MOBILE ACCESS TO INFORMATION SERVICES AND RESOURCES: THE LIBRARY EXPERIENCE

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Abstract
Libraries are prevalent cultural and information institutions all over the civilized world. They have proven to be highly satisfactory in regard to meeting the information needs of different society groups and have gained the society's confidence. In view of their mission and policy of service libraries are some of the most democratic institutions. They play a key role in providing equal and unrestricted access to information for everyone.

Mobile access to libraries' information resources and services may be realised in different ways. One of them, used for a long time and considered traditional, is realised through means of transport – a bookmobile, most commonly. Another relatively recent, but extensively implemented form of mobile access is remote access, which makes use of the opportunities provided by the Internet and contemporary information technologies. Furthermore, there are temporary initiatives offering library resources and services in institutions and even outdoors – in parks, in the mountain, on the beach, etc. Mobile services are constantly improved and enriched. Young scientists from the University of Library Studies and Information Technologies in Sofia, Bulgaria actively work on the innovative idea of library service by means of a drone. Every single one of these approaches to access to information is important for a certain group of users and has its advantages over the others.

This paper presents and analyses different forms of mobile access to information resources and services – traditional mobile libraries, digital libraries with mobile access as well as temporary initiatives and innovative ideas like library service by means of a drone. Their application and benefits in specific situations are examined. Every one of these forms of access to information is irreplaceable for satisfying particular users’ needs.

In summary, the survey’s conclusions aim to emphasise the significance of mobile access to library services and resources in order for libraries to adequately answer users’ requests, support people with specific needs and provide them with information, accomplish social and information programmes and initiatives, assure equal and unrestricted access to information.

Keywords: Mobile libraries, digital libraries, ICT, mobile technologies, drone.

1 INTRODUCTION
The IFLA / UNESCO Public Library Manifesto of 1994 begins with the statement that freedom, prosperity and development of society and of the individual are basic human values [1]. They can only be achieved by well-informed people capable of exercising their democratic rights and playing an active role in society. Successful participation in public processes and the development of society depend on good education, on free and unlimited access to knowledge, culture and information. A public library is a gateway to knowledge. It provides conditions for lifelong learning, independent decision-making and cultural development of the individual and of the social groups.

It is a well-known fact that access to information and knowledge changes people's lives. And libraries, from ancient times to the present day, are the place to collect, systemize and provide reliable and easily accessible information. In the already mentioned Manifesto of UNESCO, public libraries are defined as a local information center that provides easy access to all kinds of knowledge and information to its users [1]. Public library services are provided on the basis of equal access for all, regardless of age, race, sex, religion, nationality, language or social status. An important condition for the efficiency of libraries is the ability to respond adequately to the needs of all user groups. Library collections should include both traditional and electronic materials provided through a variety of services and different access routes.

As a consequence of the introduction of modern information and communication technologies and the emergence of new media, the functions and the role of the library are enriched. Changes in
technologies allow for new ways of creating, storing, organizing and providing information. This in turn leads to a change in users' expectations about libraries' services and activities. Today, users want information faster, they want the full text of the document instead of citing and want information that clearly and accurately answers their questions. Increased expectations cause libraries to respond by developing more complex systems for collecting, organizing, storing, processing and delivering information. They introduce new forms and ways to satisfy consumer demand.

One of the important approaches to adequate information servicing is mobile access to library services and resources. Provided in a variety of ways - via mobile libraries, through digital libraries with such access, through various temporary initiatives - mobile access ensures adequate satisfaction of the readers' needs in different situations, provides support for people with specific needs, promotes the implementation of social and information programs and initiatives, provides unrestricted and equal access to information.

2 SIGNIFICANCE OF MOBILE ACCESS TO INFORMATION SERVICES AND RESOURCES

Mobile library and information servicing provides personalized, customized access to available information. It responds as much as possible to today's user expectations for quick and easy access to library resources and services. The use of up-to-date information and communication technologies in the library, the creation of digital libraries with mobile access is a response to the aspirations of modern society to make effective use of new technologies, to globalize the information space, to open up new opportunities to culture and education. Modern digital environment makes libraries face many challenges, but also opens up unlimited opportunities for their development and operation. Motivated by the new perspectives, they can provide up-to-date and adequate to time and the social requirements opportunities of sharing knowledge and information. These opportunities can be effectively implemented to enhance the quality and accessibility of education and science, to introduce new forms of learning - mobile and ubiquitous learning, to support non-formal education and lifelong learning. "We live in a time when there are new political and social circumstances, conditions and opportunities that make the library an active element of the processes of change and rethinking traditional educational patterns and the need to respond to the diversity of educational needs to overcome social and educational isolation."

Mobile access to information resources and services is extremely important for people with special needs – blind people, people with limited mobility and limited abilities for social communication, prisoners, people in hospitals, etc. Barriers to a large number of them could disappear at the possibility of using mobile library services and resources. Portable communications and training devices can be an important means of promoting personal independence. Traditional bookmobile servicing provides the opportunity to use library materials without having to leave the place where a user is residing, that is, the library moves to people.

These are just some of the opportunities for mobile access to information today. In modern society, the acceptance of differences and social inclusion are issues that still seek answers and solutions. However, the significance and the positive effect of incorporating modern information and communication technologies, mobile technologies in particular, are undeniable. The positive effects of mobile inclusion in training have been proven through a number of studies conducted in different parts of the world. Regardless of how it is implemented, mobile access to information is of significant importance when meeting specific readers' needs and is indispensable in any particular situation.

3 BASIC FORMS OF MOBILE ACCESS TO INFORMATION RESOURCES AND SERVICES

Mobile access to information resources and services is being implemented today through the following approaches: traditional mobile vehicle libraries; digital libraries with mobile access to them; various temporary initiatives for mobile information servicing. It is also worked on innovative ideas such as drone library servicing. Each of these forms has its own peculiarities, applications and advantages to satisfy the needs of certain readers.
3.1 Traditional mobile libraries

One of the main activities of well-developed libraries is the mobile servicing of readers by vehicles - usually bookmobiles. Through this type of mobile libraries remote populated areas, disadvantaged people, social and specialized establishments can be reached.

A mobile library is a collection of books in a vehicle that provides information services in a user-friendly location. Visits to specific areas are performed once or at intervals - weeks or months, and their length is determined by the size of the service area.

This method is very well suited to working with children and pupils since they cannot go to libraries on their own yet, have no reader habits and need help and motivation. Through mobile libraries, the connection between young readers and books is set up, with the initiative being on the part of the library institution.

Mobile servicing through bookmobiles is very important for the development of an efficient library system. Thanks to the services of mobile libraries that are made possible through bookmobiles, small communities in distant regions have access to rich collections and experienced professionals, to quality and efficient servicing with traditional resources.

3.2 Digital Libraries with Provided Mobile Access

Currently one of the most promising ways of providing information are the digital libraries. The first digital libraries were created in the 1970s in the United States. The formation of diverse collections of electronic documents began in the military, academic and educational organizations, as well as in large industrial corporations. With the onset of the era of computer networks, extremely favourable conditions were created for the development of digital libraries. The advent of the Internet and its millions of users worldwide greatly increased the potential number of people visiting the electronic document collections. The number of digital collections went up in the next decades at an extremely fast pace and covered the whole world.

A plethora of definitions exist for many relatively new concepts as well as for the term “digital library”. Generally speaking, we can sum up that the digital library is a collection of digital resources available through the Internet and management tools for the whole system. For its normal functioning, the digital library should include at least three main elements: repository for preservation and management of digital object; a search system for quick and easy detection of information; and a user interface through which end users interact with digital objects. Every digital library should perform all the basic functions of the traditional one and build on them.

Thanks to the use of modern computer and communication technologies and Internet, digital libraries have some significant advantages over libraries that store only traditional carriers of information:

- there are no space restrictions on access to information - people from all over the world can find the same information without physically changing their whereabouts;
- users receive information regardless of time - 24 hours, seven days a week;
- a certain digital resource can be used simultaneously by multiple users;
- the operational availability of documents and data needed by the user increases significantly;
- the user has access to a variety of electronic resources from one point thanks to a single interface;
- information search is performed by many more keywords - word, phrase, title, subject, name - and can be done throughout the text of the document, not just the metadata;
- the use of electronic copies allows the preservation of original rare and valuable documents in good physical condition;
- the digital form of documents allows the provision of both textual information as well as colour images, graphics and sound;
- documents that are in limited quantities or single copies become available to a significantly larger number of users;
- facilitating library and information services for people with special needs;
electronic documents allow much more document handling - reading, editing, merging, adding other text or image;
much more economical and convenient storage of information;
protection and wider promotion of valuable collections through digitalization.

New technologies provide multiple benefits for digital libraries. However, there are some challenges related to digital collections: protection against unauthorized access; antivirus protection; prevention of leakage via technical channels; the regulation of information rights issues; keeping privacy, etc.

Despite these negative aspects, the removal of which is being actively pursued, new information and communication technologies have changed the information environment and will be a key tool in providing information and knowledge in the future as well. The introduction of electronic resources to library collections offers new ways to satisfy customer searches.

In the modern digital world, one of the new varieties of the library is the mobile digital library, a digital library that offers access to its services and resources through mobile technologies. A digital library definition has already been introduced. The term "mobile technologies" was defined most fully and precisely during the First UNESCO Mobile Learning Week held in Paris from 12 to 16 December 2011. Experts offer the following working definition: UNESCO defines the term "mobile technologies" as a combination of hardware, operating system, networks, software - including content, learning platforms and specific applications. Mobile devices range from basic mobile phones to tablets, MP3 and MP4 players, electronic readers, smartphones, etc. [8]. Mobile technologies evolve extremely quickly and provide instant access to a huge and steadily growing amount of information. They provide new, changing opportunities for communication and knowledge sharing between individuals or groups, regardless of time and physical location. Mobile phones in particular are universally accessible. Therefore, UNESCO is interested in their potential to support training, teaching and educational transformations. Many pilot projects have already explored this area and show that mobile phones can help improve literacy, raise learners' motivation, expand access to teacher upgrading opportunities, and optimize communication between parents, teachers and governing bodies.

However, mobile devices are only the ultimate element of the mobile technology system. In addition to these information receivers, other elements are also needed to link the source to the end user:

- specialized hardware, software, operating systems and other applications;
- high-speed networks for transfer of information;
- specialized platforms for education, electronic content of documents and information;
- publishers, providers of information in digital format;
- libraries offering digital collections and mobile interfaces;
- mobile apps.

The number of libraries that provide mobile access to their resources has already increased. The basic services provided by libraries and accessible via mobile devices are as follows:

- searching in the bibliographic database of the library;
- searching in the electronic databases and obtaining the full text of the document;
- sms-servicing: book availability information, expiration notice, book renew with sms, working time information, sms-list of borrowed items, etc.
- mobile resource and service instruction - may be in audio, video or text format;
- mobile tour in the library - if in audio or video format, the language of communication can be selected;
- mobile access to the full text of library documents.

Mobile digital libraries are becoming increasingly widespread in the fields of education, science, culture, social inclusion, as well as in the development and growth of the individual and the society as a whole [9]. Today, there are already a number of implemented projects and initiatives for the creation, management and operation of mobile digital libraries and mobile training.
Mobile digital libraries have all the benefits of digital. However, they also have a number of extras that make them even more desirable and appreciated by consumers. The trends that provide these upgrading capabilities are:

- technologies are becoming increasingly accessible and more functional;
- devices will be able to synthesize, analyze and store an even larger data set;
- the emerging of new type of data - modern mobile devices now have different types of sensors that can perceive sound through the microphone, determine a location via GPS, set motion, speed and direction parameters;
- screen size limitations on mobile devices are disappearing;
- the energy performance of mobile devices is improving;
- widespread use of distance learning - one of the most noticeable trends in technology-based training in recent years is the introduction and dissemination of Massive Open Online Courses (MOOCs).

Modern educational environment evolves in a new direction that places the learner at the center of the system [10]. Mobile learning and mobile digital educational resources, united in libraries, are one of the most appropriate answers to meet the demands of customers nowadays. They offer a variety of applications and resources customized to each individual learner, providing personalized training as expected in the future. The popularization of the Internet at the end of the last century, the development and improvement of information and communication technologies and the new trends in educational approaches set up the foundation, necessary to create, develop and perfect contemporary, up-to-date libraries that meet the needs, the time and the environment.

### 3.3 Various temporary initiatives for mobile information services

Very often, library institutions organize a variety of temporary initiatives for mobile information provision. Some of these are:

- organizing ‘green reading rooms’ in open spaces - in parks, in mountains, on the beach and other appropriate places where everyone can read or take a book;
- placing "book houses" in urban parks or other appropriate public spaces - readers can borrow a book there and then return it to the library;
- organizing visits and temporary provision of part of the library collections in institutions - kindergartens, schools, hospitals, etc.
- developing free mobile phone applications that provide information about historical and architectural sites using images, video materials, 3D models, and selected information from traditional documentary sources. The main advantage of such information provision is the opportunity to use the information during the visit to the respective cultural landmarks and without limitation in time and space.

This type of initiatives can be enriched and developed with new ideas in the future. What is important with them is the idea to get information sources out of the library institutions. As a result, more potential readers can be reached.

### 3.4 Mobile library service with drone

Mobile services are constantly improved and enriched. Since 2018, young scientists from the University of Library Studies and Information Technologies in Sofia, Bulgaria, have been actively working on the innovative idea of library servicing, using drones.

There are two sides to the main objective of the research project:

- Firstly, under the guidance of experienced lecturers, several PhD students are developing a theoretical conceptual model for delivering information materials in remote, difficult-to-access areas using drones.
- Secondly, intensive experimental work is going on by creating a practical management system for programming the behaviour of small aircraft capable in an autonomous mode and within a strictly defined time interval to provide information materials within a radius of 23 kilometers.
from the Special Center for their management. In essence, this Center is a specialized part of a library hub, which sends the drones to reception information centers in small, remote and hard-to-reach settlements.

The use of drones as equipment and supply technologies is not a new idea. What is new in this case is their application as material carriers of information resources.

Work and research activities in this field are promising and we are soon expecting to report some of the specific interim results.

4 CONCLUSIONS

In modern information society digital, information and communication literacy are considered basic skills for the formation and development of every socially active and successful citizen, while information and communication technologies play a key role in both educational and information provision and in any other sphere of social life.

Libraries are the institutions that can respond adequately to present-day social needs and can engage actively in changing the world we live in. They are particularly responsible for a fair and equitable access to information and education for everyone. By providing mobile access to information resources and services, tailored to the individual needs of each reader, libraries perform one of their main functions - providing equal access to information resources, regardless of age, race, gender or social status. At the same time, they meet the current requirements of readers for a quick and with a maximum ease access to information.

The interdependence between the interests of different members of society, the development of new policies and information provision services suggests sustainable development of both library institutions and the individual as well as that of contemporary society as a whole.

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