Development of a Digital Library for Specialists in Penitentiary Service

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Abstract: Digital technologies require us to prioritize the security and protection of library information resources. The digital environment expands access to information, makes it more convenient, and allows the use of devices to work in the information space. Includes the ability to control and protect your own information environment. Libraries and educational organizations need to work together to provide information and new ways of learning due to the demands of digital and information technologies.

1 INTRODUCTION

With the development of new information technologies, modern education is changing after a while. The internet and digital technologies are breaking down barriers to knowledge, making education more complete, dynamic, interactive, creative, and fun. The idea of education originated in Ancient Greece and later developed with humanistic education. Holistic education is becoming more popular because it explains how models and structures form in open systems. At the present stage of the development of society, holistic education requires multi-stage education. Throughout your professional journey, it is important to have access to more information. You can get this through a mobile app for the electronic library. It knows that the first project in this direction was Project Gutenberg (1971).

The active development of the Internet has influenced all spheres of society. In 2019, the COVID-19 pandemic arose in the world, which made adjustments to the life of every person in all countries of the world. The World Health Organization (WHO) has declared this disease a public health emergency (World Health Organization, 2020). It decided to introduce self-isolation, send employees of organizations to remote work, and educational

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organizations to distance learning. The need arose to use information and communication technologies (ICT) (Ahmad R., and Rafiq M., 2022). The COVID-19 pandemic has increased the demand for libraries around the world, and the need to expand user services in the online space has increased.

Digital technologies have made it easier to produce, find, and access information. As a result, more and more of it is being released in digital formats (Hilbert M., 2012). There has been a transition from analogue to digital systems (Rafiq M., 2011). The use of technology has changed how we search for and share information, and it has also transformed how we learn (Lee K.-H., Slattery O., Lu R., Tang X. and McCrary V., 2002; Sultan M. and Rafiq M., 2021)). UNESCO supports the development of new ways for educational organizations to connect and collaborate using technology. They also encourage the creation of electronic libraries and the production of digital educational materials (Workshop on European, 2001).

A modern digital library is a repository not only of books but also of various information, including an intellectual and creative hub. With artificial intelligence, data processing becomes easier as it improves information quality and simplifies searching through tagged resources.

The goal of this project is to create a digital library that professionals from various fields, including those in the penitentiary service, through a mobile app can access. This is because of the accessibility to any individual information source without access to a computer or laptop.

2 RESULTS AND DISCUSSION

As educational organizations adopt remote forms of interaction, the need for electronic information resources has grown. This has led libraries to acquire digital content. However, libraries have faced a lack of planning for long-term preservation of digital resources in mobile applications (Anyaoku E.N., Echedom A.U.N. and Baro E.E., 2019; Bazzanella B., Bouquet P. and other, 2012; Canadian Heritage Information Network (CHIN), 2011; Engelhardt C., 2013; Gorzalski M.J., 2018; Kalusopa T. and Zulu S., 2009; Library and Archives Canada. 2010; Lievesley D. and Jones S., 1998; Maron N., 2013; Masenya T.M. and Ngulube P., 2019; McInnes V., 2009; McMillan G., Schultz M. and Skinner K., 2011; Velte A., 2016). Every year, it becomes more important to preserve information resources in both printed and digital formats for a long time (Boufarss M. and Harviainen J.T., 2021; Hedstrom M., 1998).

There is a constant improvement in technologies for maintaining this space, storage, access, distribution, and ease of search (Badawy M.A.S.A.A., 2017; Deegan M. and Tanner S., 2006). The most pressing problems facing libraries are the requirements for digital content and its storage. Technological devices become outdated, wear out, and can experience failures in data carriers, software, and hardware. They can also be damaged by hacker attacks and other problems. It's need to be paid special attention to developments in data storage. Insufficiently developed technologies in digital data preservation negatively impact libraries and archives (Xie S.L., 2008; Li B., Song Y., Lu X. and Zhou L., 2020). Library IT experts argue that it is necessary to work on data curation in order to gain the trust of researchers. Digital content stored in libraries will be lost if proper actions are not able (Rafferty E. and Pad B., 2017). However, the availability of digital resources brings up the challenge of preserving and protecting the content. At the present stage, the protection of digital content has risks associated with untested methods of technical support (Trehub A., 2001). The development of such a direction as digital preservation is one of the priority tasks facing libraries. Experts regarded the first decade of the twenty-first century as the decade of digitization, while they singled out the second decade as the decade of digital preservation (Trehub A. and Wilson T.C., 2010; Hutchins M., 2012). The National Library of Australia views digital preservation from a technical standpoint as the preservation of the capability to access digital content meaningfully over time (Feather J. and Sturges, P., 2004; Beagrie N. and Jones M., 2008). Large-scale actions are designed to access digital materials continuously for as long as necessary (Strodl S., Becker C., Neumayer R. and Rauber A., 2007; Kaplan A. and Haenlein M. 2019).

Along with the problem of digital preservation, the problem of difficulty in accessing digital content is noted. M. Hedstrom (1998), K.-H. Lee (2002), S. Strodl (2007) developed options for strategies for preserving digital content, constant access to which is supported (Lee K.-H., Slattery O., Lu R., Tang X. and McCrary V., 2002; Hedstrom M., 1998; Lifshits Igal and Rosenberg Dennis, 2024) (Fig. 1).

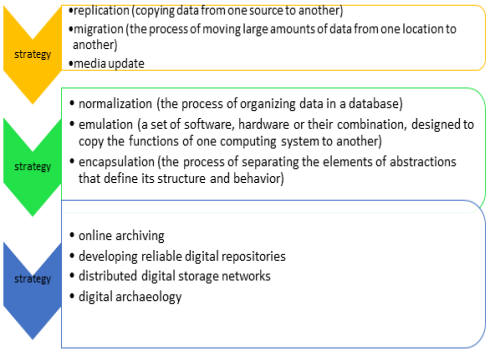

Figure 1:Strategies for preserving digital content, according to M. Hedstrom (1998), K.-H. Lee (2002), S. Strodl (2007).

The analysis of literary sources revealed that digital technologies place significant demands on preserving and securing library resources. This creates competition among providers of alternative information services in educational organizations. Unlike a traditional library, a digital library occupies a leading position in the educational market. The digital environment expands access to information, makes it more convenient allows using devices to work in the information space (Workshop on European, 2001). Some popular digital libraries include “e-Reading”, “Artifact”, “RoyalLib”, “Twirpx”, “Journal Hall”, “ImWerden”, “Aldebaran”, “TarraNova”, “CyberLeninka”, “Runivers”, and “PubMed Central”.

By analyzing literary sources, we can see that the demand for digital libraries is increasing, especially for mobile and web applications. Taking into account modern library digital developments, the team of authors has developed a universal mobile application of a digital library for specialists in penitentiary service. However, the convenience of the Afinia library is that specialists in various fields of activity (certificate of state registration of computer program can use it 2024 RU2024616396; Programming language: PHP). The application classifies information and saves it in storage, depending on its importance and frequency of use. The user independently manages the accumulation of information. The advantage of this development is the availability of digital information. E-accessibility involves the creation of digital services for the convenience of users. In our development, the emphasis is on users of the penitentiary service, who have their own professional specifics. However, the developed library can be easily adapted to any user. The digital library has reading texts, site navigation, searching for specific information, and works well with assistive technologies. A simplified interface ensures ease of use by users. It is also possible to choose: interface color scheme; number of icons on the desktop; change the password for entering the library; coordinate the search for information with teachers via chat. This library can be installed on any device. Adaptation of digital content allows to satisfy the cognitive needs of a specific user. Provides the opportunity to receive information on request about the social and educational life of society.

4 CONCLUSIONS

The artificial intelligence (AI) of the developed digital library is designed to interpret information correctly, facilitate the work of students in preparing for classes, and help specialists find the necessary information to solve professional problems (Kaplan A. and Haenlein M. 2019; Lifshits Igal and Rosenberg Dennis, 2024). Artificial intelligence (AI) can also help students select information and adapt it to their educational and professional needs. By using hashtags (#), the program ensures psychological safety when searching for information on the internet.

“Afinia,” the digital library, teaches how to work with large amounts of data. The experience of implementing the digital library has shown the interest of students and specialists in this program. It improves training by tailoring it to individuals, boosts academic performance, and encourages creative problem-solving. The implementation of the AI digital library will allow using the accumulated experience in any field of activity.

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