MOBILE INFORMATION TECHNOLOGIES AS A KEY FACTOR OF MODERN LEARNING POLICIES

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Abstract

Over the past few decades, modern information and communication technologies, education and science have become tightly related. As a result of their symbiosis, numerous innovative forms and methods of learning, grading and teaching making active use of the new opportunities provided by contemporary mobile technological solutions have emerged. Mobile technologies and learning are the subject of the present paper introducing an „Information portal for mobile learning and mobile access to library services and resources". The portal has been created as part of the completion of an eponymous research project financed by the National Science Fund of the Ministry of Education and Science in Bulgaria after winning a Competition for young scientists and postdocs' fundamental scientific research funding. The main aim of the project is to systematically analyze the issues of mobile learning and mobile access to library services and resources to achieve, assemble and present new scientific knowledge and products in a common information internet portal revealing and summarizing the positive changes brought about by information technologies in modern society. The following scientific methods have been used in order to fulfil the above-mentioned aim of the project and the tasks related to it: analysis and synthesis, systematization and summarization of document resources, comparison, modelling for the creation of the conceptual model of the information portal. Both the completed project and the present paper highlight that mobile technologies are of great significance for modern information and educational policies and contribute to promote awareness of their implementation in learning approaches.

Keywords: Mobile digital libraries, mobile learning, mobile technologies, research project, education.

1. Introduction

Modern information technologies, in particular mobile information technologies (MIT), are now an indispensable part of modern learning policies. The ubiquitous advent of mobile technologies into every sphere of public life opens up new opportunities for development and optimization. From the point of view of modern information processes, the effective inclusion of mobile technologies in the spheres of education, science, access to information and library activity is inevitable.

In January 2022, the International Federation of Library Associations and Institutions (IFLA) published the IFLA TREND REPORT 2021 UPDATE. Three of the main trends identified in the report directly relate to mobile digital libraries and mobile education, which are the focus of our attention:

- **Virtual is here to stay** – people continue to prefer to access library services remotely, putting into question the value of spaces and physical offerings.
- **A mobile population** – with people ever more nomadic, the concept of a "local" library becomes less relevant, and the need to provide joined-up services across borders rises.
- **A single, global collection** – with digitization of resources and possibilities to work across institutions, it is no longer so relevant to talk about local collections, but access to universal resources (IFLA, 2021).

These trends in the development of the global information environment once again prove the need to include mobile technologies in new information and educational policies, so that educational and cultural institutions can meet the current reader needs of the "mobile population" and adequately respond to changes in the modern digital information environment.

It is the symbiosis between mobile technologies and the educational and information sphere that is the research field in which the research team of the project in this paper works. On the basis of the conducted research and the carried out approbation activities, we came to the justified assumption about the following advantages of MIT in education:

- **Accessibility:** students can study from anywhere and at any time;
- **Personalization:** these technologies can be adapted to the individual needs of each student;
- **Interactivity:** they offer multiple interactive tools that engage students in the learning process;
- **Collaboration:** facilitate collaboration between students, teachers and the public;
- **Motivation:** the learning process is more fun and more motivating for students.

2. Research project "Information portal for mobile learning and mobile access to library services and resources "– main goal and methodology

The project "Information portal for mobile learning and mobile access to library services and resources" was developed by a team of researchers from the University of Library Studies and Information Technologies - Bulgaria. This project won funding in the Competition for financial support for projects of junior researchers and postdocs, organized by the National Science Fund at the Ministry of Education and Science of the Republic of Bulgaria, led by Assist. Prof. Elisaveta Tsvetkova, PhD.

The main goal of the project is to systematically study the issues related to mobile learning and mobile access to library services and resources, both in Bulgaria and in other European countries, to reach new scientific knowledge and products united and presented in a common informational Internet portal, through which to reveal and summarize the positive changes that information technologies cause in modern society in terms of new opportunities for access to learning and information, through the active role of mobile digital libraries, whereby to increase the interest and spread of these forms of information in the educational, scientific and cultural spheres.

3. Information portal – a major applied contribution of the research project

The most valuable scientific and applied contribution of the described project is the creation of the first Bulgarian thematic information portal for mobile learning and mobile digital libraries, freely available in the Internet space, with the title "Information portal for mobile learning and mobile access to library services and resources". The activities for the creation of the portal began with research, analysis and synthesis of information with the aim of creating 5 information databases to be the basis of the information portal. The study, analysis and systematization of documentary sources, Internet resources, scientific literature on the developed topic, the search for good practices at home and abroad began with the launch of the project and was carried out throughout the entire period of its implementation. The publications on the topic in the world information bases Scopus, Web of Science, ScienceDirect, in the publishing catalogs of renowned global publishing companies such as "Rowman & Littlefield", the websites of numerous libraries and universities were thoroughly studied. Much of the valuable information discovered was found on the websites and e-libraries of international organizations such as UNESCO, the International Association for Mobile Learning: IamLearn, the International Federation of Library Associations and Institutions (IFLA), the American Library Association, etc.

As a result of the systematic search for information on the subject of the project, the following 5 main information databases with their own sub-bases were systematized:
- **Information database:** Mobile digital libraries:
  - ➢ *Bulgarian mobile digital libraries:*
    - ▪ Bulgarian public mobile digital libraries
    - ▪ Bulgarian university mobile digital libraries
  - ➢ *Foreign mobile digital libraries:*
    - ▪ Foreign public mobile digital libraries;
    - ▪ Foreign university mobile digital libraries;
- **Information database:** Projects and initiatives in the field of mobile learning;
- **Information database:** Institutions - leaders in the field of mobile libraries and training;
- **Information database:** Scientific forums related to mobile digital libraries and mobile learning;
- **Information database:** Normative documents and policies:
  - ➢ *In Bulgarian;*
  - ➢ *In English*.

The systematized information databases were included as the main structural elements in the information portal created under the project for the promotion of mobile learning and mobile digital libraries.

A few months after the start of the project, the website "Information portal for mobile learning and mobile access to library services and resources" was created and information about the goals,

methodology and expected results of the project was uploaded. Gradually, the information is expanded and enriched. In its final version, the information portal provides information on:

- The University of Library Studies and Information Technologies (ULSIT) - the leading institution of the project;
- the team working on the project;
- the objectives, methodology, relevance and expected results of the project implementation;
- a complete bibliographic list of the publications realized in implementation of the project - 14 scientific papers published in refereed scientific publications, indexed in Web of Science and 13 scientific papers published in other refereed scientific publications - a total of 27 papers presented at 9 international and 7 Bulgarian scientific forums;
- the electronic version of the monograph "Information, Libraries, Education. Application of modern mobile technologies" authored by Elisaveta Tsvetkova (Tsvetkova, 2022);
- a gallery of photos from the final seminar on the project;
- the five information databases that provide an opportunity for easy and convenient access to systematized information in the field of mobile library and information services and mobile learning (Information, 2024).

The creation of an information portal for the promotion of mobile learning and mobile digital libraries increases the opportunities for public awareness and creates prerequisites for the wider application of the latest achievements of information and communication technologies to improve access to information and knowledge, for the socialization of Bulgarian literary culture heritage preserved in library institutions to stimulate scientific research in the field and to preserve the cultural identity of society.

4. Conclusion

Mobile technologies are of key importance for the quality provision of educational services in the conditions of the digital age. Based on them, the following policies are defined to promote their use in education:

- **ensuring access:** all learners must have access to mobile devices and the Internet;
- **teacher training:** teachers must be prepared how to use MIT in the teaching process;
- **quality content development:** quality content should be developed specifically for mobile devices;
- **ensuring cyber security:** it is important to take measures to ensure the cyber security of the educational process when using MIT.

The focus of modern education is on digital forms to provide quality, diverse and quickly accessible information (The World, 2024; UNESCO, 2024). The common vision and shared efforts of the world's information providers to deliver and maintain digital and mobile access to their information resources is an adequate response to the modern educational and scientific reality characterized by extremely rapid technological development offering many innovative opportunities, with a new type of information users looking for the fastest and easiest access to quality resources from anywhere and anytime, with multiple up-to-date information sources creating a highly competitive information environment (OER, 2024; Coursera, 2024). Combining knowledge and information with new digital technologies is a key factor in modern education policies and today's globalized and networked society. Mobile information technologies are and can be a powerful tool for improving the learning process, but it is important to use them in an appropriate way.

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