
The development of an information platform for librarians

Abstract. *The shift from the traditional form of managing a library has become achievable with the advancement and implementation of cutting-edge IT technologies. Such global changes are driven by the development of digital document spaces and the necessity for libraries to define their place in these domains by harmonising traditional and digital technologies. All the changes occurring around the world have also led to the restructuring of library systems. Developing new library models along with digitalisation will increase library services to a higher level. In this article, we define the library sector. Theoretically, most libraries rely on research conducted by Russian and foreign colleagues. Due to the lack of studies on developing information platforms in Kazakhstan, this study attempts to analyse the theoretical issues posed by scholars-librarians. The article identifies the issues and challenges in developing selection criteria for electronic documents and concludes by suggesting further research on this topic.*

Keywords: *Library system, librarian, electronic document, information society, digitization.*

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Introduction

With the explosive evolution of the global community, the role of information has become a high priority. In ancient times all information was preserved in cave paintings, and later it was stored on paper, but today information platforms have unquestionably replaced all these storage means. The shift from the traditional form of managing a library occurred owing to the advancement and implementation of cutting-edge IT technologies. On top of this fact, the focus of the library system is centered on service and maintenance. Introducing automated information systems is a tendency that provides us with a solid database, which increases the quality of work and productivity, and it is also one of the means to preserve and provide library users with the information they seek and demand.

The first thing that comes to mind when being asked about libraries is the staff, in other words, the librarians who work arduously to satisfy the needs of library users. It is a fact that the word library originates from the Greek words, which stand for “a book” and “a box or a store”, literally meaning a place where we preserve books, i.e., knowledge and information. While librarians, respectively, are people who sustain all knowledge and information.

However, to satisfy library users, having ambitious staff in place is not enough, since today's realities demand developing, implementing and investing in information platforms that will boost library services and ease access to those services for users. Kazakhstani librarians are eager to work with such advanced solutions, but such services are not widespread yet. We still theoretically rely on research conducted by Russian and foreign

scholars and lack our local contextual studies. Thus, in this article, further, we will define what the library sector means and present a literature review of the works conducted on information platforms by various scholars to visualise the context.

Literature review and discussion

Defining library and work of the library sector in the digital era.

Legally, a “library” means an informational, cultural, and educational facility that preserves an organised fund of reproduced documents and issues them to individuals and legal entities [1].

Physically, a “library” occupies an environment, i.e., space, where any user can process and access information resources. There is, however, a tricky relationship between libraries and space since the environment directly affects the user experience [2].

Economically, in today’s reality when knowledge has become an economical unit, libraries tend to become contributors to the sustainable development of the economy through direct impact on education, especially considering those located in educational and research institutions [3].

These definitions are explanatory terms serving as grounds for training librarians who handle several library operations, like storing and recording books, articles, newspapers, essays and other documents, and so on.

Digital document space is becoming a global phenomenon, and libraries should locate their place in these domains by harmonising conventional and digital technologies and solutions. Complex organisational processes occur in the digital document space, like creating full-text digital collections and systematising the features of entire digital libraries. Moreover, these processes involve representatives from a wide range of organisations and institutions - from librarians to science and technology experts and professionals from other fields [4].

Today, the library sector across the world is in crisis, driven by the necessity to adapt libraries to

the new technological communication practices associated with the spread and growth of Internet services [5]. Librarians and professionals are facing the issue of determining the directions for such adaptation, which will affect the priorities of their activities and shape the scope of their efforts.

Every small-scale to large-scale institution, university, institute, and, indeed, state, is interested in enriching the library fund. The development of information technology and the rapid growth of digitalisation in all spheres of modern society have fundamentally transformed conventional library technologies. Such solutions have changed the methods of collecting information, its visual representation and the ways of providing access to it. They have also modified the traditional forms and methods of managing library and bibliographic services. The processes of enriching, processing and preserving library funds have been transformed entirely [6].

The reciprocal collaboration between the traditional library and digital tools has enhanced library operations and created boundless new possibilities. State, public and private librarians require the relevant knowledge, digital literacy, and skills to make effective use of all available resources, and these skills should properly meet the needs of library users [7].

Turbulent changes in the world of information technologies do not intend to stop. These changes are also radically impacting usual library activities, i.e., actively expanding the range of operations to manage the library and bibliographic services directed to provide free access to global information resources.

Bottom line is that we are behind in meeting the information needs of society in Kazakhstan. Thus, it is necessary to introduce several reforms to manage libraries effectively and develop a new database for efficient and user-friendly work of libraries [8].

The digitalisation of society is one of the major issues that must be solved to enable the social progress of our citizens. Ironically, the digitalisation of society can help to fulfil this concept into reality [9]. Indeed, with the advent

of science and technology, all the data and library records are stored digitally, as well, allowing easy access to users, who value time the most in the digital era. Therefore, we all strive to employ information technology, designed to collect, create, store, transmit, process, secure and reproduce information using computer hardware, software and connection channels.

It is precisely these technologies that today play a fundamental role in the technological and sustainable national development of the state. It is common knowledge that the evolution of civilisation progresses towards building an information society [10]. Thus, today information and scientific knowledge have become of great value. Indeed, the revolution that has taken place in the library sector has changed the role and activities of libraries in general. People no longer accept them as simple book storage centres but value them as central data analysis centres that provide the wider public with access to information. This shows the growing significance of libraries in shaping the future of humankind.

So, many librarians face challenging issues and their questions may remain unanswered even in the digital era if libraries lack funding and support. For instance, such questions concerning the types of information, how to work and manage digital resources, how to retain users, and how to modernise the physical space of the library and environment since the latter directly affects the experience of library users.

There are two reasons why it is difficult to develop criteria for selecting digital documents to integrate into library, archive and museum funds. First, it is the instability of the digital environment, which leads to the unforeseen disappearance of significant document repositories. Second, it is due to the inadequate feasibility of typological and generic characteristics of digital documents, and, therefore, resulting in the complexity to differentiate the responsibility of how to collect and store them within the traditional “memory institutes” [11].

We will further consider the development of an information platform for librarians as an example to elaborate on this topic and to engage in one of the issues of our society.

Information platform for librarians

Primarily, all information systems should create a database - an array of specially arranged data that are stored in the memory of any computing system or database server and reflect the current state and interaction of items in a particular subject field [12].

Here, a computer will serve as a centralised computing system with a database, and a network will serve as a distribution system [13]. To develop the database, we will need to create a library fund, consisting of all the necessary literature, books, publications, essays, monographs, and other information in digital and paper formats. The larger the database, the more we can satisfy people’s needs for information. There are different database models.

It is necessary to accurately structure all information to enable library users to have easy access and work efficiently (Figure 1).

A well-functioning network of a user and a librarian can be achieved by creating conditions in the library that satisfy today’s needs and user demands.

The next phase is to train specialists capable of meeting all the requirements and ensuring the provision of continuous and uninterrupted work in the library [14]. Staff training has a distinct role in the library sector since their knowledge and skills can accelerate the social productivity of society, and accelerate Kazakhstan’s entry into the world of the future.

To sustain library operations, we will need to implement a user registration system, and a platform for librarians to search and maintain the number of data in the library database. Certainly, we will retain the traditional form of libraries as a right to receive books for a certain period and read paper formats in the reference rooms. The electronic format of resources will be available upon registering on the platform of the library. Such an example of library development is quite realistic and feasible, even in remote areas with the boost of digitalisation in Kazakhstan. Only by ensuring coherent work of all library facilities, we can achieve some plausible results.

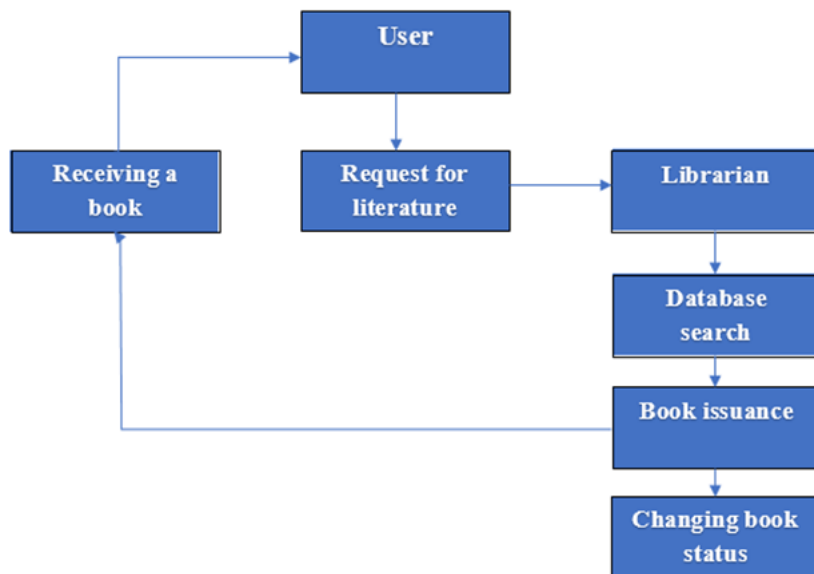


Figure 1. Framework for book issuance (traditional vs. digital)

The process for receiving and returning books, publications, newspapers, magazines, essays, and other literature will be the same as shown in Figure 1. Only when returning books, the title will change accordingly.

As for the digital format, however, this stage can create a series of legal issues. Few authors and publishers will consent to the digitisation of their works, by granting subsequent free access to

the Internet. Therefore, it is necessary to consider all the legal aspects of digitisation and reach an agreement with the authors to access the latest data for the database. The digitisation of intellectual property, the term of which has been exhausted, will cause no legal issues. These are books, magazines and journals from the past century. However, it is worth checking each piece of data in advance to avoid any legal consequences. We

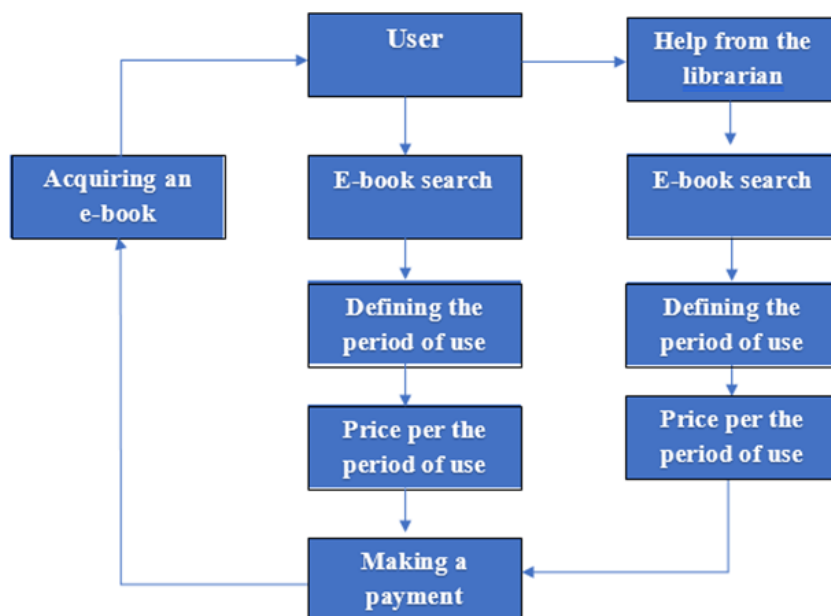


Figure 2. The process of acquiring a fee-based e-book

are aware that one of the essential characteristics of any library is the structure of its funds and the accessibility of publications in the public domain. Occasionally, restrictions are imposed on issuing especially rare, damaged, or state-secret editions, necessitating a special request or permission from the user [15]. Establishing such links is feasible also with the implementation of paid resources in the library, allowing a compromise with the owners of intellectual property (Figure 2).

Fee-based library services can make users uneasy, but also it will enable us to build up a well-structured library with all the necessary facilities, improving library space and environment. Getting a fee-based process in place will facilitate the legal work of the library, and ensure that users enjoy the books with no worry about the breach of authors' rights or intellectual property laws. We can arrange a fee-based system in this manner.

"Virtualising", or converting library processes to online mode as much as possible, will also help libraries adapt to the needs of the information society. The crisis caused by the Covid-19 pandemic has shown us that we need to be ready for distance learning. Thus, developing online platforms is vital if we want to sustain the quality of education and this is just a small example of this necessity.

The role of libraries has changed and we can today access various solutions. The online conferences held in 2 years demonstrated that the search for the right document and access to its content and the presentation of the book, seminar, round table and other activities online requires a lot of effort. We all witnessed how educational processes were undermined due to the lack of a database and the unpreparedness of

the institutions and government during a time of the pandemic.

The significance of ensuring high-quality distance learning concerns developing an information platform for librarians and extending their functional responsibilities. Meanwhile, the role of libraries in society is becoming increasingly prominent. Therefore, a networked library model will probably fulfil all the needs of our society.

Conclusion

As agents of information socialisation, the primary advantage of libraries is the high-quality guidance of users to access information that is not only relevant but also objectively reliable.

The conducted literature review and discussion indicate that digital development is transforming all aspects of society. Indeed, a human being as an intelligent being can adapt to any changes.

As of today, there have been several metamorphoses in the library sector, which will require improvement in the future since the digital era forces us not to stand still. The librarians' experiences with digitising all the data, changing the structure of the library and finding new solutions have helped them evolve as professionals. These skills will also help them reform today's library models.

Overall, although this article is limited to theoretical analysis and discussion, it raises a concerning issue that needs to be developed further. Thus, we recommend conducting additional research based on the provided theoretical data to identify the realities of using information platforms among librarians and library users.

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Разработка информационной платформы для библиотекарей

Аннотация. Переход от традиционной формы управления библиотеками стал возможным с развитием и внедрением передовых IT-технологий. Глобальные изменения обусловлены становлением электронного документного пространства и необходимостью для библиотек определить в нем свое место, гармонизировав традиционные и компьютерные технологии. Все изменения, происходящие в мире, привели и к реформированию библиотечных систем. Разработка новых моделей библиотек совместно с цифровизацией поможет вывести библиотеки на высокий уровень. Даны определения библиотечной отрасли. В теоретическом плане большинство библиотек опираются на исследования российских и зарубежных коллег. Принимая во внимание недостаточную изученность этой темы в Казахстане, в данном исследовании предпринята попытка проанализировать теоретические вопросы ученых-библиотековедов. Выявлены проблемы и трудности разработки критериев отбора электронных документов и в конце статьи сделан вывод о необходимости проведения дальнейшего исследования.

Ключевые слова: Библиотечная система, библиотекарь, электронный документ, информационное общество, оцифровка.

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Кітапханашылар үшін ақпараттық платформа әзірлеу

Аңдатпа. Кітапхананың ұйымдастырудың дәстүрлі формасынан көшу алдыңғы қатарлы IT-технологияларды дамыту және енгізу арқылы мүмкін болды. Жаһандық өзгерістер электронды құжат кеңістігінің қалыптасуымен, кітапханалар үшін дәстүрлі және компьютерлік технологияларды үйлестіре отырып,

оның орнын анықтау қажеттілігімен байланысты. Әлемде болып жатқан барлық өзгерістер кітапхана жүйесін реформалауға әкелді. Кітапханалардың жаңа үлгілерін цифрландырумен бірге әзірлеу кітапханаларды жоғары деңгейге шығаруға көмектеседі. Кітапхана саласына анықтамалар берілді. Теориялық тұрғыдан алғанда, кітапханалардың көпшілігі ресейлік және шетелдік әріптестердің зерттеулеріне сүйенеді. Бұл тақырыптың Қазақстанда жеткілікті зерттелмегенін назарға ала отырып, осы зерттеуде кітапханашы ғалымдардың теориялық мәселелерін талдауға әрекет жасалды. Электрондық құжаттарды іріктеу критерийлерін әзірлеудегі проблемалар мен қиындықтар анықталды және мақаланың соңында осы мәселені ары қарай зерттеудің қажеттілігі туралы баяндалды.

Түйін сөздер: Кітапхана жүйесі, кітапханашы, электронды құжат, ақпараттық қоғам, цифрландыру.

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