Drive-thru Library Service in Korea

Seong-Kwan Lim* iD

School of Librarianship, Graduate School of Education,
Kyonggi University, Suwon, Korea
E-mail: kglimpro@kyonggi.ac.kr

ABSTRACT

The purpose of this paper is to analyze the case of 'drive-thru' services newly introduced and tried in libraries in Korea under the influence of COVID-19, and to develop and propose a service model so that this service can be continuously applied to all libraries in the future. Therefore, the method of study was selected and analyzed by selecting one of the representative libraries that provide related services in Seoul Special City, Incheon Metropolitan City, and Anyang City of Gyeonggi Province. In addition, a focus group interview was conducted with twelve people in charge to find a way to apply the drive-thru service to the library. As a result, the library's drive-thru service is a way to fulfill the library's original purpose of providing information materials while minimizing face-to-face contact with users. It was concluded that it is a suitable method for a library of complex buildings, where there is a lack of parking space. In addition, it was deduced that it may be one of the ways to use the library efficiently for office workers who are unable to use library services during the opening hours. Therefore, if the drive-thru service is implemented according to the developed model, it is expected to increase the library visit rate and data utilization rate.

Keywords: drive-thru, library service, library circulation, library circulation system, drive-thru service system

1. INTRODUCTION

The library, which has been established and operated since around 2300 B.C., provides functions related to knowledge, culture, education, and recreation, and emphasizes functions such as knowledge information, culture, education, and recreation in line with the needs of the development and change of the era. Furthermore, at the present time when the Fourth Industrial Revolution era has begun, the development of science and technology represented by artificial intelligence has created a ubiquitous-based smart library to create a much faster and more convenient operating system than before and is working on services.

This change can be said to be the result of efforts not to be dismissed in society, thanks to the necessity and importance of being a necessary place for users, as a library is also an evolving organism. This is because, in accordance with the change of the times, if the library does not develop and implement new services, it will be disregarded by users and eventually shunned. In "The future of employment report: How susceptible are jobs to computerization?", published by Frey and Osborne (2017) at Oxford University in the UK, the prospect of losing librarianships among 702 jobs in the United States is ranked 360, which is a result of this crisis. Since this report focuses on jobs that are likely to be replaced by artificial intelligence, there is no need to broadly interpret that the results themselves are the future of the entire library. This is because the library's role and function of preserving important materials will be maintained regardless of any changes in the future. However, I do not want to see the library turned into a storehouse of books with various artificial intelligence services being implemented instead of a librarian.

In the meantime, much research has been done on library services worldwide. Looking at the results, it can be seen that library services have also made remarkable developments with the development of the times, and it can be predicted that further changes will be made. However, studies on 'drive-thru' services in libraries have yet to be seen. Therefore, in this study, it is meaningful to propose a drive-thru service as a method of library service suitable for the present era.

2. LITERATURE REVIEW

2.1. Public Library Service

According to the International Federation of Library Associations and Institutions (IFLA)/UNESCO Public Library Declaration, public libraries are local information centers that make all kinds of knowledge and information readily available to users. It is a fundamental human right to have access to information and to know it, and now more information is available than ever before. As public services are open to everyone, public libraries not only provide access to a wide variety of information resources, but also play a very important role in collecting, organizing, and utilizing information. Therefore, it can be said that the value of public libraries is assessed according to the services they provide to the community (IFLA, 1994).

Therefore, public libraries provide a variety of services to satisfy the needs of users not only within the library but also within the local community. Libraries should make it easy for everyone to access library services, including those who have difficulty reading printed materials. The services that users can easily access though various forms, media, and the Internet include lending books and other materials for in-house use, information services using printed materials and electronic media, readers' services including reservations, community information services, user education including text-learning program support, programs and events, blogs, mobile phone text services, reference services, and publicity using modern communication tools such as social networking (Koontz & Gubbin, 2010).

2.2. Drive-thru Services

'Drive-thru,' a way to purchase products while in a car, is a service strategy that has spread all over the world since it first started in the United States in the 1930s. The Grand National Bank in St. Louis, a major US financial hub, opened the world's first deposit-only drive-thru window. Later, in 1974, the Red Giant Hamburg in Springfield, Missouri, introduced drive-thru service for the first time in a fast-food restaurant. McDonald's, which has many chain stores around the world, started its first drive-thru service in 1975, and in Korea in 1992 at the McDonald's Busan Haeundae branch.

There is also the concept of "click and collect," which is similar to drive-thru, but is also used interchangeably with "order and collection" or "pickup order." Click and collect allows customers to receive products directly from designated locations outside of their homes. It has become a new and more powerful purchasing method for many people in the current era where online shopping is becoming more and more ubiquitous (even without the influence of the COVID-19 pandemic). According to Dalin-Kaptzan (2020), click and collect, also known as online

purchase and in-store collection, is a form of omni-channel flow in which shoppers buy online and receive orders from physical locations instead of having items shipped to them. The pickup location is usually a local retail store, but it could also be a post office, a special purpose locker, or another retail store.

When the world was confused by the influence of COVID-19 in 2020, Korea was the first nation in the world to implement a screening clinic that can collect a sample from the nose and mouth, measure body temperature, and disinfect while riding in a car. The drive-thru clinic was evaluated as an innovative idea by major media outlets around the world such as CNN and Agence France-Presse. Since then, the drive-thru screening clinic has become a COVID-19 response model in many countries around the world, and has been extended to funerals, weddings, and library services aimed at avoiding or minimizing face-to-face contact. It was possible to increase the convenience of service by allowing citizens to continue to use the library.

Most of the studies on drive-thru services that have been published have been related to banking, fast food, coffee, and pharmacy services, but there are none about libraries. For this reason, the literature review here focuses on drive-thru services related to banks, fast food, coffee, and pharmacies, and aims to find ways to apply them to library services. We also looked at key resources for libraries in responding to the coronavirus pandemic provided by IFLA, as well as news articles about public libraries in the United States responding to the COVID-19 situation.

Morcos et al. (1992) stated that the employees working in the drive-thru window are the main link between the company and the customer who wants convenient service, and a factor that has a great influence on the reputation with customer return decisions. Therefore, it was necessary to set consistent educational standards for improved job performance accuracy and kindly services.

Song (2002) presents the problems of the existing McDonald's drive-thru system and proposes a multimedia drive-thru system as a solution, and provides an exemplary usage process of a new system, a content flow chart, and conditions for graphical user interface design.

Allon et al. (2011) said that drive-thru stores are a system that allows busy consumers to receive products without getting out of their cars and it is a system that provides consumers with conveniences such as reducing waiting times and travel.

See also Kucukusta et al. (2015), who said that consumers can feel usefulness from the convenience provided with drive-thru, and this usefulness helps them to form a

positive attitude towards the products or services.

Abu Farha et al. (2017) surveyed 226 pharmacists in Jordan for their awareness of drive-thru services. As a result, 85.5% of pharmacists said they knew drive-thru service, but only 27% said they would be willing to do it. The reason is that the drive-thru service would make them feel like a fast-food worker, which would negatively affect the job image of a pharmacist. However, pharmacists working in chain community pharmacies were more aware than independent communities were, and Jordan's pharmacists also needed to adopt the service better because the service system was well established worldwide.

According to IFLA's Key Resources for Libraries in responding to the Coronavirus Pandemic, which was last updated on October 13, 2020, libraries around the world face very different circumstances, from widespread maintenance of full services to complete closure. Among them, the methods used by countries with minimal services include fully closing spaces and only offering the possibility to borrow or return books at a counter, or via a book drop. Some countries are experimenting with drive-through pick-up and return of books. Others are only allowing visitors who have pre-booked (IFLA, 2021).

According to the results of a survey with 2,545 United States public libraries conducted by the Public Library Association (2020), 98% of the libraries were closed due to the COVID-19 pandemic. Overall, online renewal policies expanded by 76%, online services such as e-books and streaming media by 74%, and expanded access to digital resources, such as operating a virtual program, 61%. In addition, new services were developed and provided to respond to the COVID-19 situation, such as making curbside pick-up available possible, with 22% of libraries surveyed.

As reported by KSN in Wichita, Kansas during their December 17, 2020 newscast:

> As the pandemic continues to affect the way our community operates, Wichita Public Libraries are finding ways to better serve their readers. In particular, the Westlink branch, the busiest branch in the city, has implemented a new curbside drive-thru system starting last Thursday. The library opened up designated areas for material collection, returns, and printing services, with the staff in charge coming out to support users' requests (Montero, 2021).

As a result of reviewing the literature as described above, drive-thru is a service that helps to form a positive

attitude because it is a system that provides consumers with conveniences to reduce waiting time and movement. However, librarians might consider that the drive-thru service compares them to fast food workers, bestowing a less professional view upon them and negatively affecting further library applications.

3. METHOD

The purpose of this paper is to analyze the case of drive-thru services newly introduced and tried in libraries in Korea under the influence of COVID-19, and to develop and propose a service model so that this service can be applied to all libraries at all times in the future.

Therefore, in order to achieve the purpose of the study, each of the representative libraries that perform related services in Seoul Special City, Incheon Metropolitan City, and Anyang City of Gyeonggi Province was selected for analysis of the operation cases. The reason for the selection of these sites for the analysis of operational cases is that the three regions are the metropolitan areas centered on the capital of Korea, and each library is a place that actively implemented drive-thru services on behalf of the city.

A focus group interview, which was the method chosen for this study, modified the question method suggested by Krueger and Casey (2009). Four types of introductory, main, and closing questions were conducted utilizing an open-ended method of questioning. Analyses of these questions are part of the method suggested by Morgan and Scannell (1998). The focus group interviews were conducted in real time on March 12, 2021 using the ZOOM program (a cloud-based video conferencing service program). The questionnaires were distributed in advance via e-mail, with a total of 12 librarians – one in charge of planning the drive-thru service for each library, and three other librarians involved with the continuing operation of the service.

4. ANALYSIS

4.1. Case Analysis 1: Seoul Special City

As of 2019, there are a total of (180) public libraries in Seoul. Among them, drive-thru service cases were examined focusing on the Namsan Library, belonging to the Seoul Metropolitan Office of Education. Table 1 summarizes some of the drive-thru service promotion plans implemented by Namsan Library.

Looking at drive-thru service cases of Namsan Library, summarized in Table 1, it can be seen that the loan period was extended from two weeks to six weeks a month while maintaining the existing service system. In addition, although existing members can use it, it is also possible to confirm that they tried to minimize face-to-face use while not allowing new members to sign up or reissue due to loss of ID cards. Therefore, the drive-thru service of the Namsan Library has had a positive effect in that the citizens can continue to read and spend free time even while the *force majeure* called COVID-19 can be expected. However, in order to use the service, it is necessary to make a reservation in advance on the Internet homepage, so there is a limitation that it cannot be used for people who do not have a computer or do not know how to use the Internet.

Table 1. Drive-thru service case of Namsan Library

Service appellation	Weekly visit reservation loan
Purpose	The purpose is to help citizens in the COVID-19 situation regain the will to overcome themselves with high quality books.
Period	Monday, March 9, 2020 until reopening after the serious phase of COVID-19.
Time	Monday-Friday 13:00-17:00 (Friday-Sunday reservations will receive Mondays)
Promotion policy	a) Existing members can only make weekly visit reservations. b) You can apply for a weekly visit reservation loan through the Namsan Library website. c) The number and duration of loans are in accordance with the regulations on reading and lending data at Namsan Library (7 books, 4 non-books, 6 weeks of loan period). d) Only books booked the day before can be borrowed, and if the book is not borrowed by the day after the reservation, it will be returned. In addition, if you do not borrow more than 3 times after booking, use is restricted for 30 days. e) In the case of weekly visit reservation loan operation, information materials, reading culture promotion and staff are involved.
How to apply	Search for library website data → Click on the material to be booked → Apply for a weekly reservation loan service (user) → Separately provide user application data (library) → Receive the ID of the person in charge on the following day (user)
Return	Return to library drop box or staff

4.2. Case Analysis 2: Incheon Metropolitan City

Incheon Metropolitan City has a total of 53 public libraries as of 2019. Among them, drive-thru service cases are planned by the Michuhol Library, which represents 44 libraries belonging to the local government, and are divided into five branches (Cheongna Lake Library, Cheongna International Library, Yeongjong Sky Library, Majeon Library, and Songdo International Organization Library). We focused on the contents carried out together. Table 2 summarizes some contents of the drive-thru service promotion plan planned by the Michuhol Library and implemented with five branches.

Looking at the cases of Michuhol Library and drive-thru service of the five branches, summarized in Table 2, there is a feature that utilizes the smart library located in the Cheongnaru parking lot of Cheongna Lake Park. The smart library is an unmanned library system where anyone can conveniently borrow and return with a device such as a vending machine. Since about 400 books can be stored in the smart library, pre-booked books are put in a designated field, and the latest books or best-selling books are placed in other fields. The strategy that made it possible to borrow or return is outstanding. In addition, the part that made the reservation application available on the library homepage and the mobile app is considered to be the consideration that made it easier for more users to use the drive-thru service. However, the total number of loans including the drive-thru service is five, and the period of the loan is 14 days, which is an unfortunate part considering the current social situation.

4.3. Case Analysis 3: Anyang City of Gyeonggi Province

As of 2019, in Anyang City of Gyeonggi Province, there are a total of ten public libraries belonging to local governments, and all libraries provide drive-thru services. Table 3 summarizes the main contents of the drive-thru service commonly provided by Anyang City Library.

If one looks at the case of the drive-thru service of Anyang City Library, which is summarized in Table 3, there is a feature that users must use e-mail, not a homepage or mobile app, to apply for reservation. Therefore, the process of downloading and filling out the form and sending it back to the e-mail can be cumbersome. In addition, since it is not operated in an integrated manner, it is possible to apply to each library, so one can use the nearest location, but the library may have different materials, so there may be limitations on use. However, there is also a difference that the width of time that can be received is the widest.

As mentioned above, as a result of looking at drive-thru service cases conducted by Namsan Library of Seoul Metropolitan Office of Education, Michuhol Library of Incheon Metropolitan City and its five branches, and Anyang City Library of Gyeonggi province, the service is currently being implemented alternatively due to COVID-19. It was found that the system has a level that can be applied at any time. However, it was also concluded that in order to provide more effective services, it is necessary to find detailed plans for each region or library.

Table 2. Drive-thru service cases of Michuhol Library and 5 branches

Service appellation	Cheongna Book Drive
Period	From Wednesday, April 8, 2020 until re-opening after the serious phase of COVID-19
Time	Monday-Friday 9:00-18:00 (Friday application books will be received on Monday; no application on weekends)
Promotion policy	a) Existing members can use Cheongna Book Drive service. b) To apply for the Cheongna Book Drive service, you can search for materials on the library's website and mobile app, and then apply for a reservation if it is available. c) The target data is limited to the data provided in the general data room and the children's data room. d) The number of reservations is 2 per person and is possible when the total number of loans is within the range of 5 books for 14 days. e) Only books booked on the previous day can be borrowed, and after the reservation is applied, check the identity of the member at the rental location from 13:00 to 17:00 the next day, and receive it. f) Books not received until the next day after reservation are automatically canceled, and rebooking for the same book is possible after one week.
How to apply	Search for materials on the library homepage/mobile app → Check for available loans → Apply for the Cheongna Book Drive service (user) → Submit the user application data to the smart library (library) → Receive the ID the next day (user)
Return	a) Books borrowed through the Cheongna Book Drive service must be returned through Book Drive. b) Smart Library → Return menu → Book barcode recognition → Book input → Return completed

Table 3. Drive-thru service cases of Anyang City Library

Service appellation	Safe book lending service
Period	Tuesday, March 17, 2020 until re-opening after the serious phase of COVID-19
Time	Daily 9:00-18:00 (Excluding holidays)
Promotion policy	a) Existing members can use the secured book lending service. b) The number of applications is 5 per person. c) The collection of application books is available from 14:00 to 20:00 the next day, from 14:00 to 19:00 for children's libraries, and from 14:00 to 17:00 on weekends.
How to apply	a) You can download an application from the homepage and fill out the secured book loan service and send it to the library email where you want to receive the service. b) If you receive a loanable letter from the library after applying for an email, visit the library with an ID card.
Return	Return to library drop box or staff

Table 4. Main participants

Participant	Affiliation library	Library career experience
A	Namsan Library	5 years
B		2 years
C		5 years
D		2 years
E	Michuhol Library	26 years
F		11 years
G		13 years
H		2 years
I	Anyang City Library	18 years
J		17 years
K		17 years
L		10 years

5. FOCUS GROUP INTERVIEW ANALYSIS

FGI (Focus Group Interviewing) is a research method that targets a small number of groups on a specific topic. It is a method of qualitatively grasping each person's perception, meaning, and content by experts participating in the field under the presidency of a modulator. Therefore, it has the advantage of being able to quickly and inexpensively explore the core of the problem and solve it flexibly. FGI was conducted according to the following procedure and results were analyzed.

5.1. Participants

Participants of the FGI are the three library managers introduced in the drive-thru service operation example, the main of which is shown in Table 4 (see participants marked A to L – for experience/classification purposes).

5.2. Write a Question and Send an Email

Prior to the interview, the researcher composed a question appropriate to the purpose of the study and e-mailed the participants. All questions were composed of open-ended questions that could induce participants to experience running a library drive-thru service, taking into account that the time required to conduct the entire interview was one hour. The questionnaire formed by the researcher and sent to the participants in advance was modified to the questioning method suggested by Krueger and Casey (2009), and was selected as four types of starting question, introduction question, main question, and ending question. The contents are shown in Table 5.

The content obtained through the step-by-step focus group interview questions summarized in Table 5 is as follows: First, it tried to confirm the librarian's perception of the drive-thru service. Second, it tried to reveal the relationship between the drive-thru service and the library applied to the special situation of COVID-19. Third, it tried to confirm the possibility of whether a drive-thru can be operated and activated as a regular service of the library even after the pandemic is over.

5.3. Conduct an Interview

The interview was conducted in real time utilizing ZOOM from 18:00 to 19:00 on Friday, March 12, 2021. The researchers briefly explained the purpose of the interview and the study, pledged that the data collected through the interview would not be used for any purpose other than the study, and focused on making possible participants feel free to discuss. The questions were tuned to finish within one hour while taking full advantage of one hour, focusing on the six that were prepared and distrib-

Table 5. Focus group interview questions

Question process	Item	Apply	Question
Opening questions	Drive-thru service awareness	We started with a simple greeting between researchers and participants and relatively simple questions related to the topic of the interview.	What was your first thought when you heard of drive-thru service?
Introductory questions	Drive-thru service and library relevance	Introduced the topic of the interview and allowed them to express their thoughts freely.	Drive-thru service and library, how can I connect?
Key questions	Drive-thru service operation	The library was able to fully express the experience of operating the drive-thru service.	Why did the library run the drive-thru service? What was the most difficult thing about running a drive-thru service in your library? How about always running the drive-thru service in the library?
Closing questions	Activation of drive-thru service operation	Summarize what you have said about your experiences and see if there are any more to add. Subsequently, the plan to promote the operation and increase the effectiveness of library drive-thru services will be divided.	What do you think is necessary to revitalize the library drive-thru service operation and increase its effectiveness?

Table 6. Analysis result for answering opening question

Participant	Responses/Answers	Category	Subject
A	"I thought of stores like McDonald's and Starbucks first"	Recognized as a service mainly applied to fast food stores	A new service method introduced by the library in accordance with the changing environment
F	"It was reminiscent of services such as the drive-through of the hamburger franchise"		
H	"I thought it was a convenient way to use mainly in cafes and fast-food restaurants"		
I	"I first thought of fast-food stores"		
B	"People can read books anytime, anywhere"	New library service for citizens' reading in accordance with the COVID-19 restrictions	
C	"I think it is a different and good service when closed for a long time due to coronavirus"		
D	"Increased user convenience, good news for those who like books and frequently visit the library"		
E	"I thought I had a job to do in the library"		
G	"Enhancing the convenience of citizens' use of data"		
J	"Borrowing books non-face-to-face outside the library without getting out of the car"		
K	"Borrowing books non-face-to-face"		
L	"There have been many changes due to COVID-19 and it has affected public library services as well"		

uted according to the four-step process. Also, all contents were recorded with the consent of the participants.

5.4. Result Analysis

Krueger and Casey (2009) describe important elements in the analysis of focus group interview data as "systematic, verifiable, sequential, and continuous." The data obtained

through the focus group interview were analyzed in the form of finding important topics and categories by applying open coding among the theory of evidence presented by Morgan and Scannell (1998). In other words, the concept was to name concepts and categorize concepts with similar contents.

Table 6 summarizes the results of analyzing the answer to the opening questions, "What was the first thought that came to your mind when you heard the word drive-thru service?"

Reviewing the answers to the introduction questions summarized in Table 6, librarians are using drive-thru services similar to the method utilized by fast-food stores. This is partly due to the COVID-19 situation and restrictions – libraries have introduced and implemented this new borrowing method for the benefit of the reading public.

Table 7 summarizes the results of analyzing the answers to the introductory question, "How can I connect the drive-thru service and the library?"

In response to the answers with the introductory questions summarized in Table 7, librarians can reduce contact with citizens while maintaining minimal available library services, such as being able to collect books that have been reserved in advance in such a way that connects the library directly with the drive-thru service.

Table 8 summarizes the results of analyzing the answer to the first key question, "Why did the library operate the drive-thru service?"

Looking at the responses to the first key questions listed in Table 8, the reason librarians are operating drive-thru services in libraries are due, in a large part, to the parent agency's COVID-19 guidelines to develop and operate non-face-to-face services.

Table 9 summarizes the results of analyzing the answer to the second key question, "What was the most difficult thing about running the drive-thru service in the library?"

Looking at the answers to the second major question summarized in Table 9, librarians cited an incomplete operating system, such as a lack of manpower and system errors, as the most difficult problems in operating the drive-

Table 7. Analysis result for answering introductory questions

Participant	Responses/Answers	Category	Subject
A	"I think you can make a reservation through the website or mobile app, and then check the ID at the information desk the next day to visit"	Connect to pick up pre-reserved books	Library service practice non-face-to-face
E	"Books reserved through the homepage or mobile app can be borrowed through the smart library without meeting the librarian"		
I	"I think you can make a reservation through the website or mobile app, and then check the ID at the information desk the next day to visit"		
B	"In the non-face-to-face era, I was contemplating what role the library could play"	Pathways to minimize contact with citizens and link library services	
C	"I think it would be good to actively serve users who are uncomfortable to come to the library"		
D	"Third-party services sought by the library when direct service is not possible"		
F	"As a representative non-face-to-face service, it is supported 24 hours a day, so I think it can even play the role of an annex"		
G	"Increase interest and utilization of libraries"		
H	"Pathways to move library services to the outside"		
J	"Provides services that can satisfy citizens' reading needs while minimizing contact when the library is not open due to coronavirus"		
K	"Provide services while minimizing contact between the library and citizens"		
L	"I think it is connected because it has already been implemented"		

Table 8. Analysis result for answering first key question

Participant	Responses/Answers	Category	Subject
A	"Due to the COVID-19 impact, guidelines were issued from the Lifelong Education Division of the Seoul Metropolitan Office of Education, and the drive-thru service was operated"	Operational guidelines are given by the parent organization through the meeting.	Guidelines for operating non-face-to-face services due to the COVID-19 situations
E	"It was decided through a meeting at Michuhol Library, the representative library of Incheon City Library, so the drive-thru service was operated"		
I	"It was decided through a meeting of Anyang City Library, so the drive-thru service was operated"		
B	"COVID-19"	Due to COVID-19 guidelines and restrictions	
C	"This service will be provided to users due to the library closure due to coronavirus"		
D	"Looking for alternative services due to library closing due to COVID-19"		
H	"For users who cannot visit the library due to COVID-19"		
J	"Minimize contact when the library is not open due to coronavirus and provide loan services to citizens"		
K	"Civil complaints from citizens who cannot use library services because of COVID-19 restrictions"		
L	"This is a method to provide loan services to citizens in situations where it is difficult to open the library due to COVID-19"		
F	"To develop library services without restrictions and to establish a system for common use of library materials"	Development of non-face-to-face library services	
G	"Development of library's active user service and non-face-to-face service"		

thru library service.

Table 10 summarizes the results of analyzing the answer to the third key question, "Why doesn't the library operate the drive-thru service at all times?"

Reviewing the responses to the third major question summarized in Table 10, librarians can provide a good service if a well-structured drive-thru service is always operating in the library. Increased manpower and higher budget are a prerequisite and required, though.

Table 11 summarizes the results of analyzing the answer to the closing question, "What do you think is necessary for the activation and effectiveness of library drive-thru service operation?"

Looking at the answers to the final questions summarized in Table 11, librarians believe that in order to initiate or revitalize drive-thru service operations in the library and increase its effectiveness, it is necessary to further support professional manpower requirements and accompanying budgets, establish a sound system, and promote

the resource publicly.

Table 6 to Table 11 summarizes the questioning method suggested by Krueger and Casey (2009), and sets them into four types: opening questions, introductory questions, key questions, and closing questions. The answers were summarized using the analysis method suggested by Morgan and Scannell (1998). As a result, 6 themes, 16 categories, and 72 subjects were derived for the library drive-thru service experience. Among these, 6 themes which can be considered the core results of this study are summarized in Table 12.

In the end, public library librarians thought that the drive-thru service was a newly introduced service method according to the non-face-to-face service operating guidelines of the COVID-19 situation, thus is inefficient and unnecessary at present as it was difficult to use due to its incomplete operating system. However, if the system were well established, such as building a service system, it is expected that it would be a good service.

Table 9. Analysis result for answering second key question

Participant	Responses/Answers	Category	Subject
A	"After preparing the reserved book(s), applicants have to wait for a specified time because they do not know when they will come to pick up the book"	It was difficult due to the preparation process and user involvement	It was difficult because of the incomplete operating system
B	"Feeling of wasting time because of people who do not visit after booking, and the system had to be changed due to constantly changing policies and circumstances"		
C	"It was cumbersome because users had to buy the books they wanted, and there were users who came without making a reservation"		
D	"Users do not visit after making a reservation or request other services"		
E	"After receiving the reservation, it was difficult to repeatedly find the book, disinfect it, and put it in the smart library"		
I	"The service preparation process was also difficult, but the point of waiting outdoors was difficult due to hot or cold weather extremes"		
J	"It took a lot of time to find and prepare books reserved through e-mail"		
K	"It was difficult to find and disinfect the books and make them into separate packages"		
L	"It was difficult because there were more books to borrow than other libraries"		
F	"Equipment error and lack of manpower"	Insufficient manpower and equipment errors	
G	"Difficulty of quick resolution in case of insufficient manpower or equipment error"		
H	"System error"		

6. DISCUSSION

The purpose of this study is to analyze the operation cases of the 'drive-thru' service conducted by public libraries in Korea under the influence of COVID-19, and to find ways to settle this service in the future. Therefore, because the library environment and related policies are different in each country, it is difficult to expand and apply to all countries. Therefore, we hope that discussions can be started from this point to determine whether and how the drive-thru service will operate in the library.

Korea has the lowest number of public libraries among OECD countries. Also, because the total population is larger than the land area, the total area of public libraries, including parking lots, is also narrow. Therefore, there is no public library in place which all citizens can reach within five minutes on foot, and there are many places where there is no parking if users drive a car. Therefore,

considering these conditions, the drive-thru service can be an efficient way to increase the library utilization rate of users.

However, in order to operate the drive-thru service in the library at all times, there are the following problems that must be solved first. First, policies should be established. Since the library is a public institution where government or local governments perform official duties, policies should be established in order to proceed in the future. Second, the budget should be secured. Since budgets are a necessary condition to promote everything, libraries need to secure an appropriate budget. Third, it is necessary to recruit manpower. Currently, the number of librarians is insufficient in public libraries in Korea. Therefore, it is difficult to provide efficient services unless dedicated personnel are recruited. Fourth, the reservation system through mobile apps should be expanded. Since modern people use smartphones more than Inter-

Table 10. Analysis result for answering third key question

Participant	Responses/Answers	Category	Subject
A	"It will be difficult, but if the system is well established, it will be a service for busy users"	It is a necessary service, so it should be organized well	It can be a good service if the system is well established, but at the moment it has been shown to be inefficient and unnecessary
E	"I think this is a necessary service if you consider the library conditions with insufficient parking space, the increase of smart libraries, and the lives of busy modern people"		
G	"It would be okay to designate and operate a specific library, such as a library specialized for each subject"		
I	"There is a need to first find a plan for efficient operation, such as through a smart library or installing a dedicated booth in the library parking lot. If a plan is established first, it will be a good service"		
B	"There are already services available, such as reservation loans and desired books, and it does not seem to suit the purpose of a library that prioritizes visitors"	Feeling inefficient or unnecessary	
C	"Appropriate in unavoidable cases such as closing due to corona, but thought to be unnecessary during opening"		
D	"When the library is open, it is a redundant service and is considered unnecessary because it is a burden in terms of personnel"		
F	"It would be possible if manpower and budget were supported, but I think the regular operation is inefficient"		
H	"I think it is not good in terms of efficiency to run the library normally concurrent with drive through service"		
J	"We oppose parcel delivery services for the socially disadvantaged because it consumes a lot of time and manpower"		
K	"Opposition because it consumes a lot of time and manpower"		
L	"The service is difficult to use for citizens who have difficulty making online reservations, and the number of books should be higher."		

net homepages, access to mobile apps is required rather than Internet homepages to use drive-thru services more efficiently. Fifth, active promotion is necessary. It is necessary to make drive-thru services available to many citizens through various publicity activities such as Internet homepages and social network service. And, finally, it is necessary to prepare appropriate regulatory measures for users who do not use the service after making a reservation.

7. CONCLUSIONS AND SUGGESTIONS

The purpose of this study is to analyze the case of drive-thru services newly introduced and tried in libraries in Korea under the influence of COVID-19, and to develop and propose a service model so that this service can be continuously applied to all libraries in the future. Therefore, in order to achieve the research purpose, we selected one of the representative libraries that are conducting related services in Seoul Special City, Incheon Metropolitan City, and Anyang City in Gyeonggi Province, and looked at the operation cases. Focus group interviews were also conducted through real time video conference calls with twelve service representatives in each library to draw the following conclusions.

First, the library's drive-thru service has a positive effect in that citizens can continue to read and spend free time even in the irresistible situation of COVID-19, and

Table 11. Analysis result for answering closing question

Participant	Responses/Answers	Category	Subject
A	"Professional personnel are needed to handle the service"	Needs professional manpower and budget support	Need to build a service system
D	"Allocate dedicated personnel, allocate budget, require stipulated regulations, prepare measures to boost employee morale"		
F	"Efficient operation is possible if a dedicated team is established"		
G	"Expansion of dedicated manpower and budget"		
I	"Needs support for manpower and budget"		
L	"Recruitment of manpower, securing space for vehicle access, and installation of loan devices should be preceded"		
B	"Codified operating regulations are required, and a system is built for perfect non-face-to-face"	It is necessary to prepare operational regulations and establish a system	
J	"A large space is also required for the computer system and the smooth flow of the vehicle"		
C	"It would be good if you actively use the smart library"	Smart library utilization	
E	"Since it is possible to connect with the mutual lending service system, it is necessary to install many smart libraries in public places used by many people"		
H	"Promotion of the service"	Need to promote	
K	"I hope that the library will be fully opened as before and the situation where citizens can freely use it soon"	We look forward to opening the library entirely	

Table 12. Subjects derived according to the experience of the drive-thru service

Questions	Derived subjects
Opening questions	A new service method introduced by the library in accordance with the changing environment
Introductory questions	Library service practice non-face-to-face
First key questions	Guidelines for operating non-face-to-face services due to the COVID-19 situations
Second key questions	The difficulties incurred by the incomplete operating system
Third key questions	It can be a good service if the system is well established, but at the moment it has been shown to be inefficient and unnecessary
Closing questions	The need of building a service system

also instilled courage to overcome difficulties on their own. However, when service reservation was limited to an Internet homepage, there were also limitations in that it would not be available to those who do not have a computer or do not know how to use the Internet.

Second, it was concluded that it was difficult to apply the library's drive-thru service in a situation where issues such as policy establishment, budget securing, and selection of dedicated personnel were not resolved. Therefore,

it is necessary to set the specific application method according to the library after solving the problems first, and it is also necessary to prepare alternatives such as using inter-loan services with the smart library before solving the problem.

Services are convenient for recipients but can be a difficult process for those who provide them. As a result, the service that was being carried out is sometimes stopped, but if the people who have already received the service

Table 13. Drive-thru service operation guidelines in the library

Designation	Drive-thru service
Explanation	A service that allows you to borrow pre-booked materials without getting out of the car
How to make a reservation	1) Check if you are a library member. If you are not a member, you can visit the library and create an ID 2) Book the desired material through the library homepage or mobile app. Reservations are available 24 hours a day 3) If you are aged 65 or over, you can make a reservation by phone from 09:00-17:00
How to pick up	1) You must bring your library ID card and visit the booker yourself 2) If the day after the reservation is ended, it can be picked up after 2 days 3) Materials booked by 15:00 can be picked up within the library operating hours the next day 4) Materials booked after 15:00 can be picked up after 2 days
How to return	1) ID card is not required to return, and someone else can return 2) Return directly to the library 3) Library drop box 4) Return materials to the device when using the smart library
Other	1) The number of loans, loss etc. are in accordance with the library operation regulations 2) Data not received within the designated time will be automatically returned 3) Users who do not receive the data after making a reservation more than 3 times are prohibited from using the service for a month afterwards
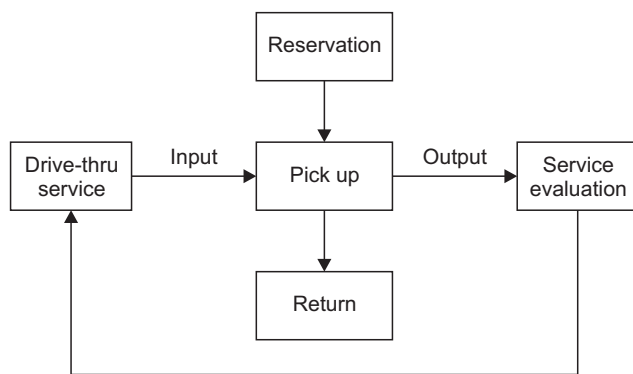
Fig. 1. Drive-thru service model.

experience convenience, the demand for resumption may continue.

In this regard, the drive-thru service in Korea was first applied, which brought difficulties to the library, but it must have been a way to make users experience convenience. Therefore, even if the library is reopened, it is a service that can cause demand for implementation. Therefore, the following are suggestions on how to efficiently apply the drive-thru service in the library.

First, even in public libraries belonging to the same local government, the conditions are different. Therefore, it is necessary to designate and operate one library that is most suitable for the drive-thru service, or actively utilize the smart library. If libraries specify one place in terms of suitability, they will need additional support, such as assigning dedicated manpower or installing a dedicated booth.

Second, reservation of the drive-thru service is possible only through the homepage and mobile app, but it is necessary to allow elderly users to make voice calls.

Third, the operation of the drive-thru service in the library allows users to visit pre-booked materials by visiting the library during the next day. For other loan volumes or due dates, existing operating guidelines should be followed.

Table 13 is the drive-thru service operation guideline established, based on the contents of Table 1, Table 2, and Table 3. It includes the details of the service use methods such as the name, description (definition) of service, reservation method, reception method and return method, and others.

Fig. 1 is the drive-thru service model. Fig. 1 expresses that the results of users' use and evaluation will be calculated when the drive-thru service is prepared and implemented in the library, and the contents should be reflected in the service again. At this time, input factors include dedicated staff, operating budgets, and service space such as a smart library and homepage reservation systems. Calculation factors include the number of reservations made, number of visitors, the quantity of loans, and various satisfaction factors.

CONFLICTS OF INTEREST

No potential conflict of interest relevant to this article was reported.

REFERENCES

Abu Farha, R., Abu Hammour, K., Alefishat, E., Alsaeed, H., & Alma'aiah, S. (2017). Drive-thru pharmacy service: Assessments of awareness, perception and barriers among pharmacists in Jordan. *Saudi Pharmaceutical Journal*, 25(8), 1231-1236. https://doi.org/10.1016/j.jsps.2017.09.008.

Allon, G., Federgruen, A., & Pierson, M. (2011). How much is a reduction of your customers' wait worth? An empirical study of the fast-food drive-thru industry based on structural estimation methods. *Manufacturing & Service Operations Management*, 13(4), 489-507. https://doi.org/10.1287/msom.1110.0343.

Dalin-Kaptzan, Z. (2020). *Retail trends: The growing demand for click and collect*. https://www.bringg.com/blog/industry-trends/click-and-collect-growth/.

Frey, C. B., & Osborne, M. A. (2017). The future of employment: How susceptible are jobs to computerisation? *Technological Forecasting & Social Change*, 114, 254-280. https://doi.org/10.1016/j.techfore.2016.08.019.

IFLA. (1994). *IFLA/UNESCO public library manifesto 1994*. https://www.ifla.org/publications/ifla-unesco-public-library-manifesto-1994.

IFLA. (2021). *COVID-19 and the global library field*. https://www.ifla.org/covid-19-and-libraries.

Koontz, C., & Gubbin, B. (2010). *IFLA public library service guidelines*. https://www.ifla.org/publications/ifla-publications-series-147.

Krueger, R. A., & Casey, M. A. (2009). *Focus groups: A practical guide for applied research*. 4th ed. Sage.

Kucukusta, D., Law, R., Besbes, A., & Legohérel, P. (2015). Re-examining perceived usefulness and ease of use in online booking: The case of Hong Kong online users. *International Journal of Contemporary Hospitality Management*, 27(2), 185-198. https://doi.org/10.1108/IJCHM-09-2013-0413.

Montero, S. (2021). *Westlink Library adds a new "drive-thru" feature*. https://www.ksn.com/news/local/westlink-library-adds-a-new-drive-thru-feature.

Morcos, S. H., Tak, J., & Gregoire, M. B. (1992). Customer perception of drive-thru service. *Hospitality Review*, 10(2), Article 3. https://digitalcommons.fiu.edu/hospitalityreview/vol10/iss2/3.

Morgan, D. L., & Scannell, A. U. (1998). *Planning focus groups*. Sage.

Public Library Association. (2020). *Public libraries respond to COVID-19: Survey of response & activities*. American Library Association.

Song, M. H. (2002). A proposal of multimedia menu system for drive-thru. *Journal of Basic Design & Art*, 3(2), 87-98. https://www.kci.go.kr/kciportal/ci/sereArticleSearch/ciSereArtiView.kci?sereArticleSearchBean.artiId=ART001557078.