

## Research Article

# Analysis and Research on Digital Reading Platform of Multimedia Library by Big Data Computing in Internet Era

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Digital reading promotion service is a service way for libraries to provide readers with a series of digital resources, enjoy the service functions, and share the experience of using them in various digital reading platforms, which is to meet the reading interests and reading needs of more readers, and is also the focus of the current library work. In the era of new media, the characteristics of digital reading are subtly changing the readers' needs for reading environment, reading content, and reading style. Libraries should keep pace with the development of the times and provide readers with diversified, intelligent, and targeted digital reading platforms. The digital reading platform should continuously improve the digital reading service functions, broaden the service scope and dissemination channels, and finally realize the diversification, interest, and intelligence of digital reading service. This paper takes the digital reading platform of libraries in the region as the research theme and carries out research work on libraries. The province is divided into three regions according to the geographical map: southeastern region, central region, and northwestern region. The digital reading platforms of 14 prefecture-level public libraries and 58 libraries of higher education institutions in each region were accessed. Firstly, we check the construction of digital resources within the library websites, secondly, we count the opening of digital reading platform functions, and finally, we check the opening of digital reading platforms. Through the research, it is found that there are problems of unbalanced distribution of digital reading resources in regional libraries; unattractive design of readers' interface and inadequate reading service functions; lack of continuous training of readers' guidance; insufficient publicity and promotion; low efficiency of staff in responding to consultation; and low degree of platform openness and weak awareness of sharing. Finally, the problems found in the research are summarized, and the solution measures for the regional digital reading platform are proposed. Libraries in the digital era should give priority to systems that can manage all library resources comprehensively and effectively, adapt to more flexible library workflows, and enable libraries to provide better services to users.

## 1. Introduction

Along with the rapid development of digital technology and network technology, more and more digital reading information has become a resource that can be described and accessed on the network [1]. Reading resources have evolved from the initial single paper text content to today's situation where audio, images, video, and hyperlinks coexist. Diversified, personalized, and intelligent network technologies advance the development and innovation of new digital reading services [2]. Profit-oriented digital commercial reading platforms are being constantly improved and updated,

while libraries are still lacking in digital reading promotion activities and open sharing of resources. The traditional stacked system faces problems such as inconvenient data interaction and poor scalability in the way of providing reading services, which restrict the development of digital reading promotion work [3]. At present, libraries are in the stage of transformation to digital services and need to make a change to realize the popularization and promotion of digital resources and services, so it is timely and extremely necessary to optimize digital reading promotion services. With the increasing proportion of digital resources in university library collections, the services provided by university

libraries for users are becoming more and more diversified, and library management and services are being expanded and extended; the traditional business workflow and service methods of university libraries are increasingly unable to meet the management and service requirements under the current digital conditions, so university libraries are facing transformation and change [4]. However, the transformation and change of libraries cannot be achieved without the support of library management system.

Due to the changes in the nature of collection resources and service contents and methods, the traditional integrated library management system has become increasingly difficult to perform the management services of modern libraries [5]. In other words, many university libraries are still using products developed more than ten years ago, and although they have been upgrading their systems, they are only upgrading traditional functions or integrating new system modules, such as Huifen and ILAS, which can solve part of the business and service problems by introducing auxiliary products to integrate with their management systems, but they cannot change the underlying architecture of the system and cannot solve the problem at root [6]. In recent years, the rapid development of network technology and the exponential growth of electronic resources and digital content have increasingly exposed the weaknesses of traditional integrated systems. In order to deal with the increasing electronic and digital resources, many professional management systems have come out one after another, such as electronic resource knowledge base, electronic resource management system, digital resource management system, and resource discovery system [7]. However, due to the lack of flexibility, interoperability, and efficiency, these systems can hardly meet the needs of both internal and external users of libraries, and university libraries urgently need new systems to replace the original system. In the digital era, users' information needs have changed significantly, and university libraries are undergoing a comprehensive transformation and development from resource construction to service mode [8]. This paper analyzes the main library integration systems at home and abroad by sorting out the development of library integration systems, comparing the similarities and differences in technology and functions of each system at home and abroad and comprehensively evaluating each type of system in different periods. On the basis of understanding and mastering the functional characteristics of the systems, the corresponding selection principles and selection strategies are proposed, so as to guide the university libraries in China to carry out the selection work better [9]. By systematically sorting out the development history of integrated library systems, this paper summarizes the commonalities that exist between libraries and library systems, and by studying the new concepts and technologies of foreign products, it helps domestic absorption and reference of foreign advanced development concepts and can further enrich the theoretical system of library automation systems [10].

By analyzing the system architecture and functional characteristics of mainstream products in the current automation market, we aim to understand the differences and

connections between different systems and provide feasible suggestions for the introduction of suitable systems in university libraries. With the development of information technology and the increasing digitalization of libraries, the industry environment in which college libraries are located has changed dramatically, yet many college library systems are still using products developed in the previous generation, and the outdated business processing methods and management concepts have hindered the development and changes of college libraries. Therefore, the renewal of university library management systems becomes an urgent problem. In this paper, by comparing different products developed by different automation system vendors, we find out the similarities and differences in the functions of each system, which is a reference for domestic university libraries to select a new system that suits their development concept and service needs in a targeted way. The main research of this paper is to investigate the design concepts, functions, and technical characteristics of traditional library integration system, new generation library integration system, and next-generation library service platform as well as the current situation of domestic university libraries' applications and to compare and analyze them, compare the advantages and disadvantages of different products, and accordingly propose the selection principles and selection strategies applicable to different types of university libraries in China. At the same time, libraries increase their investment in digital reading resources to meet the reading needs of different types of readers. Libraries need to continuously improve digital technology, speed up the construction of digital reading platform, increase the number of digital reading services, and improve the service experience of readers.

## 2. Related Work

The Digital Age, also known as the Post-Information Age and the Bit Age, was first proposed in the book *Digital Survival* made by MIT professor Negroponte. Subsequently, Wikipedia defined it as the computer age or the information age. In the digital age, people will have more choices, more diverse lifestyles, more widespread cooperation, and sharing, and everyone will have the freedom to transmit information and the ability to access it at the right time, which was difficult or impossible to do in the past. In such an era, people are more inclined to solve problems through the Internet [11]. At the same time, the iteration of technology has promoted the deeper development of user needs. Among them, user needs in the digital era show four main characteristics: diversification, integration, personalization, and interactivity. Based on the above concepts, the author believes that the digital era can be simply understood as the era of meeting people's information needs with the help of digital technology [12].

The essential feature of the digital era library is to use modern digital information technology and network communication technology to process and transform all kinds of traditional media documents into digital information. In addition, libraries in the digital era should have the equipment and ability to store and protect large amounts of information [13]. With the advent of digital era, the collection of

university libraries gradually changes from physical resources to digital resources. In order to meet the teaching and research needs of university teachers and students, university libraries expand their collections by purchasing a large number of electronic and digital resources on the one hand and actively participate in self-built and co-built resources on the other hand, which realize the digitization and sharing of local resources [14]. In the future university libraries, digital resources and traditional print resources will jointly constitute the university library collection resource system and will occupy a dominant position. The current library services are changing from the traditional way to the networked and digital way. Traditionally, university libraries mainly focus on circulation and reading of paper documents, and their service mode is also focused on providing paper resources collection service. This passive and mechanical way determines that users need to go to the library to enjoy services such as lending and returning services, searching services, and consulting services [15]. It also determines that users can only use the library's collection and services, and it is difficult to share resources with other universities or institutions. However, the emergence of mobile Internet has broken this limitation. When users want to receive library services, they only need a cell phone to access the library system so that they can enjoy the services brought by the library, such as collection inquiry, book renewal, online consultation, network information retrieval, and other services, and at the same time, they can easily realize resource sharing with other university libraries or institutions through the Internet platform. With the advent of the digital era, the proliferation and high-speed utilization of information no longer restrict users to the collection resources, which enriches access but also makes it difficult for users to accurately extract useful information from the vast amount of resources [16].

This has eventually evolved into a situation where the accuracy of people's access to the information they need is decreasing with the growth of information resources. As a result, users expect libraries to provide more personalized services to improve the utilization of information resources [17]. First, users want to have mobile access to resources. Users have a strong demand for off-campus (off-library) access to library resources, and they want to be able to access all kinds of resources without going to the library [18]. The popularity of mobile communication technology and wireless network technology enables users to access library resources anytime and anywhere, which greatly improves the efficiency of accessing resources. Secondly, users want to customize their services and organize content according to their needs and preferences, so that libraries can provide targeted services. Finally, users have a high level of demand for personalized community communication platform and want to have a platform for community communication. As an important information resource center of the university, university libraries should not only have high-quality information resources but also have easy access to external information resources, so as to better provide high-quality literature and information services for teachers, students, and scholars [19], although the proportion of digital

resources in university collections is getting higher and higher and can meet the needs of the vast majority of users. However, traditional printed documents still occupy a large proportion in university libraries and have many advantages that cannot be replaced by digital resources, so for a long time, digital resources and paper resources will coexist and develop in the collection resources through the way of complementary advantages [20]. On the other hand, although traditional libraries also advocate the sharing of resources, the degree of sharing is greatly restricted by the limitation of the technical power of traditional libraries [21]. In the digital era, libraries can cooperate with library consortia and CALIS to use interlibrary loan and document delivery, so that users can download and deliver documents through a library webpage, thus reducing the duplicate purchase of resources, realizing the effective use of documents, and solving the contradiction between the expensive cost of using documents and the limited acquisition funds of libraries.

### 3. Integrated Library Digital Reading System Platform

*3.1. Library Integration System.* First of all, the cooperative alliance between libraries needs to develop policies on digital reading services and be sure to implement the content of the policy requirements to achieve win-win cooperation in the alliance. The integrated library system is an integrated system that makes the main functions of the library (including interviewing, cataloging, circulation, continuous publication management, and public search) all realized on the basis of one bibliographic database. With the use of the integrated system, library staff can always know which status the library collection is in, which facilitates the daily management of librarians and improves the efficiency of library operations. The library connects users to various shared resources through the management system, providing fast and powerful search options, and users can retrieve the collection resources at any time, enhancing the user experience. With the development of the times and the changing needs of users, integrated library systems are always in a dynamic development. "Library Automation System," "Library Integrated System," "Next Generation Library Integrated System," "Next Generation Library Service Platform," and other names are all more relevant kind of names or terms in a certain period of time. In short, no matter how the names evolve, the author believes that they are essentially systems that use advanced technologies to provide better management and services for libraries and users. Cloud computing refers to the delivery of computing and storage capacity as a service to end users, where end users access cloud-based applications through a web browser or mobile application, while business software and data are stored on remote servers.

The next-generation service platform in the cloud computing environment uses a microservice architecture that allows various library resources, such as electronic and digital resources, and network resources, to be stored in the cloud in an open manner. In addition, it allows users to access and utilize resources anytime and anywhere with

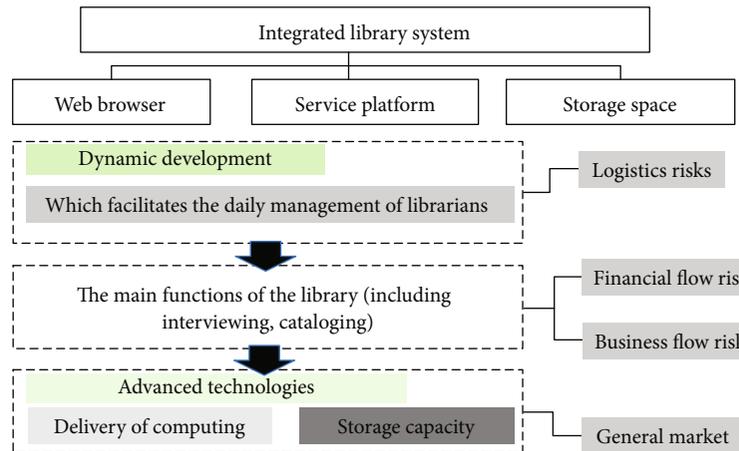


FIGURE 1: Integrated library system.

lower cost and storage space. Also, interoperability is enhanced, and libraries can read the featured data on the Internet directly through API interface, as shown in Figure 1. The maintenance of the system after cloud-based will not have to be done through the local client but can be updated and maintained on the cloud platform, and the future data migration and system replacement can be done through the cloud, which not only reduces the cost of system migration but also improves the overall efficiency of the library. See Figure 1.

Open source systems developed based on the open source concept represent a spirit of openness. From the perspective of Lib2.0, open source software is not only the openness of source code and content but also the openness of application programming interface (Open API) and Open Link standard specifications such as OpenURL. Koha open source system in foreign libraries proves that open source system is a viable option to break the monopoly of commercial systems. Before the emergence of open source systems, the monopoly of automation system companies and data developers on library integration systems and databases made libraries lack voice and bargaining power over the construction of their management systems, which greatly limited the development of libraries. Therefore, the next-generation LSP must be an open system. Although the next-generation systems that have emerged in recent years also emphasize openness, they only open part of their interfaces, which is still too closed compared with open source systems that advocate open source. The next-generation LSP is completely open source, which breaks through the traditional application interface model and opens up the library resources and services to the outside world in a more effective way, and also introduces external open data and services into the library system, which can not only improve the openness of library resources but also make up for the lack of resources and services in the library. In addition to the openness and access to content, the next-generation service platform is also committed to putting all open source content including source code on the community platform, driven by the community and open to the community, so that library staff, third-party developers, and users can par-

ticipate in the community, build the library service platform together, and provide technical support and services for the construction of the next-generation LSP.

The next-generation LSP takes a more modular approach, packaging the system into individual ILS modules and ERMS modules. These modules will be published as applications in the app store, and libraries or users can pick and choose functional modules according to their needs, just like a smartphone downloading an app from the app store, and then combine them into an optimized new system. The modular approach makes interaction between applications both easy and fast, meeting the need for libraries to utilize application components and services more efficiently. Under the influence of data globalization, data accessibility and system scalability are important features combined in the next-generation LSP. The next-generation service platform should have good scalability to expand various application systems as needed, such as campus network management system, institutional knowledge base, and resource discovery system.

**3.2. Library Digital Reading Construction.** Alma is a next-generation integrated library system developed by Ex Libris, a provider of library automation systems, and according to the product roadmap provided by Ex Libris on its website, Alma embodies Ex Libris' "Unified Resource Management" concept. Alma is designed from the ground up to be deployed on a multitenant platform with a browser-based interface that supports the complete library operations of resource selection, access, metadata cataloging and management, digital resource management, and user services, regardless of collection size and library size, as shown in Figure 2; processes were personalized. To support Alma's globally dispersed customer base, Alma provides support services through data centers in multiple countries on multiple continents, including the U.S., Singapore, and the Netherlands. The next-generation LSP is completely open source, which breaks through the traditional application interface model and opens up the library resources and services to the outside world in a more effective way, and also introduces external open data and services into the library

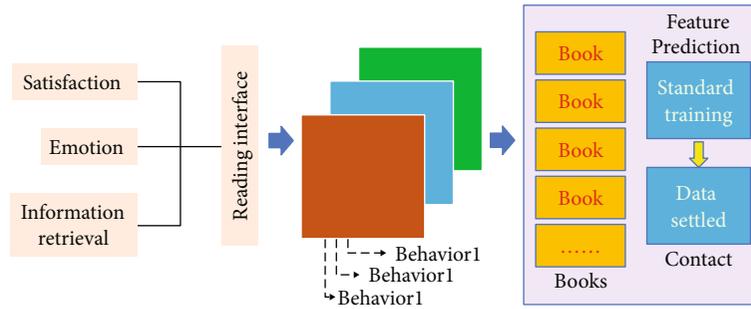


FIGURE 2: Library digital reading interface settings.

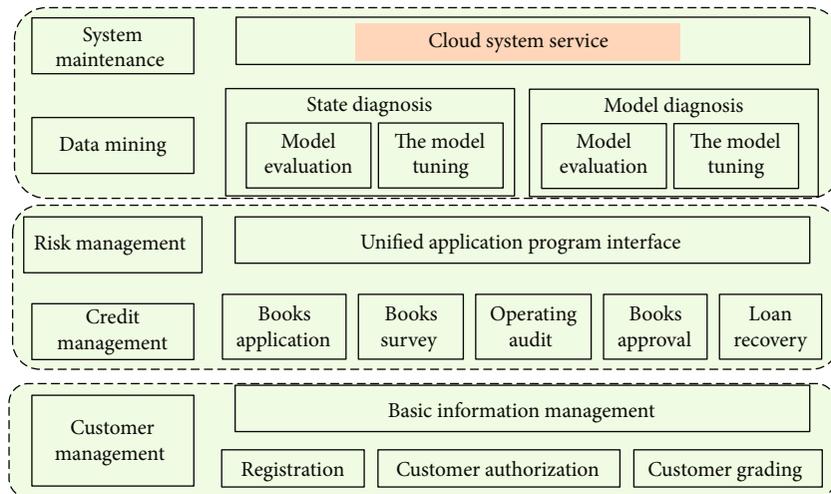


FIGURE 3: Cloud system service experience.

system, which can not only improve the openness of library resources but also make up for the lack of resources and services in the library. In addition to the openness and access to content, the next-generation service platform is also committed to putting all open source content including source code on the community platform, driven by the community and open to the community and library staff. Alma has extended its integration interfaces and application programming interfaces (APIs) to allow access to the data and workflows stored in the platform. Since its introduction, the Alma system has attracted significant interest from university libraries, with 1,808 libraries worldwide having installed Alma to date, according to the Library Technology Guide website, including 1,501 university libraries. According to the Library Technology Guide website, 1,808 libraries worldwide have installed Alma, and 1,501 of them have chosen Alma as their system platform, accounting for 83%. See Figure 2.

The new generation of integrated systems offers Software as a Service (SaaS) in a multitenant model, where SaaS can host services through a cloud platform without the need for local client installation. On the other hand, such a setup can also increase the library’s dependence on the Internet. When the Internet or local network is disconnected, the library will be disconnected from its system. Both Alma and WMS support cloud platform deployment; through cloud computing technology, the system can be deployed

more rapidly, with version upgrades, hardware updates, patching vulnerabilities, and backing up system data; online cloud upgrades can be handled directly without the need for interruption of service, as shown in Figure 3 (high litigation). However, cloud services also bring certain risk, such as data being held by the service provider; there is a risk of leakage. Open interface is one of the features that distinguish the new generation of integrated systems from traditional integrated systems. Open and unified application program interface (API) can more easily access each other with other systems, realize the sharing of resources, and better meet the needs of users for open access to resources in the digital era. Alma, WMS, and Sierra all provide open API interfaces to access third-party applications and integrate with the system. Alma is a commercial system, but it has open APIs for almost all functional areas, allowing libraries to access the system’s data and functionality through external programs and applications. For example, these APIs make it possible to access Alma through other discovery layers outside of Primo. The library will also be able to use the APIs to interconnect Alma with campus infrastructure such as learning management systems, financial systems, and research management systems, thus embedding library services into the university’s teaching and research. The library will be able to access and process the data in Sierra through SQL. See Figure 3.

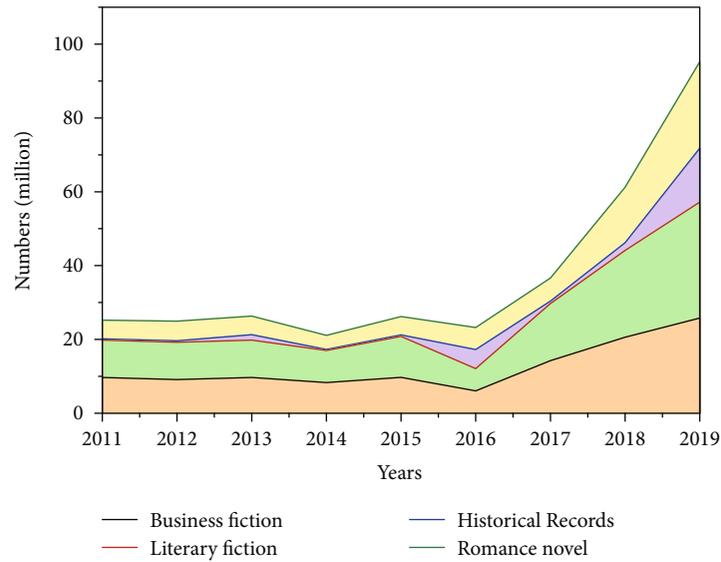


FIGURE 4: The relationship between reading ability and fragmented reading.

**3.3. Interactive Experience of Digital Reading.** The ability to read is an ability that people must acquire in the process of socialization in the digital age, and it is also an ability that is necessary to achieve digital survival. Children's reading ability is an important means for children to perceive the world, build their emotional structure, enhance their sense of identity, and thus build their self-worth system. Paper books are a traditional linear text medium that exhibits a linear temporal character from the past to the future, while digital media are characterized by virtual temporality and spatial mobility. This difference leads to the transformation of deep reading in the paper era into fragmented reading in the digital era. Digital media often make children more easily immersed in fragmented reading because of the wonderful sensory enjoyment they bring, and although this approach can somewhat promote the development of children's sensory organs and symbolic thinking, deep reading is a multidimensional perception and exploration of reading content, and the absence of deep reading will restrict the balanced development of deep reading, and fragmented reading can fundamentally improve children's reading ability, as shown in Figure 4. And children can avoid getting into trouble and develop good digital reading habits by receiving proper guidance from parents in parent-child reading for digital reading. However, the author found from interviews with parents of three groups of parent-child families that parents often failed to play the role of a guide in parent-child digital reading together, which transformed parent-child reading into general digital reading for children. See Figure 4. The benefits of clientless and cloud-based systems are obvious; i.e., system maintenance and upgrades can be achieved without downtime, and library staff can freely access the system and perform work from any network location.

In the interviews, we asked about the status of digital reading with parents and children in the library and found that parents choose digital reading together mostly because

of its rich and interesting resources, but in the actual reading together process, we found that children only like to watch video content and lack communication with parents, which leads them to feel that the meaning of reading together is lost, and parents hope that the digital reading all-in-one machine can help them arrange a reasonable setup. Parents hope that the digital reading machine can help them arrange a reasonable parent-child reading mode, so that they are more willing to use the digital reading machine. Parent-child digital reading and children's general digital reading are different from the participation of parents, so the product should meet the basic digital reading needs, but we also should think about how to help parents can better assist children to read. In terms of the content of parent-child reading, parents need to have a certain understanding of the reading material, find the reading value of it, make them interested in the reading content through wonderful explanation and interpretation, and also take the initiative to think and understand the content, and when children have doubts and confusion in the reading process, parents can use the correct expression to explain to children, making the whole reading process more in-depth and meaningful, and also show respect. It is also a sign of respect for children. However, most parents, due to their work, cannot guarantee that they will be able to preview the reading content when they read with their children, driving them to unconsciously read in pieces with their children. Therefore, when the library digital reading terminal can let parents understand the general content and connotation of the required reading materials in a short time, it can make up for the parents' lack of time and avoid impatience, so that they can guide children more patiently in parent-child reading together.

#### 4. Analysis of Digital Reading Experience

In order to meet the requirements of university library services in the digital age and be able to meet the needs of

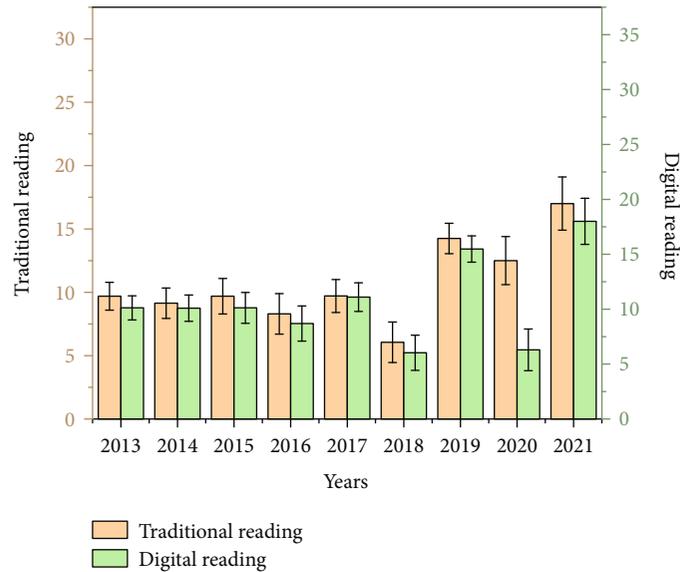


FIGURE 5: Change in reading volume for multi-channel reading system.

future development of university libraries, the advancement of technology should be ensured. Library integration systems generally adopt Client/Server (client/server), Browser/Server (browser/server), or a mixture of both architectures, and although these two architectures can meet the needs of traditional libraries, they cannot keep up with the development of the times. Therefore, the new generation system becomes a key concern. The new generation system realizes a service-oriented architecture, supports multitenant cloud deployment, and supports multiple communication standards and resource description standards, which can well meet the management and service needs of university libraries, as shown in Figure 5. From the long-term development of libraries, it is undoubtedly more advantageous to choose a technologically advanced management system. The integrated library system itself is to meet the daily work needs of the library, so basing on the actual needs of the library is the most fundamental selection principle. First of all, university libraries should evaluate the development concept and management requirements of the library and examine whether the functions of the system meet the resource management and service requirements of the library: for example, whether the resource type of the library is mainly traditional paper or digital literature and whether the professional ability and technical strength of the librarians can provide deeper knowledge services under the new technology conditions. Secondly, we should also consider whether the system provider can give good after-sales service and technical support, including system update and maintenance. Therefore, university libraries should choose a suitable integrated system according to their own needs. See Figure 5. There is a shift in the reading medium used for parent-child reading, which in turn has a different impact on children's reading skills.

Economics is also an important factor to consider when choosing a library integration system for a university library. As a nonprofit organization, university libraries are mainly

funded by their parent organizations. Different types of university libraries have different funding, and universities with sufficient funding usually consider the system with excellent performance first and less consider the cost performance of the system, while universities with insufficient funding often consider the affordability of the library. When selecting a system, university libraries must consider the initial purchase cost, annual subscription cost, additional costs for system updates, and training costs, based on the overall system functionality and the manufacturer's technical support and after-sales service. It is advisable for the library community to plan to join the construction of FOLIO-type next-generation service platform projects in the form of regional or industry consortia, so that libraries can transform from system users to platform participants and plan the layout for the eventual construction of an open-source, scalable, and community-integrated service platform. On the other hand, even if the plan of building the next-generation service platform has not yet been implemented, the libraries can take the lead in changing the concept by participating in the FOLIO project, providing useful references for the design of the next-generation service platform system and at the same time cultivating technical talents for the next-generation service platform, so as to lay a solid foundation for the implementation of the next-generation service platform. Secondly, multiple university libraries form an alliance and choose the next-generation integrated system as a regional common platform. The alliance members work on the same platform and unify the workflow to achieve real resource and service sharing in the region and industry. At present, the Alma system has been successfully practiced to realize the sharing of front and back office systems among alliance members, which facilitates the connection of systems and makes it possible for members to carry out regional joint work and services more smoothly and better realize the sharing of literature and information resources among universities, as shown in Figure 6. Finally, if the

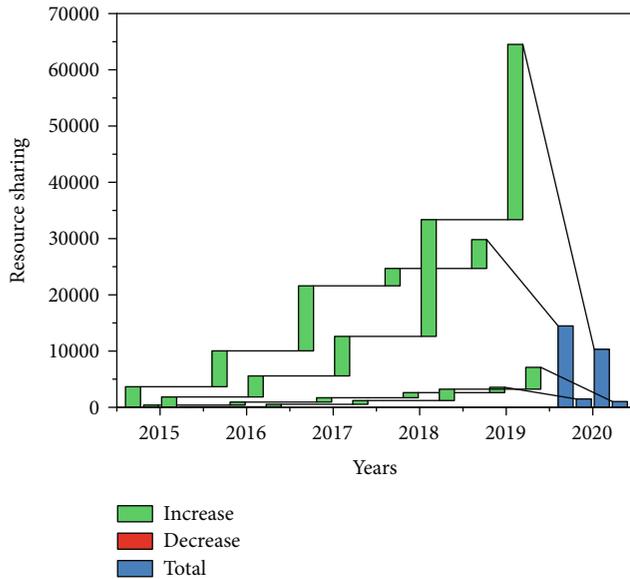


FIGURE 6: Changes in the resource sharing system.

next-generation service platform cannot be implemented for various reasons and the introduction of an integrated system continues to be chosen, then, it is better for all university libraries in the same region or under the same alliance to choose the same type of system. The most typical examples are Tianjin Higher Education Literature Information Center and Jiangsu Higher Education Digital Library, both of whose member libraries uniformly adopt the same type of integrated system, the former using Unicorn system imported from abroad and the latter using Huifen system developed independently in China. See Figure 6.

The scale of collection varies greatly among different types of universities; especially with the increase of electronic resource possession, the goal of collection resource construction in each university library is obviously differentiated, some universities focus on the construction of digital resources, while some universities still focus on paper documents, so the demand for library system is not the same. Before preparing to replace the system, university libraries need to have a clear positioning of the library, consider the philosophy of the library and the structure of the collection and the strength of talents, and understand the needs of the library while clarifying what kind of changes the new system can bring. In the digital era, universities of different levels and types have different orientations. The libraries of universities with “double first-class” construction should have a high level of service capability and provide teachers, students, scholars, and other people with massive literature resources and a more intelligent service environment, so they should mainly consider the next-generation open source library service platform with unified resource management and certain social functions or introduce the new generation of ILS. The libraries of general undergraduate universities focus on the development of key disciplines and the construction of special collections, so the next-generation ILS can meet their needs, as shown in Figure 7. If you want to customize the service independently, then

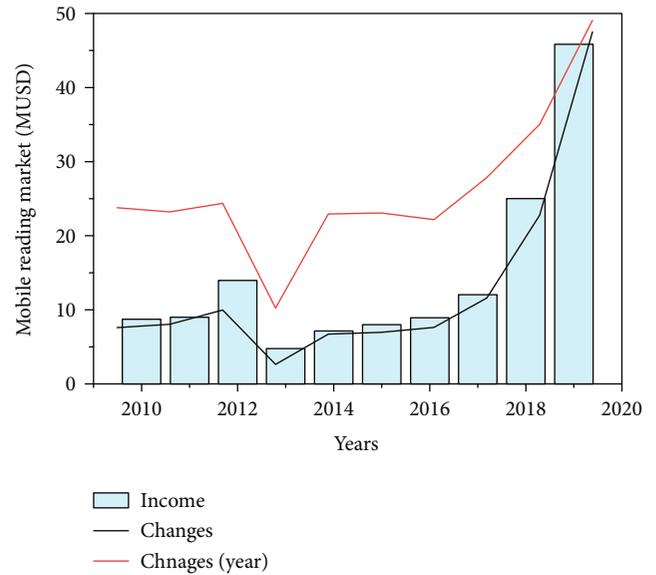


FIGURE 7: Mobile reading market size change.

you can also consider the open source system if the conditions allow. The focus of resource construction in higher education libraries is on paper and electronic resources, so the combination of traditional integrated library system plus electronic resource management system and digital resource management system can also meet most of their needs. See Figure 7.

In order to retain market share and grow further, ILS companies are constantly adopting industry mergers and technological innovations to enhance their competitiveness as competition becomes increasingly fierce around the world. Through a series of acquisitions, foreign ILS companies have not only strengthened their R&D strength and expanded their global market share but also strengthened the competitiveness of their products. However, domestic ILS companies not only do not have the phenomenon of mergers and acquisitions but also have the phenomenon of internal management and technical R&D cadres leaving the original company to start new companies due to the development direction and policy system, which, on the whole, not only weaken the original technical strength of the company but also indirectly take away the original market share of the company. For example, the technical and management team separated from Shenzhen Ketu Company set up Guangzhou Tucson Company, and the technical managers separated from Beijing Xiyang Company set up Qingda Xinyang Company. Researching the current market situation is to grasp the market dynamics and development trend, collect relevant information about the system, and fully understand the functional characteristics of the relevant products. At this stage, we can enter the website of system developers by means of network survey, investigate the basic information of system developers and the overall usage of their products, and record the technical parameters and functional characteristics of the system in detail, carry out in-depth and detailed comparative analysis of each system, summarize their respective advantages and shortcomings,

and make selection evaluation with the support of data, which has the advantage of avoiding blindness at the early stage of selection.

Commercial products and open source products have their own advantages and disadvantages, and all university libraries have to do is to consider them according to the actual situation of the library. The strength of university libraries can be considered in terms of economic strength and librarians' ability. Open source products have good generality, openness, and scalability, but they also require high technical level of librarians. If a university library has a high demand for improving its personalized services and has a stable and high level of technical staff, then open source products are definitely worth considering first. However, for many university libraries, where the library technology is generally low and the librarians' computer skills are average, it is a better choice to choose mature commercial products. Mature commercial products have perfect service and product training system, and there is no particularly high requirement for the comprehensive quality of librarians, which can meet the work requirements of a large proportion of university libraries; after all, the purpose of introducing the system in most libraries is to help them improve their work efficiency.

## 5. Conclusion

After more than 30 years of development and application, the potential of traditional ILS has almost reached its limit, and the conflict between traditional ILS and the needs of library users has become more intense. Today's libraries have a wider range of options than ever before, ranging from improving legacy ILS to introducing next-generation ILS and participating in the development of next-generation service platforms. This paper focuses on comparative and survey research, comparing and analyzing library integrated systems and library service platforms separately on the one hand and, on the other hand, investigating and analyzing the current application status of library systems in some universities in China. The selection principles and selection strategies are proposed through comparison and summary, so as to provide a reference basis for the selection work of domestic university libraries. College libraries should choose the system suitable for their own needs. Different university libraries differ greatly in terms of collection structure, workflow, and capital budget, so it is important to understand the philosophy and service needs of the library, which helps university libraries to clarify the selection principles and enhance the target of selection at the early stage of selection. Libraries in the digital era should give priority to systems that can manage all library resources comprehensively and effectively adapt to more flexible library workflows and enable libraries to provide better services to users, although traditional ILS has become increasingly difficult to meet the needs of university libraries in the digital age, given that many universities in China still manage print-based documents primarily. Therefore, the traditional library integration system can still meet the needs of some university libraries after improvement and upgrading. In the future, it

is advisable for the library community to plan to join the construction of next-generation service platform projects in the form of regional or industry consortia.

## Data Availability

The data used to support the findings of this study are included within the article.

## Conflicts of Interest

No competing interests exist concerning this study.

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