides offers a good and easy platform for several types of library guides. The guides are easy and quick to produce for various needs. We hope that library users - students and personnel, will find the guides easy to use. We've heard experiences from other libraries who have started using LibGuides, and the comments have all been positive. Library users seem to like the guides. I hope our customers will also like them and find them useful.” (Tuula Laurila, information specialist at Malmi library campus, 19.5.2015)

“Hopefully they will help us to serve our customers better. Customers will find the information needed easier and we have a more effective tool to serve.” (Eerika Kaasalainen, Information specialist, Haaga library campus, 22.5.2015)

“I hope that those will help on information search and in all kinds of tasks.” (Jaana Kurko, Information assistant, Pasila library campus, 22.5.2015)
5.3 Learning outcomes

The author was very fortunate to work as a team member at the library of her university, Haaga Helia university of Applied Sciences, and participated actively in enhancing its services and information management. Not only was it an amazing work experience taking part in adopting and implementing entirely new platforms such as LibCal's online booking system and LibGuides, the author has gained an immense working experience as an information specialist by being the pioneer of launching an IT project from scratch, and successfully reaching the desired goals.

Time management during this thesis project was not an easy task, especially when the thesis process was interrupted by summer holidays. The writing part of this thesis has consumed most of the time dedicated to this project. The author has come to the conclusion that it is of crucial importance to carefully plan for any new IT project and to start as earlier as possible gathering requirements, documentations, resources and making interviews sooner. However, even with the thesis project, the author was able to achieve the main objectives during her employment.

Finally, the author is very thankful to Haaga Helia library management to be given the chance to take part in such an important project to both the library as well as to Haaga Helia UAS. Special thanks is owed to the friendly and supportive staff members of the library.

5.4 Further work

Various potential features, of both LibCal’s and LibGuides platforms, were left out of the thesis project because of the author limited contract with Haaga Helia library and also to maintain the size and the content of such a huge project reasonable.

The promotion of the LibCal online room booking system and the guides is important to increase awareness that there are such new resources available to the students and librarians as well. In order to increase discoverability, Librarians should promote the booking system and the guides when they interact with the students during library training classes, in the classroom and also when the students make inquiries at the desk via emails. In addition, the created guides on LibGuides are automatically indexed by Google and can be easily found when using Google to search for them. The library website and MyNet are also another important tool that should not be overlooked to promote the guides.
The aim of the library manager is to shift most of the old subject and the teaching guides to LibGuides platform, and this is of course will be performed by library staff on daily basis in a collaborative way to create focused and intuitive guides. In addition, setting up the LibGuides homepage as the landing page for all the created guides and aggregating the guides in meaningful groups on the homepage, which will help users easily find what they search for. Furthermore, mapping LibGuides and LibCal will facilitate future use of library services.
6 Summary

Haaga Helia University of applied sciences library has implemented LibCal and LibGuides platforms as new platforms to enhance its information management and library services. LibCal’s is adopted to create Haaga Helia Library Group Study Room Bookings system at Pasila campus to automate its old booking system that was based on paper reservation form. Currently, Haaga Helia Pasila campus library is using the new booking system that has helped the library staff to keep control of the usage of the study rooms and has gained popularity and satisfaction among the university students.

LibGuides platform is integrated to create subject and teaching guides for both library staff and students. The implementation process of LibGuides was easy once the initial guides’ templates were built up and the creation of new guides was much easier. Consequently, the guides’ templates shorten the process length for creating new guides.

When developing a new guide, librarians can copy or reuse the content from the guides’ templates or further from another guide done by another librarian. The library staff, who are actively engaged in creating the content guide, felt empowered to create and maintain these new guides from the already created templates and with the use of LibGuides platform. This means that the templates’ guides met the requirements of ease of creating new consistent, dynamic and intuitive ones in a short time. Of course, the requirements were met with the use of the LibGuides Web 2.0 platform that includes modern functionalities like search and embedded widgets, RSS feeds, tags, etc.

The author believes that this thesis project has entirely achieved its main objectives and considers the obtained results as a complete success, and that she has completed them to the best of her ability. The author work experience as a library team member, the various documentation and basic tutorials the author was provided with during her work placement at Haaga Helia library, the online questionnaire surveys, the different interviews the author was able to obtain from the library key members alongside the thesis project and Springshare customer service contact, were highly beneficial to a successful project completion.

In addition, the author deeply believes that the migration to LibCal's online room booking system and LibGuides was an ingenious decision by Haaga Helia library management. And without any hesitation, the author can state that the answer to the question “Does the integration of the LibCal and LibGuides platforms enhance Haaga Helia library services and information management?” is “Definitely yes!”
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Appendices

Appendix 1. HAAGA HELIA Online room bookings’ steps

This material defines essential steps on how to self-reserve a study room process by students.

HAAGA HELIA Room Bookings’ System Reservation Guide

1. Haaga Helia room Bookings’ system

Haaga Helia library at Pasila campus has 3 Study Rooms available for use during the library opening hours by Haaga Helia students. There are two methods to book the study rooms:

- By browsing Haaga Helia website and using the online bookings’ system URL available there, or
- Directly, by using QR Code available on the door of each room

NB: The online room bookings’ system is available on Haaga Helia network and also through remote use.

2. Customer View:

![Image of the customer view](image)

**Figure 1:** Customer (public) view

- **Green time slots**: are the available time to be reserved by librarian customers.
- **Blue time slots**: are time slots where booking room is not available or already booked.
3. **Online self-book room reservation process**

On the public view (customer view), customers can select and then book from 1 to 3 time slots available on the Booking Room Calendar after choosing the suitable day and time for their reservation. To book a time slot(s), customers need to perform the following steps:

1. Click on your desired time slot
2. Remark that rules’ text is appeared under important
3. Read the library rules, if you agree click continue
4. Fill the form fields

![Reservation form](image)
NB: You will receive shortly a confirmation email to confirm or cancel your booking.

![Figure 4: Customer view after submitting your booking](image)

5. Email checking

Within 30 minutes after receiving the confirmation/cancellation email, you can confirm your booking by clicking on the confirmation email, or you can cancel it by clicking on the cancellation email.

![Figure 5: Confirmation/Cancellation email](image)
NB: If you confirm your booking using the received confirmation link, you will receive a confirmation email (Figure 6). However, you will receive a cancellation email only if the system cancel your reservation.

![Confirmation email](image)

**Figure 6**: Confirmation email
Appendix 2. Blueprint guides: library Staff and Student guides

- Staff guide:
  Admin view:

Public view (With HAAGA HELIA banner)

Home page
Library services page that includes subpages
E-materials page

E-materials page showing links to various resources such as Nelli, ebrary, and RefWorks.

RefWorks page

RefWorks page showing information on how to use RefWorks and how to cite sources.
Teaching resources page

Linking resources in Moodle page
Student Guide:

Admin view (Home page:)

[Image of LibGuides home page]

- Click to enter a description!
- Last Updated: Wed 10 May 2016 2:46 PM
- URL: http://libguides.haaga-helia.fi/student-guide
- Subjects: Degree programmes, E-books, Library services, Helsinki, Theses & Dissertation
- Tags: article, campus, database, e-book, express, FAQ, feedback, help, library card, magazine, blog, remote use, services, study space

- Library card: You can obtain a library card by presenting picture ID and filling out a customer information form. Library cards are personal and the card owner is responsible for all materials borrowed using their card.
- Please inform us immediately if you lose your card. Replacing a lost card costs 2 €.

[Image of library opening hours]

Welcome to Haaga-Helia Library

Haaga-Helia Library is a modern and versatile library serving the university of applied sciences. The library services and collections are available for everyone. Our goals is to support our customers in their studies, teaching and research activities.

Library opening hours link:

Visit the library during opening hours and make sure not to take materials from the library without loaning them using a loaning machine or dealing with a member of library staff.

If you want to visit the library or bring a group of students to learn about the Library outside its opening hours, please make sure to arrange the matter in advance with the library.
Public view:
Home page
Studies and services page

Library services page
E-materials page

Facilities and equipment page
Appendix 3. HELIA HELIA Information specialist first guides

The following guides were done by Tuula Laurila, Information specialist at Malmi campus by using the Blueprint guides as a templates.

Using e-resources in teaching guide (<http://libguides.haaga-helia.fi/using_e-resources_in_teaching?userLang=en>):
Library and information services for staff guide (http://libguides.haaga-helia.fi/library_and_information_services_for_staff?userLang=en):

[Image of the library's website]

- Library card
  - Apply for your library card online and come and use the library. If you need to Haaga-Helia, contact your unit's information specialist or librarian to arrange a library orientation session and pick up your library card. Remember to bring a photo ID with you.
  - Library cards are personal and the card owner is responsible for all materials borrowed using the card. For this reason, we do not recommend that you loan materials borrowed using your card to students, for example.

- Borrow, renew, make reservations
  - Loans for personnel:
    - longer loan period of 6 months
    - no renewal fees
  - Materials should be returned to the library before their due date if they are no longer needed. In this way, our materials are available for use by all library customers.
  - Make a reservation or request books from other Haaga-Helia libraries if necessary.

- Visiting the library
  - Library's opening hours and contact information:
    - Visit the library preferably during opening hours. Please make sure not to take materials from the library without having them using a borrowing machine. If you are a member of the staff, you may want to visit the library or bring a group of students to learn about the library outside its opening hours. Please make sure to arrange the matter in advance with the library.

- Updating and renewing your loans
  - You can sign in to your account and renew your loans on Haaga-Helia's front page. Loans may be renewed the number of times the reservations have been made. Sign in to access your account information using your library card number, your name, and the PIN code 12345. You can change your PIN code when you sign in for the first time.
  - Return materials to:
    - any of the Haaga-Helia campus libraries
    - drop box outside the library door (see when the library is closed)
    - library's mail box

[Footer information: Last Updated: May 10, 2017 5:15 AM | URL: http://libguides.haaga-helia.fi/library_and_information_services_for_staff | Print Page]
Appendix 4. Haaga Helia Library Services and Information Seeking Survey & Responses

This appendix includes the questions and their responses of the online survey that was used to gather requirements and information about important content that students want to find it on the Students LibGuides.
What kind of library information do you think is very important to know as a new student/customer? *

- Library collection content
- Information retrieval training
- Presentation of different sources
- Available databases (Helia, Library, etc.)
- Library facilities and equipment
- Library card, loans, reserving, etc.
- Others, please specify below

How successful are you usually in finding information about the library? *

- High
- Medium
- Satisfactory
- Not at all

Have you used a guide for finding information on the Haaga Helia website? If YES for what purpose? If NO why? *

What sort of problems and time delays are you encountering in finding information? *

Do you ask help from library staff when you face a problem in your search? If no why? *

- Yes
- No

How do you find the available information on Haaga Helia Library? *

- Well organized
- Mixed
- Complex
- Easy to follow

What do you value most about the library services and collections? *


How would you rate each of the following library services and resources? *

<table>
<thead>
<tr>
<th>Service/Metric</th>
<th>Excellent</th>
<th>Good</th>
<th>Fair</th>
<th>Poor</th>
<th>Don't Know</th>
</tr>
</thead>
<tbody>
<tr>
<td>Library websites on HHI website</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Information organization</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Seeking information time</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Ease of access to library information</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Webpages consistency</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Availability of library webpages</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Reliability of information</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Satisfaction of information format</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

How would you rate each of the following? Where 5 is the highest rate *

<table>
<thead>
<tr>
<th>Rating</th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
</tr>
</thead>
<tbody>
<tr>
<td>The more information I get, the more interested I become in the information topic</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>User of library staff help</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>How important is it for you to find information?</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Seeking time usually takes up more time than I assumed</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Well-organized and attractive format of info</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Heiho</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Heiho portal</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

How could the library information searching be improved? *

How often do you use Heli portal to retrieve information? *
- Daily
- Sometimes
- Never

Please comment on Heli library services you would like to be offered in the library that are currently not available

Do you think it would be helpful to have separate library guides for each topic (area, student guide, staff guide, thesis guide, subject of study guide, degree guide, library facilities and equipment guide, etc.)? Are they helpful? *

Which guides do you consider the most important and would you like to see them on Heiho library webpage? *
Survey Replies:

108 responses

Summary

Age

- 17-20: 56 (50.0%)
- 21-30: 28 (25.4%)
- >30: 24 (21.7%)

Sex

- Female: 79 (72.6%)
- Male: 29 (26.4%)

Degree of study

- Management assistant
- Hospitality management
- Gaia
- Multilingual Management Assistant
- RA
- Management in Tourism business
- Restaurant

Hotel Management

- RUM18 Matkailun liikkeenjohtajan koulutusohjelma monimuoto 1 year
- RA
- Business Information Technology
- Hospitality
- Hospitality Management
- International business

- Business Information Technology
- Tourism management
- Bachelor
- Bachelor’s Degree
- Bachelor of Hospitality Management
- Tourism
- Bachelor of Hospitality Management
- International business
- Master's Degree
Which language do you use when retrieving Haaga-Helia Library information?

- Finnish: 66 (11.4%)
- English: 51 (47.2%)

How often do you visit Haaga-Helia Library?

- Daily: 8 (7.4%)
- Weekly: 41 (38%)
- Monthly: 57 (52.6%)
- Never: 2 (1.9%)

What information or sources do you regularly consult/search?

- Opening hours: 21 (19.4%)
- E-resources: 41 (38%)
- Books: 90 (80.7%)
- Magazine and journals: 22 (20.4%)
- Others, please precise below: 3 (2.8%)

"Which language do you use when retrieving Haaga-Helia Library information? " Answer: Swedish

Thesis

Possibility to use special class room for personal use (G207), Opened by library personel.

If I have time I read some magazines but usually I just come to loan books.

Thesis

Opening hours for holiday seasons

I only searched for books for my thesis but I usually do not use the library.
Do you ask help from library staff when you face problem in your search? if No why?

<table>
<thead>
<tr>
<th></th>
<th>Yes</th>
<th>No</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>94</td>
<td>14</td>
</tr>
<tr>
<td>%</td>
<td>87%</td>
<td>13%</td>
</tr>
</tbody>
</table>

I haven’t had such problem yet in which I would’ve needed help from the staff. But if such problem arises, I surely will ask, why not?
I want to figure it out myself.
I don’t have time.
I am mostly at home or I recognize my mistake when I don’t get the right results.
Concerning the problem above, I always find it eventually.
more convenient.

How do you find the available information on Haaga Helia Library?

<table>
<thead>
<tr>
<th></th>
<th>Well organised</th>
<th>Mixed</th>
<th>Complex</th>
<th>Easy to follow</th>
</tr>
</thead>
<tbody>
<tr>
<td>%</td>
<td>40.7%</td>
<td>31.5%</td>
<td>15.7%</td>
<td>10.7%</td>
</tr>
</tbody>
</table>

What do you value most about the library services and collections?

They have a good collection of books regarding school courses.
Available books
Versatility
The loans are very easy to manage through your personal page on the internet.
Ebooks and the extent of the collection.
Most valuable thing is we can even order books from other campus and it get delivered. I like the extra silent room to study. I’ve not explored the whole collection yet!
Possibility to book online but also can get personal help. the combo is good. Helsinki database and Nelli portals are very valuable.

Library webpages on HH website [How would you rate each of the following library services and resources?]

<table>
<thead>
<tr>
<th></th>
<th>Excellent</th>
<th>Good</th>
<th>Fair</th>
<th>Poor</th>
<th>Don’t know</th>
</tr>
</thead>
<tbody>
<tr>
<td>%</td>
<td>18.7%</td>
<td>59.3%</td>
<td>10.7%</td>
<td>2.8%</td>
<td>4.6%</td>
</tr>
</tbody>
</table>

Information organization [How would you rate each of the following library services and resources?]

<table>
<thead>
<tr>
<th></th>
<th>Excellent</th>
<th>Good</th>
<th>Fair</th>
<th>Poor</th>
<th>Don’t know</th>
</tr>
</thead>
<tbody>
<tr>
<td>%</td>
<td>10.2%</td>
<td>53.9%</td>
<td>18.8%</td>
<td>3.7%</td>
<td>3.7%</td>
</tr>
</tbody>
</table>
Available links on library webpages [How would you rate each of the following library services and resources?]

- Excellent: 18 (16.7%)
- Good: 51 (47.2%)
- Fair: 25 (23.1%)
- Poor: 3 (2.8%)
- Don't know: 11 (10.2%)

Reliability of information findings [How would you rate each of the following library services and resources?]

- Excellent: 32 (29.8%)
- Good: 68 (63.7%)
- Fair: 10 (9.3%)
- Poor: 0 (0%)
- Don't know: 8 (7.4%)

Satisfaction of information format [How would you rate each of the following library services and resources?]

- Excellent: 17 (15.7%)
- Good: 58 (53.7%)
- Fair: 24 (22.2%)
- Poor: 1 (0.9%)
- Don't know: 8 (7.4%)
Seeking time usually takes up more than assumed time [How would you rate each of the following? where 5 is the highest rate]

- 1: 4.6%
- 2: 10.5%
- 3: 50%
- 4: 15.6%
- 5: 3.3%

Well arranged and attractive format of info [How would you rate each of the following? where 5 is the highest rate]

- 1: 2.8%
- 2: 10.5%
- 3: 42.6%
- 4: 32.4%
- 5: 15.7%

Nelthia [How would you rate each of the following? where 5 is the highest rate]

- 1: 2.8%
- 2: 13.6%
- 3: 30.4%
- 4: 26.2%
- 5: 28.4%

Nelli portal [How would you rate each of the following? where 5 is the highest rate]

- 1: 7.4%
- 2: 17.6%
- 3: 35.2%
- 4: 25%
- 5: 14.8%

How could the library information searching be improved?

- I am pretty satisfied with the available information search system.
- Web page in order to find information
- Library could have their own separate website/blog with information about services, news etc.
- One platform for all would be way easier than many different ones and each operates in its own way.
- Dunno
- Maybe make the basic information easier to find.
- Clarified

How often do you use Nelli portal to retrieve information?

- Daily: 2.8%
- Sometimes: 59.3%
- Never: 38%
The more information I get, the more I get interested in the information topic. [How would you rate each of the following? where 5 is the highest rate]

Use of library staff help. [How would you rate each of the following? where 5 is the highest rate]

How important to find info easily and quickly. [How would you rate each of the following? where 6 is the highest rate]

Please comment on any library services you would like to be offered in the library that are currently not available:

- They could sell pencils and blank papers.
- All services I need are available.
- Combining sources to library services (for example searching source books).
- Very nice.
- Complimentary coffee for everyone, yes!
- Oh, and an e-book of Mohsenian & Mohsenian book Yumak налог. Or like a thousand more copies of it, as they are always unavailable or unmanageable.

Do you think to have separate library guides for each topic area (student guide, staff guide, thesis guide, subject of study guide, degree guide, library facilities and equipment guide, etc.)

- Yes, because it's pointless to browse guides through the stuff you don't need at the moment. The academic one gets to the information sought. The better the more.
- Please.
- I have not faced the need for that.
- Yes, it makes search easier.
- Yes maybe...
- Definitely. Makes it easier to find what you're looking for.

Which guides you find very important and you suggest them to be on Iliaua filia library webpages?

- Library facilities
- these guide, subject of study guide, degree guide
- I don't know what there is now...
-本身
- I don't really know because I haven't used any of the guides
- well, I haven't used those guides. I'm more like learning by doing
- not used many
Appendix 5. Study Room Bookings System: Students' Satisfaction

This appendix includes questions and their responses about students' satisfaction as first time users of the new booking system.

Survey questions:

**Study Room Bookings System: Students' Satisfaction**

This questionnaire survey is conducted as a last part of a Bachelor's thesis for Haaga-Helia University of Applied sciences, after the deployment of the new online room booking system for the group study rooms at Haaga-Helia library, at Pasila campus.

The questionnaire is designed to investigate your level of satisfaction of the new system and let you share your experience as first time users. Results of this survey support improving the library services and completing the thesis project. For this reason, I am honored to invite you to answer this questionnaire.

No personal data will be collected. Thank you for your collaboration!

* Required

**Overall, how satisfied or dissatisfied are you with the new online room bookings' system?**

- Very satisfied
- Satisfied
- Dissatisfied
- Very dissatisfied
How often do you use your online booking system?
- At least once a week
- A few times monthly
- Once a month
- I did not use the system so far

Which of the following words/sentences you use to describe your new booking system? select all the relevant ones
- Web-enabled devices (Possible to use it on devices)
- complicated
- Practical
- Unpractical
- Easy reservation form to fill
- Clear usage description and rules
- I have truly enjoyed using this system
- I felt confused when booking (complicated process)
- Simple to follow
- Point-and-click
- Mobile system (book from anywhere at any time)

Others

Does the system add value to the library services? *
- Yes
- No

If yes, please write what value do you think is added?
Do you agree or disagree, the online reservation process has improved and enhanced the library services?

- Strongly agree
- Agree
- Neutral
- Disagree
- Strongly disagree

Have you faced any problem when using the system?

- Yes
- No

If yes, please what was the problem?

How quickly was the problem resolved?

- Immediately
- Within one hour
- Within a day
- Within a week
- Not solved
When booking a room, which method do you prefer more? *

- Navigate the library webpage (link available on Haka Helia website)
- Use QR code (available on the rooms’ wall)
- Both

How do you compare your new online booking system with the old one (using reservation sheet paper)? *

Please, rate the following statements regarding the new system?

<table>
<thead>
<tr>
<th>Statement</th>
<th>Strongly disagree</th>
<th>Disagree</th>
<th>Neither agree, nor disagree</th>
<th>Agree</th>
<th>Strongly agree</th>
</tr>
</thead>
<tbody>
<tr>
<td>Easy to use</td>
<td>○</td>
<td>○</td>
<td>○</td>
<td>○</td>
<td>○</td>
</tr>
<tr>
<td>User friendly</td>
<td>○</td>
<td>○</td>
<td>○</td>
<td>○</td>
<td>○</td>
</tr>
<tr>
<td>Quick reservation process</td>
<td>○</td>
<td>○</td>
<td>○</td>
<td>○</td>
<td>○</td>
</tr>
<tr>
<td>Quick confirmation/cancellation</td>
<td>○</td>
<td>○</td>
<td>○</td>
<td>○</td>
<td>○</td>
</tr>
<tr>
<td>Save time (no need to send email or visit the library)</td>
<td>○</td>
<td>○</td>
<td>○</td>
<td>○</td>
<td>○</td>
</tr>
<tr>
<td>Enhance the project work (space reserved)</td>
<td>○</td>
<td>○</td>
<td>○</td>
<td>○</td>
<td>○</td>
</tr>
<tr>
<td>This service is exactly what I need</td>
<td>○</td>
<td>○</td>
<td>○</td>
<td>○</td>
<td>○</td>
</tr>
</tbody>
</table>
Based on your experience with our online booking system, would you recommend this service to a friend/student?

- Definitely will
- Probably will
- Probably will not
- Definitely will not

If you would like to share any additional comments, experience about the service, or suggestions for improving it, please enter them down.

Please, complete this survey by adding your age, gender, and degree programme.

Age
- 17 - 25
- 26 - 32
- > 32

Gender
- Female
- Male

Degree programme

Submit

Never submit passwords through Google Forms.
Questionnaire replies:

41 responses

Summary

Overall, how satisfied or dissatisfied are you with the new online room bookings’ system?

- Very satisfied: 22%
- Satisfied: 51.2%
- Dissatisfied: 14.6%
- Very dissatisfied: 12.2%

How often do you use your online booking system?

- At least once a week: 2.4%
- A few times monthly: 33.3%
- Once a month: 31.7%
- I did not use the system so far: 20.8%

Which of the following words/sentences you use to describe your new booking system? Select all the relevant ones

- Web-enabled devices (Possible to use it on devices): 29%
- User-friendly: 22%
- Complicated: 18.6%
- Straightforward: 11.6%
- User-friendly: 11.6%
- Easy reservation form to fill: 44.4%
- Clear usage description and rules: 30.9%
- I have truly enjoyed using this system: 11.1%
- I felt confused when booking (complicated process): 16.7%
- Simple to follow: 36.1%
- Point-and-click: 11.1%
- Mobile system (book from anywhere at any time): 6.3%

Others

- I did not even know about this kind of a system. But sounds good the long process
- At the first time it took time, but then I got used to it
- Have not used it so there’s really nothing that I can say.

Does the system add value to the library services?

- Yes: 31 (77.5%)
- No: 9 (22.5%)
If yes, please write what value do you think is added?

It is good you can see online when the rooms are available and make reservation. It just should be more simple to use.
User can book from anywhere. Not need to come in front of the room to check which user had to do before.
Good customer service
Simple and easy for staff.
That all the students would be properly informed about those kinds of possibilities.
It is a bit easier now
Peaceful place to do thesis or just to study.

Do you agree or disagree, the online reservation process has improved and enhanced the library services?

<table>
<thead>
<tr>
<th>Response</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Strongly agree</td>
<td>17.5%</td>
</tr>
<tr>
<td>Agree</td>
<td>32.5%</td>
</tr>
<tr>
<td>Neutral</td>
<td>37.0%</td>
</tr>
<tr>
<td>Disagree</td>
<td>2.5%</td>
</tr>
<tr>
<td>Strongly disagree</td>
<td>7.5%</td>
</tr>
</tbody>
</table>

Have you faced any problem when using the system?

<table>
<thead>
<tr>
<th>Response</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Yes</td>
<td>17.0%</td>
</tr>
<tr>
<td>No</td>
<td>82.5%</td>
</tr>
</tbody>
</table>

If yes, please what was the problem?

- Once I booked the room for a room meeting and the booking worked. But when it was our tour, we were asked that the library is closing (16:00). It was a public holiday. And no information about library closing. The person in the system wouldn’t even allow to book those rooms as the library is closed.
- The process is not straightforward. Clicking a few and will only show a time in orange, but does not state what to do next.
- No possibility to start reservation at 16:00. Though many lessons and half past.
- I try to reserve and should get email but did not receive any which cause confusion for me.
- I don’t have a device which needs bar code. The code in address is too long. A simple one or site where on the school website that completed link could be easily found would help.
- Sometimes the booking link is down.

How quickly was the problem resolved?

<table>
<thead>
<tr>
<th>Time</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Immediately</td>
<td>10%</td>
</tr>
<tr>
<td>Within hour</td>
<td>10%</td>
</tr>
<tr>
<td>Within a day</td>
<td>10%</td>
</tr>
<tr>
<td>Within a week</td>
<td>0%</td>
</tr>
<tr>
<td>Not asked</td>
<td>70%</td>
</tr>
</tbody>
</table>

When booking a room, which method do you prefer more?

<table>
<thead>
<tr>
<th>Method</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Navigate the library webpage</td>
<td>52.5%</td>
</tr>
<tr>
<td>Use QR code (available)</td>
<td>47.5%</td>
</tr>
</tbody>
</table>
How do you compare your new online booking system with the old one (using reservation sheet paper)?

It is better:

No, not this is the first time I hear about the online booking system. Of course it sounds great if you don't have to go to the library to book a room and cancellation could be maybe easier. Anything online is better - that doesn't require me to march into the library to make a booking if I am at a desk at the time.

I don't know.

Easier to do on any computer, no need to visit the library.

Easy to use [Please, rate the following statements regarding the new system?]

<table>
<thead>
<tr>
<th>Strongly disagree</th>
<th>Disagree</th>
<th>Neither agree nor disagree</th>
<th>Agree</th>
<th>Strongly agree</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>0</td>
<td>4</td>
<td>8</td>
<td>12</td>
</tr>
</tbody>
</table>

User friendly [Please, rate the following statements regarding the new system?]

<table>
<thead>
<tr>
<th>Strongly disagree</th>
<th>Disagree</th>
<th>Neither agree nor disagree</th>
<th>Agree</th>
<th>Strongly agree</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>0</td>
<td>4</td>
<td>8</td>
<td>12</td>
</tr>
</tbody>
</table>

Quick reservation process [Please, rate the following statements regarding the new system?]

<table>
<thead>
<tr>
<th>Strongly disagree</th>
<th>Disagree</th>
<th>Neither agree nor disagree</th>
<th>Agree</th>
<th>Strongly agree</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>0</td>
<td>4</td>
<td>8</td>
<td>12</td>
</tr>
</tbody>
</table>

Quick confirmation/cancellation [Please, rate the following statements regarding the new system?]

<table>
<thead>
<tr>
<th>Strongly disagree</th>
<th>Disagree</th>
<th>Neither agree nor disagree</th>
<th>Agree</th>
<th>Strongly agree</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>0</td>
<td>4</td>
<td>8</td>
<td>12</td>
</tr>
</tbody>
</table>

Save time (no need to send email or visit the library) [Please, rate the following statements regarding the new system?]

<table>
<thead>
<tr>
<th>Strongly disagree</th>
<th>Disagree</th>
<th>Neither agree nor disagree</th>
<th>Agree</th>
<th>Strongly agree</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>0</td>
<td>4</td>
<td>8</td>
<td>12</td>
</tr>
</tbody>
</table>
Enhance the project work (space reserved) [Please, rate the following statements regarding the new system?]

<table>
<thead>
<tr>
<th>Strongly disagree</th>
<th>Disagree</th>
<th>Neither agree nor disagree</th>
<th>Agree</th>
<th>Strongly agree</th>
</tr>
</thead>
<tbody>
<tr>
<td>2</td>
<td>5.3%</td>
<td>0</td>
<td>0</td>
<td>0%</td>
</tr>
<tr>
<td>10</td>
<td>20.3%</td>
<td>18</td>
<td>47.4%</td>
<td>0</td>
</tr>
<tr>
<td>0</td>
<td>0%</td>
<td>0</td>
<td>12</td>
<td>21.1%</td>
</tr>
</tbody>
</table>

This service is exactly what I need [Please, rate the following statements regarding the new system?]

<table>
<thead>
<tr>
<th>Strongly disagree</th>
<th>Disagree</th>
<th>Neither agree nor disagree</th>
<th>Agree</th>
<th>Strongly agree</th>
</tr>
</thead>
<tbody>
<tr>
<td>2</td>
<td>5.3%</td>
<td>4</td>
<td>10.5%</td>
<td></td>
</tr>
<tr>
<td>10</td>
<td>28.3%</td>
<td>17</td>
<td>44.7%</td>
<td></td>
</tr>
<tr>
<td>0</td>
<td>13.2%</td>
<td>5</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Based on your experience with your online booking system, would you recommend this service to a friend/student?

- Definitely will: 16 (44.4%)
- Probably will: 0 (0.3%)
- Probably will not: 1 (2.8%)
- Definitely will not: 1 (2.8%)

If you would like to share any additional comments, experience about the service, or suggestions for improving it, please enter them here:

1. The system is too slow when reserving places. I would be happy to wait, but it takes too long. I have received an email saying that a room has been reserved. Then, I would have to wait for another 24 hours before the next group reserve. Would you mind if I could reserve a room for my group? Today, I would not book a room without checking the availability of the space.

2. The system should inform users if a slot has been reserved or not. This would help me plan my schedule better.

Please, complete this survey by adding your age, gender, and degree programme:

**Gender**
- Male: 9 (37.5%)
- Female: 17 (72.5%)

**Degree programme**
- MS/PhD: 17 (72.5%)
- Bachelor of Management: 10 (42.1%)
- Management assistant: 1 (0.4%)
Appendix 6. Online room bookings' system QR Code.

This appendix presents the QR code that is used to book one of the three study rooms at Haaga Helia library at Pasila campus. It is available on the rooms' wall.

Ryhmätyöhuone
Vara osoitteessa

enintään kolmaksi tunniksi kerrallaan.

Group Study Room
Book online at

for a maximum of 3 hours per day.