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**UNIVERSITY LIBRARY
AT A NEW STAGE OF SOCIAL
COMMUNICATIONS
DEVELOPMENT**

CONFERENCE PROCEEDINGS

No. 7 (2022)

Dnipro

2022

Ukrainian State University of Science and Technologies

**UNIVERSITY LIBRARY AT A NEW STAGE OF SOCIAL
COMMUNICATIONS DEVELOPMENT.
CONFERENCE PROCEEDINGS**

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The New Evolutionary Trajectory of University Libraries: The Editor-in-Chief's View

The paper provides a brief overview of the events/issues that the authors of the 7(2022) issue of the UniLibNSD journal cover in their articles. The authors' many issues are highlighted through evidence of the nature of these challenges, as well as theoretical and concrete examples of how to address them. At a time of tectonic shifts in global geopolitics, climate change, digital development, the fight against the COVID 2019 pandemic, social transformations, librarians have witnessed russia's full-scale aggression against Ukraine and against world democracy, including the terrible destruction of Ukrainian libraries and archives by russian terrorists who continue their fierce offensive against the world's documentary heritage. That is why most of the authors challenge traditional concepts of librarianship, argue that libraries are not neutral, and call on the world's librarians to take active measures to prevent genocide, anti-racist and anti-oppressive practices for the benefit of both users and the profession itself.

Keywords: university libraries; journal "UniLibNSD"; modern challenges for librarians; evolutionary trajectory of university libraries; Ukraine

Dear readers, authors, and colleagues,

We were looking forward to the new (VII) issue of the journal "University Library at a New Stage of Social Communications Development. Conference Proceedings". Full-format papers were selected, reviewed and recommended by the members of the international editorial board of the similarly-named conference (UniLibNSD-2022). The issue is extremely relevant and somewhat unusually rich in the authors' own reflections on the tragic events in Ukraine caused by the Russian military aggression and genocide of the Ukrainian people.

The international conference was held October 6–7, 2022 at the Ukrainian State University of Science and Technologies (Dnipro, Ukraine) in a hybrid format.

The theme of the conference 2022 – "The era of library transformations and the new ecology of life", planned in mid-2021, turned out to be extremely relevant for both Ukraine and the whole world. The International Organizing Committee dreamed that the participants would highlight current issues and hear inspiring answers from theorists and practitioners of the library and information science in the context of the challenges of the COVID 2019 pandemic.

But russia's cruel and insidious war against Ukraine with the intention of seizing its territories, destroying the Ukrainian people as a nation, destroying its culture, language, education, science has brought an additional urgent focus – what is or can be library policy and library measures to prevent genocide in any country in the world, anti-racist and anti-oppressive practices for the benefit of users and the profession itself.

Ukraine is a country located in the centre of Europe. Dnipro, the space capital of Ukraine and a city of one million people, is now a frontline city, which since February 24, 2022 has been living and working hard under air raid sirens, missile attacks, constant threats to human life, destruction of buildings and critical infrastructure, frequent lack of light, heat, communication...

That is why the organizers were not sure whether they would have enough strength and capacity to hold a high-quality event and whether it would be postponed to the post-war period. But it was decided to work, because these are the lessons we will learn and which will contribute to the development of the world library and information business, world democracy.

And we did it together!!! And, of course, it is impossible not to thank the heroic Armed Forces of Ukraine for this!

The main organizer of the conference is the scientific library of the Ukrainian State University of Science and Technologies (until 2022 Dnipro National University of Railway Transport named after Academician V. Lazaryan). Co-organizers and partners of the conference: the Nazarbayev University Library (the Republic of Kazakhstan), European Network of Open Education Librarians (SPARC Europe), Ukrainian Library Association (Ukraine).

The UniLibNSD 2022 conference, as in the last two years, was held in a hybrid format. Of course, most of the participants (almost 70%) were present online, and they were pleased to note the quality of communication, professional English-Ukrainian and Ukrainian-English translations, friendly, optimistic and relaxed atmosphere of the event. Participants from 17 countries made a creative contribution with reports, discussions and questions: Belgium, India, Indonesia, Ireland, Italy, Canada, the Netherlands, Germany, Poland, the Republic of Kazakhstan, Slovenia, the United States of America, Hungary, Ukraine, the Philippines, France, the Czech Republic.

In the reports, discussions and articles, the participants focused on the bright surge of changes in the activities of university libraries, related organizations and communities of different countries as a response to the COVID 2019 pandemic and Russia's attempts to terrorize the Ukrainian people and the whole world with the threat of destruction of people, nature, tangible and intangible objects...

Undoubtedly, most of the articles in the UniLibNSD-2022 yearbook are a reflection on the war and a presentation of the unique experience of librarians of higher education institutions of Ukraine, which was and is being obtained at a terrible price.

But the global background against which the transformational activities of university libraries in different countries are unfolding today confirms that they are very responsive and receptive to rapidly changing trends in technological development, social challenges, as well as to emerging paradigms of teaching, learning and research. And this library activity depends not only on the preservation and transmission of fixed knowledge, but also on the co-creation of new knowledge.

The evolutionary trajectory of the university library in the historical context in recent years demonstrates a bright surge of changes caused by digitalization. The effects of digital transformation and communication related to social spheres, including education and serious threats to human life and public health, are changing the thinking and roles of libraries.

We realize that the ecosystems in which we work, study, research and spend our personal time are connected to other ecosystems. And the new ecology of ecosystems guides us not only to introduce innovations in library and information activities, but also to extend the life of those resources that we already possess, to be creative in how we give a "second life" to valuable information from library collections, to repurpose and reorient our spaces, to rethink and transform library services in the context of eco-conscious life.

In times of great upheaval and change, librarians stand for an ecosystem of products and services for the benefit of everyone, their communities and nature!

And this thesis was present in each of the 64 keynote speeches and poster presentations. It was from them that the editorial board selected, reviewed and recommended 23 full-length papers for "University Library at a New Stage of Social Communications Developments. Conference Proceedings".

This report attempts to provide a snapshot of the developments/challenges that the authors of the UniLibNSD journal have highlighted in their articles:

- Ethical Component of Library Competences Design;
- Safety is One of the Most Important Component Systems of Digital Competencies in Wartime Conditions
- Reorientation of library space and library services and formation of eco-environment under martial law in Ukraine;
- While librarians generally report favourable beliefs about Open Access (OA), most institutions lack OA policies, resulting in a fragmented approach to open content of all types and less than coherent institutional strategies;
- Improved understanding of university communities (faculty, students, librarians) about the development of distance learning, open educational resources and the new role of university libraries in these processes;
- Determination of the level of satisfaction of library users with its virtual services, taking into account (as a consequence of digital transformation) the increase in user outreach and decrease in the distance of communication with them (if there is access to documents, especially open access);
- Artificial intelligence (AI) is being increasingly embedded in academic libraries tools and services. For example, the introduction of AI in virtual reference services provides a new online model for libraries with the help of chatbots;
- Virtual communication, social media contribute to the development of library cooperation at the university, national, and international levels, including research on digital civic engagement and overcoming language barriers in open educational resources;
- Leadership communication, a new type of leadership with new sets of skills and orientations;
- Restoring the emotional balance of Ukrainian librarians during the full-scale war between russia and Ukraine;
- Reflections on returning to the physical office after a long period of virtual work.

The authors' thoughts on these and many other issues are highlighted through evidence of the nature of these challenges, as well as theoretical and concrete examples of how to address them. We hope that you will find useful ideas and tools that you can apply in your libraries.

At a time of tectonic shifts in global geopolitics, climate change, digital development, the fight against the COVID 2019 pandemic, social transformations, librarians have witnessed russia's full-scale aggression against Ukraine and against world democracy, including the terrible destruction of Ukrainian libraries and archives by russian terrorists who continue their fierce offensive against the world's documentary heritage.

That is why today critical librarianship, which challenges traditional concepts of librarianship, actively tries to assert that libraries are not neutral, and calls on librarians to take active measures to prevent genocide, anti-racist and anti-oppressive practices for the benefit of both users and the profession itself.

Thus, most of the authors of UniLibNSD emphasize that the library and information community shall protect the rights to the highest human values throughout the world, democratic rights, value the diversity of cultures, support national education and science.

Dear readers and authors, members of the international editorial board hope that the new (VII) issue of the journal "University Library at a New Stage of Social Communications Development. Conference Proceedings" will focus your attention on the most important lessons,

practices, services, competencies, opportunities that we have acquired recently and that we will take with us in the post-coronavirus and post-Russian-Ukrainian war period. This is a new evolutionary trajectory of university libraries in the world.

The international editorial board highly appreciates the contribution of each author. We sincerely thank our readers for their interest in UniLibNSD, our reviewers for their competence, delicacy and goodwill.

We sincerely wish our partners and readers success and confidence in the future! We invite you to cooperation.

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Нова еволюційна траєкторія університетських бібліотек: погляд головного редактора

У роботі подано короткий огляд подій/проблем, які висвітлюють у своїх статтях автори 7(2022) випуску журналу "UniLibNSD". Численні проблеми авторів висвітлюються через докази сутності цих викликів, а також теоретичні та конкретні приклади їх вирішення. У час тектонічних зрушень у світовій геополітиці, зміни клімату, цифрового розвитку, боротьби з пандемією COVID 2019, соціальних трансформацій бібліотекарі стали свідками повномасштабної агресії Росії проти України та світової демократії, зокрема жакливого знищення українських бібліотек та архівів російськими терористами, які продовжують свій запеклий наступ на світову документальну спадщину. Саме тому більшість авторів кидають виклик традиційним концепціям бібліотечної справи, стверджують, що бібліотеки не є нейтральними, і закликають бібліотекарів світу до активних дій щодо запобігання геноциду, антирасистських та антирепресивних практик на благо як користувачів, так і самої професії.

Ключові слова: університетські бібліотеки; журнал "UniLibNSD"; сучасні виклики для бібліотекарів; еволюційна траєкторія університетських бібліотек; Україна

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Distance Learning as an Efficient Way to Stimulate Self-Education of Librarians of Scientific Institutions of the National Academy of Sciences of Ukraine

Objective. The research is aimed at the representation of distance learning as an efficient way to stimulate self-education of librarians of scientific institutions of the National Academy of Sciences of Ukraine. **Methods.** The research results were obtained due to the application of a complex of general and special methods of scientific knowledge, among which the systematic and logical approach, structural-functional and information-analytical methods were decisive. **Results.** The library is substantiated as a conceptual component of a fundamental stabilizing society development factor in Ukraine under the conditions of global challenges of the 21st century. The work reveals functioning of the advanced training system for librarians of scientific institutions of the National Academy of Sciences of Ukraine under the quarantine. The **conclusions** reasoned the expediency and for the first time proposed the necessity of creating a virtual university on the basis of the V. I. Vernadskyi National Library of Ukraine.

Keywords: distance learning; virtual university; self-education; V. I. Vernadskyi National Library of Ukraine; National Academy of Sciences of Ukraine

Introduction

The rapid digital development promoted modernization of the modern education system and personalization of the educational process, actualization of lifelong learning and transformation of advanced training strategies. Scientists interpret distance learning as a form of educational organization, when participants are distant from each other in space and time and communicate through technical and technological means. With such an organization of education, which becomes more accessible and universal, the educational process occurs in a place convenient for everyone and at an agreed time. Therefore, the difference between distance learning and traditional learning is obvious in terms of interaction forms between the educational process participants, the involvement of innovative methods and tools of learning. It should be noted that distance learning has long been widespread in the world, and with the introduction of quarantine restrictions caused by COVID-19, it has become the most popular. For example, in Canada, as an alternative to traditional education, virtual universities have long been established, where everyone can get an education on basic distance courses at the basis of any university. Athabasca University (Canada) founded in 1970 following the example of the British Open University, uses television, electronic curriculum technologies and distance education tools to provide lifelong learning. Courses and programs are implemented considering the needs of the country's economy. The main target audience of this university are students who already have work experience and continue to work during their studies (Oros, 2018). The Canadian Virtual University, a consortium of 11 leading universities in the country, and the Telelearning University of Quebec operate on the same principle.

Thus, virtual education is distance learning that occurs through the Internet and requires certain efforts (internal motivation, self-organization, discipline), which contributes to real results.

Methods

The research results were obtained due to the application of a complex of general and special methods of scientific knowledge. In particular, the use of a systemic approach made it possible to justify the library as a conceptual component of a fundamental stabilizing factor of the society development in Ukraine. The logical method revealed, and the descriptive method presented the distance learning of the librarians of the National Academy of Sciences of Ukraine as a proven means of stimulating self-education. In the way of scientific knowledge of distance learning as an effective means of stimulating self-education using the methodological tools of source study analysis and synthesis, the publications of recent years were included in the circle of our research. The application of the structural-functional method contributed to the revealing of the functioning of the advanced training system characteristics for librarians of scientific institutions of the National Academy of Sciences of Ukraine in modern conditions. The information and analytical method made it possible to argue the expediency and necessity of creating a virtual university on the basis of V. I. Vernadskyi National Library of Ukraine.

Analysis of the latest research

The relevance of the chosen topic is evidenced by the constant attention of practicing teachers and scientists to the issues of the essence of reforming the national education system, which is aimed to preserve centuries-old traditions and best assets. N. Bachynska, V. Kasian, O. Klymenko, T. Kolesnykova, T. Novalska, A. Solianyk, M. Tsyvin, I. Shevchenko and others highlighted the peculiarities of the specialists training in the speciality 029 “Information, library science, archival affair,” which includes such issues as the development of modern forms of the educational process, the introduction of innovative methods, and the adaptation of tools and means of distance learning. O. Klymenko and O. Sokur thoroughly illuminate the achievements and prospects of the advanced training organization for the librarians of scientific institutions of the National Academy of Sciences of Ukraine in the conditions of global challenges of the 21st century (2021a, 2021b). The publications of T. Kolesnykova and O. Matveyeva (2019, 2021) are devoted to the study of the foreign experience of university libraries in working with open educational resources (Open Textbook, OT, video lectures, etc.) and the prospects of starting a similar project in Ukraine.

Results and Discussion

In European countries, open universities of distance education have been created, when several institutions of higher education implement distance programs in cooperation. For example, the Virtual University of Bavaria (Germany) is a community of 32 state or state-recognized universities in Bavaria. All online courses are developed by professors from Bavarian universities, the vast majority of which are taught in German, only a fifth in English. Open courses in the university program are designed for everyone with sufficient level of language proficiency and are free of charge. They cover a wide range of academic-level themes (Lutsk National Technical University, n.d.; Deineha, 2021). According to Zou Chengzhang (2016), “the virtual university itself not only changes the cultural environment, but also acts as a product of these changes, embodying the basic principles of open education with its own existence” (authors’ transl.).

In November 2005, the Central and Eastern European Virtual University (CEEVU) was founded in Ukraine on the basis of the National Technical University of Ukraine “Igor Sikorsky Kyiv Polytechnic Institute.” It was implemented under the auspices of UNESCO. This project

involved 12 technical higher education institutions from eight countries of the region. Each of them developed the courses in which this particular institution specializes and is competitive in the market (Bohuslavska, 2005).

Therefore, a virtual university is a distributed educational institution. It does not have a separate building, but functions only through communication between institutions of higher education based on the pooling the information resources, which are jointly developed and used by participants (Lviv State University of Life Safety, n.d.). The methods of such education involve the use of new information technologies including television and computer networks, multimedia, etc. Currently, teleuniversities, tutoring centres (multimedia training), information centres (Internet training) are gaining popularity in the world.

These forms of distance education and self-education open new prospects for the organization of librarians training in the National Academy of Sciences of Ukraine (NAS of Ukraine) because the advanced training of librarians takes an important place in the scientific-methodical and scientific-organizational work of the V. I. Vernadskyi National Library of Ukraine (VNLU), a methodological centre of the library network of the NAS of Ukraine. The Department of Scientific and Methodological Work of the Institute of Library Science of VNLU coordinates this activity. In accordance with the plans of advanced training of librarians of VNLU and the libraries of scientific institutions of the NAS of Ukraine, this department organizes seminars, workshops, lectures, trainings, internships, and working meetings in all areas of library and information activities.

We interpret the distance learning of librarians of the National Academy of Sciences of Ukraine as a proven means of stimulating self-education, which, due to its speed, results in a significant increase in the initial value of the acquired competencies, a significant increase in the professional level, and a real increase in the possibility of career growth. It should be noted that, on the one hand, realities of the present (globalization, digitalization, information technology, European integration, social transformations, war, etc.) induce a paradigm shift in the training of specialists for the library and information sector in Ukraine. On the other hand, it is the invasive nature of the library as a special social institution designed to provide access to information and knowledge 24/7 that is a conceptual basis of humanistic character of sustainable development of society and is realized in the cultural development of society through the introduction of actual trends and new services in the post-print period. That is, today the library has become a fundamental stabilizing factor and a holistic platform for the development of civil society due to the ability of adequate response to the challenges of the time (professional legal assistance, professional digital skill training, multipronged activities during the war).

The quarantine, which was introduced in Ukraine in March 2020 to prevent the spread of an infectious disease caused by the coronavirus infection COVID-19, forced the reorientation of the advanced training system for library workers of scientific institutions of the National Academy of Sciences of Ukraine to a new format – remote one. Thereby, practical steps to the formation of new information and communication competencies of network specialists were initiated.

All activities on advanced training of librarians of scientific institutions of NAS of Ukraine in 2020-2021 were conducted in online and mixed format: consulting, informing, questioning, seminars, lectures, conferences. From the very beginning of the quarantine restrictions, individual consultations of library specialists of scientific institutions of the NAS of Ukraine were arranged, which were conducted in telephone mode using e-mail and a Viber group (accounting and preservation of funds, subscription, access to foreign databases, exhibition work, legal issues, etc.). Collective information was regularly provided, in particular, regarding current regulatory legal acts and the updated operation mode, the functioning of free platforms for improving professional competencies, etc.

Among the VNLU activities for the employees of scientific institutions of the NAS of Ukraine in 2020–2021 the following seminars planned by the leading scientific libraries of Ukraine were organized: “Institution Profile in the Web of Science: Functions, Possibilities, Creation, Correction” (February 13, 2020), “Library of the Scientific Institution: Results, Tasks and Activity Priorities” (December 3, 2020) (librarians of Kyiv, Kharkiv, and Lviv for the first time met on the online platform Zoom), “Modern Trends of Exhibition Activity of Libraries of Scientific Institutions of the National Academy of Sciences of Ukraine” (March 2, 2021), “Modern Subject Cataloguing in Scientific Libraries: Theoretical and Practical Aspects” (April 6, 2021), “Electronic Exhibition: New Opportunities in the Digital Age” (June 16, 2021), “Interaction of Academic Libraries in the Conditions of the Development of the Electronic Communication System: Tasks and Main Activity Areas” (December 14, 2021). There was also organized an overview lecture on free educational courses and scientific and communicative events (April 22, 2021) (Klymenko & Sokur, 2021b).

Let us note that the topic of the events is defined by the key requirements of users that are decisive for the organization of information and communication activities of the network under conditions of digitalization: creation of thematic electronic databases, work with the library fund, popularization of the achievements of Ukrainian science in the world through the preparation of bibliographic indices and electronic exhibitions, which are a reference point for the further development of advanced training system for library employees of scientific institutions of the National Academy of Sciences of Ukraine (Klymenko & Sokur, 2021a).

Traditionally, VNLU cooperation with Ukrainian and foreign institutions of higher education develops in several time-tested directions, in particular, international cooperation is implemented through document exchange, organization, and joint participation in scientific events (symposia, conferences, round tables, etc.), membership in editorial boards of specialized publications.

Since February 24, 2022 Ukraine is in a state of war because of the treacherous attack of the Russian Federation, which finally confirmed the expediency of organizing continuing education in a remote format as a process aimed at the all-round development of the individual, systematic updating of knowledge, and improvement of professional competence. Therefore, a promising direction is the establishment of a virtual university on the basis of the V. I. Vernadskyi National Library of Ukraine through partnership interaction with Ukrainian branch institutions of higher education, and in the future – with leading universities of the world. This form of training, which will be held in close cooperation between librarians-practitioners and teachers, will contribute to the further training of highly qualified personnel in the speciality 029 “Information, library science, archival affair” of the scientific industry “Social communications” for library and information sphere of Ukraine.

Today, there is an urgent need to change the strategy of student practice and internship programs in the educational institutions of the country. Training on the basis of libraries as promising employers will positively affect the quality of training of future specialists due to the organic combination of theoretical and practical components of a high-quality educational process, will help the conscious choice of a profession and full self-realization. In the future, this will positively affect the development and progress of librarianship in Ukraine, optimal integration of national information space into the world one.

Conclusions

The change in the paradigm of specialists training for the library and information sphere of Ukraine is caused by such factors as globalization, digitalization, information technology,

European integration, social transformations, war, etc. The century-old experience of the system of advanced training for librarians of scientific institutions of the National Academy of Sciences of Ukraine, for which the V. I. Vernadskyi National Library of Ukraine is the main methodical centre, allows speaking about the systematic nature of such work and the intellectual potential and scientific resource for creating a virtual university based on the main library of the country.

REFERENCES

- Bohuslavskaya, A. (2005, Lystopad 17). Universytet virtualnyi – diplom realnyi. *Ukraina moloda*. Retrieved from <https://umoloda.kyiv.ua/number/555/174/20088/> (in Ukrainian)
- Deineha, I. (2021). Virtual university of adult education – prospects of transition to a new model of postgraduate education. *Open Journal Systems*, 19, 19-32. Retrieved from <https://jrnl.nau.edu.ua/index.php/VisnikPP/issue/view/860> (in English)
- Klymenko, O. Z., & Sokur, O. L. (2021a). Orhanizatsiia pidvyshchennia kvalifikatsii bibliotekariv naukovykh ustanov Natsionalnoi akademii nauk Ukrainy v umovakh karantynu: zdobutky i perspektyvy. *Nova model informatsiinoho obrazu biblioteky: zmina tradytsiinoho spryiniattia yii pryznachennia ta funktsii: materialy III nauovo-praktychnoi internet-konferentsii, 21 zhovtnia 2021, Uzhhorod*, 48-52. Retrieved from <https://dspace.uzhnu.edu.ua/jspui/handle/lib/38166> (in Ukrainian)
- Klymenko, O., & Sokur, O. (2021b). Pidvyshchennia kvalifikatsii bibliotekariv merezhi naukovykh ustanov Natsionalnoi akademii nauk Ukrainy v umovakh karantynnykh obmezhen COVID-19. *Suchasna informatsiino-bibliotekna osvita: metamorfozy navchalnoho dyzainu: zbirnyk materialiv XI Mizhnarodnoi nauovo-praktychnoi konferentsii, Kyiv*, 58-62. Retrieved from https://issuu.com/ukrainian_library_association/docs/zbirnyk_ula_slavske_2021 (in Ukrainian)
- Kolesnykova, T. (2019). The role of libraries as publishers in the open education landscape: reflecting modern world practice of open textbooks. *University Library at a New Stage of Social Communications Development. Conference Proceeding, IV*, 88-99. doi: https://doi.org/10.15802/unilib/2019_187423 (in English)
- Kolesnykova, T., & Matveyeva, O. (2021). First steps before the jump: Ukrainian university librarians survey about OER. *University Library at a New Stage of Social Communications Development. Conference Proceedings, VI*, 96-107. doi: https://doi.org/10.15802/unilib/2021_2483791 (in English)
- Oros, I. (2018). Systema osvity doroslykh u Kanadi ta SShA. *Pedahohichniy visnyk Volyni*, 4(11), 44-50. Retrieved from <https://evnuir.vnu.edu.ua/bitstream/123456789/15896/1/%d0%9e%d1%80%d0%be%d1%81%2c%2044-50.pdf> (in Ukrainian)
- Lviv State University of Life Safety. (n.d.). *Virtualnyi universytet LDU BZhD*. Retrieved from <http://virt.ldubgd.edu.ua/?lang=en> (in Ukrainian)
- Lutsk National Technical University. (n.d.). *Virtualnyi universytet Bavarii proponuie blyzko 600 onlain-kursiv*. Retrieved from <https://lntu.edu.ua/uk/virtualnyy-universytet-bavariyi-proponuye-blyzko-600-onlayn-kursiv> (in Ukrainian)

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Дистанційне навчання як дієвий засіб стимулювання самоосвіти бібліотечних працівників наукових установ Національної академії наук України

Мета. Дослідження зосереджене на репрезентації дистанційного навчання як дієвого засобу стимулювання самоосвіти бібліотечних працівників наукових установ Національної академії наук України. **Методика.** Результати дослідження отримані завдяки застосуванню комплексу загальних та спеціальних методів наукового пізнання, визначальними серед яких були системний підхід, логічний, структурно-функціональний та інформаційно-аналітичний методи. **Результати.** Обґрунтовано бібліотеку як концептуальний складник фундаментального стабілізуючого фактора розвитку суспільства в Україні в умовах глобальних викликів ХХІ ст. Розкрито функціонування особливостей системи підвищення кваліфікації бібліотечних працівників наукових установ Національної академії наук України в умовах карантинних обмежень. У **висновках** аргументовано доцільність і вперше запропоновано необхідність створення віртуального університету на базі Національної бібліотеки України імені В. І. Вернадського.

Ключові слова: дистанційне навчання; віртуальний університет; самоосвіта; Національна бібліотека України імені В. І. Вернадського; Національна академія наук України

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Transformation of University Library Activities in the Conditions of Modern Challenges

Objective. The article analyzes the activity of the university library under conditions of transformational changes caused by the unification of the book collections of 4 higher education institutions, while solving the problems of activity in the conditions of Russia's war against Ukraine. **Methods.** The research was conducted by reviewing publications related to the practical use of remote forms of work of modern university libraries, summarizing the experience of the Scientific Library of the State Biotechnology University (SL SBTU) in the organization of work under conditions of activity restructuring in wartime. **Results.** Reviewing publications and studying the experience allowed us to find the best ways and lead changes, as well as to address the challenges of reorganization in the conditions of online activity. The approaches and methods presented in this study are based on the author's personal experience as a university library manager, as well as on the experience of library managers around the world. During the research, the author determined that the main response of the Scientific Library of SBTU to the challenges of time is theoretical justification, practical testing, mobility and timeliness of the tasks of information support of scientific and educational processes in the conditions of remote work. **Conclusions.** *Originality of the work* consists in expanding ideas about the possibilities of using remote work forms in the activities of the university library, which is an important factor for evaluating the effectiveness of its management activities. *Practical value.* The obtained results can be used to improve the management of university libraries in the conditions of transformational changes.

Keywords: library; activity transformation; time challenges; personnel management; talent management

Introduction

The Scientific Library of the State Biotechnological University was created in 2021 by combining the information resources of the libraries of 4 higher education institutions on the basis of the Order of the Cabinet of Ministers of Ukraine No. 431 dated 12.05.2021 and the Order of the Ministry of Education and Culture No. 689 dated 18.06.2021 "On the Formation of the State Biotechnological University." It was created through the reorganization of Kharkiv Petro Vasylenko National Technical University of Agriculture, Kharkiv National Agrarian University named after V. V. Dockuhaiev, Kharkiv State Zoo Veterinary Academy, and Kharkiv State University of Food Technology and Trade, and their libraries. In its activities, the newly created Scientific Library is intended to support the achievements and traditions of the united libraries and to retain the image as one of the leading divisions of the SBTU for solving the tasks of information support for the scientific, educational, and training processes of the university.

Even before the merger, each of these libraries accepted the challenges of the times with dignity. This is the transformation against the background of general civilizational changes based on informatization, digitalization, (Bakumenko, 2020; Dovgalyuk & Zhydkykh, 2020; Rybalchenko, 2019), and the coronavirus pandemic, and the associated process of establishing remote forms of work based on the experience of the libraries of Ukrainian higher education institutions (Kolesnykova, 2020; Ogar & Dushu, 2018). At the end of 2021, huge reorganizational changes had to be introduced, which were related to combining the resources of four university libraries into one. This created new unique challenges and tasks for a large team: personnel, organizational, technical, technological. Based on the foreign experience (Mael, 2014; Mael & Münster, 2017; Uwamwezi, 2017, 2020; Lebbin, 2022; Lobrano, 2018; A. M. Thompson,

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H. J. Thompson, Jones, & Rosenbloom, 2021), the library staff were ready to overcome these challenges with great responsibility, continuing to support national, regional projects, and their own project activities.

However, the greatest challenge of the time was working in the conditions of a full-scale military Russian invasion, and from February 24, 2022, the priorities of activities were changed, shifting the emphasis to the use of only online forms of work. Opportunities for timely and full-fledged information and library provision of the professional needs of scientists and students of SBTU were created due to the library digitization, which has been successfully developed in recent years, the provision of open access to printed and electronic documents, the formation of modern information resources of one's own generation, the introduction of new forms of work with a focus on the remote user.

Methods

The study was conducted by reviewing publications related to the use of remote forms of work in modern university libraries of the world. Searches were conducted in the Scopus database, Web of Science Core Collection, Google Scholar, and the websites of academic libraries around the world. Chronological framework – publications of the last decade: from 2012 to 2022. Keywords for searching resources are library mergers, merger of university libraries. The experience of the Scientific Library of the State Biotechnological University (SL SBTU) in organizing work under conditions of wartime restructuring was also summarized. Chronological framework from 18.06.2021 to 30.07.2022.

Results

The availability of an online library without physical location, but with access to thousands of electronic files, new search tools, and the willingness of library specialists to provide online assistance is the basis of the library's functioning in the conditions of war. The online work of librarians is aimed at developing key competencies for learning, including lifelong learning, which is a powerful way of European integration in the context of ensuring the quality of education. The list of key competencies recognized as necessary for the successful development of the knowledge economy and social harmony includes literacy, language competence, scientific-communicational, technological, and technical competence, digital competence, personal, social, and educational competence, civil competence, entrepreneurial competence, competence of cultural awareness, and self-expression.

Currently, to strengthen European integration processes at the university, SL specialists take care of the availability and openness of their own information resources, firstly, through the library website (<https://library.btu.kharkov.ua>), which is a web-oriented technological platform for supporting the educational, scientific, and training activities of the SBTU. Today it is available from mobile devices. It provides access to the necessary information resources, innovative services; improves the efficiency and quality of scientific and information support for education and scientific activity. The introduction of ICT made it possible to increase the number of remote users and virtual visits to the library. An electronic user account has been created to register students online, which provides an opportunity to use all services of the electronic catalog and electronic library through an authorized login.

Filling the databases (DB) of own generation – Electronic catalog, Repository, Web-portfolio of scientists takes place online due to the setting up of remote access to the software

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from the personal computers of library employees, wherever they are: at home or far from home, in other regions of Ukraine, the world.

Gradually, the databases of electronic catalogs of 4 libraries are being merged by converting them into a single database. Taking into account that all libraries worked using different software, 402,939 records were subject to editing after conversion of bibliographic records of electronic catalog. Unfortunately, during the hostilities, we lost the library server, which stored electronic copies of educational and teaching-methodical publications. The library specialists search and find opportunities to restore full-text databases through direct communication with teachers, e-mail archives.

A large volume of work is associated with filling the SBTU repository on the DSpace platform <https://repo.btu.kharkov.ua/>, created by combining the resources of 4 repositories of higher education institutions (Kharkiv National Agrarian University, Kharkiv National Technical University of Agriculture, Kharkiv State University of Food and Trade, Kharkiv State Zooveterinary Academy). It is necessary to transfer more than 25 thousand full-text documents of scientific journals, conference proceedings, educational publications <https://repo.btu.kharkov.ua/>, as well as register it in open access directories. To integrate the repository into the structure of the international information space and to increase its authority, the work to obtain an international universal ISSN identification is underway.

The content of the information and search electronic resource “Web-portfolio of SBTU scientists” <http://athra.dbtu.libteh.in.ua/>, which was developed by the specialists of the Scientific Library as a portal with a single access point to the bibliographic data, full-text materials, bibliometric indicators of publishing activity of SBTU scientists is of great importance. Personalized pages include surname, first name, patronymic, scientific degree, place of work, list of publications with the links to full texts of documents (if available), scientometric indicators of scientists, integrated from many databases, interactive links to the ORCID identifier, accounts in Scopus, Web of Science, Google Scholar databases, as well as links to the inventor’s pages in the Ukrpatent resource. The information for the portal is generated from the Works of Scientists database, both by bibliographic records and full texts, to represent the publishing activity of scientists of the State Technical University of Ukraine. From February 24 to September 15, in the Works of Scientists database 8,058 entries were made, 718 full-text links, 493 full-text DOIs, 222 PDF files were added. The feasibility of the Web-portfolio resource has been proven both for the assessment of the university’s scientific activity or an individual scientist, and in the licensing of specialties, attestation, accreditation due to the transparency, openness, relevance, and reliability of the information presented.

Library specialists provide administration and advice in plagiarism check in the UNICHECK system. Training was held for the responsible for checking qualification papers from faculties and departments. Additional free pages for plagiarism check during the period of military aggression were obtained from the company. Recently, the library checked 46 works (2 articles, 4 dissertations, 15 textbooks/manuals, 8 monographs, 10 student, and 7 qualification works).

The activity of the library on informational and analytical monitoring of the publishing activity of scientists is the basis for increasing the international and all-Ukrainian ratings of SBTU, which affects the European integration processes of the university. Therefore, constant attention is paid to this work. In particular, ID of 4 higher education institutions in Scopus and WoS were combined to identify the overall scientific potential of SBTU in these resources. Individual counseling on editing profiles of SBTU scientists in ORCID, Google Scholar, Research ID, etc. is also provided by phone, mail, via Viber.

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The library organizes access to external information resources of scientific information – Scopus, Web of Science, ScienceDirect, Research4Life (correspondence with State Scientific and Technical Library of Ukraine on providing access via an additional IP address, providing the possibility of remote work, contact with teachers by phone, mail, consulting, etc., contract with Research4Life: connecting more than 180 teachers to use the database).

Online user services are an integral part of the transformation processes taking place in the library. Currently, specialists are working on the development of a module for online registration of users to the library by creating a personal reader account, creating video materials to popularize the resources of the Scientific Library. Representations of the SL on the Facebook social network – SBTU Scientific Library <https://www.facebook.com/library.dbtu/>, SBTU Scientific Library. Library branch 6 (in post office “Dokuchaievske-2”) <https://www.facebook.com/library.dbtu6>, the group SL SBTU (library branch no. 7; Klochkivska St., 333) <https://www.facebook.com/groups/233460583745457>, Instagram account – “Calendar basket” – <https://www.instagram.com/kalendarniikoshik/>, SL YouTube channel – https://www.youtube.com/channel/UCwRAVxLReIY3oyUU3Ai5_Pw.

Since the beginning of military aggression, new sections in the social networks Facebook and Instagram have been created. They are as follows: “Useful information in wartime,” “A nation that reads is invincible,” “The big day will come! AND FREE UKRAINE WILL WIN!,” “Open resources for science and education,” “This is a classic, my friend!,” “Hryhorii Skovoroda – 300,” “Anniversaries of writers in 2022” (for the period from February to August 2022 on the Facebook page posted – 361 publications, Instagram – 288 publications, on the SL YouTube channel – 53 videos), in the virtual cultural and educational project “Calendar basket,” 285 publications were prepared and posted, 43 virtual resources (reviews, exhibitions) were updated).

We are pleased to note the fact that the library joined the group of volunteers of the Ukrainian Library Association for archiving documents about Russia’s war against Ukraine. Currently, 4074 files have been sent to the project.

The publishing activity of the library also continues in the conditions of remote work. The first issue of the series of bibliographical indexes “Works of the Departments” (Scientific work of the professors and teachers of the UNESCO and Social Protection Department (1996-2021)) has been published: to the 25th anniversary of its foundation: scientific-assistant bibliographical index / compiled by: E. M. Bocharova, O. I. Barabolik, T. B. Bohdanova; scientific editor, N. M. Nikolaienko; Scientific Library of SBTU. – Kharkiv, 2021. – 316 p. – (Series: “Works of the Departments”; issue 1)) and methodical recommendations for scientific and pedagogical workers of higher education institutions are being prepared for reissue (General requirements for the design of scientific, training and educational and methodological literature: method. rec. for scientific and pedagogical workers; compiled by: N. M. Nikolaienko, O. Rybalchenko. – Kharkiv. – SBTU, 2022. p.).

In view of global digitization and integration into the international information space, employees are constantly working on improving their professional skills (from February 24 to September 15, the employees of the scientific library participated in 26 events (courses, webinars, online trainings), received 54 certificates).

Among the latest achievements of the team is the victory in the competition “Librarian of the Year 2021” of the Kharkiv Zonal Association of Libraries of the Kharkiv Institutions of Higher Education (L. I. Bezdolna, Head of the Department), the award for participation in the wiki project (February 2022) “The Most Active Newcomer” to I. Zhydkikh and “The most active writer” to Ivakhnenko V.

There are many ambitious plans ahead to raise the image of the university and its library.

Conclusions

The library world has changed, and the war, forced distance learning, have become a challenge for all participants in the educational process. The library radically reshaped its activities and opened up new opportunities for work in the online environment. As library leadership and management, tools used, and internal organization become increasingly flexible, librarians acquire new skills, improve teamwork and collaboration, maximize creativity, and foster innovation. Remote forms allowed not only to continue library activities, but also significantly expanded the horizons of cooperation with users.

Thus, the originality of the work consists in expanding ideas about the possibilities of using remote forms of work in the activities of the university library, which is an important factor for evaluating the effectiveness of its management activities.

All the listed priorities in a certain way meet the requirements of the time dictated by reality, because we should understand that after the end of the war, Ukraine will need specialists capable of initiating the development of the state, setting the pace of its development. These are the ones that SBTU prepares, and the SL helps in this process.

The obtained results can be used to improve the management of university libraries in the conditions of transformational changes.

We believe in Victory. Glory to Ukraine.

REFERENCES

- Bakumenko, L. G. (2020, October). Bibliotechnyi kolektyv u rozrizi suchasnykh transformatsii. In *Bibliotechno-informatsiine seredovyshe yak draiver zmin ta innovatsii u osviti. Materialy II Vseukrainskoi naukovo-praktychnoi konferentsii do 90-richchia Naukovoii biblioteki KhNTUSG* (pp. 14-20), Kharkiv Petro Vasylenko National Technical University of Agriculture. Kharkiv, Ukraine. Retrieved from <http://dspace.khntusg.com.ua/handle/123456789/13059> (in Ukrainian)
- Dovgalyuk, S. O., & Zhydykykh, I. P. (2020, October). Tsyfrove naukovo-osvitnie seredovyshe bibliotek ZVO v umovakh pandemii COVID-19. In *Bibliotechno-informatsiine seredovyshe yak draiver zmin ta innovatsii u osviti. Materialy II Vseukrainskoi naukovo-praktychnoi konferentsii do 90-richchia Naukovoii biblioteki KhNTUSG* (pp. 30-33), Kharkiv Petro Vasylenko National Technical University of Agriculture. Kharkiv, Ukraine. Retrieved from <https://repo.btu.kharkov.ua/handle/123456789/13385> (in Ukrainian)
- Kolesnykova, T. O. (2020). *Organizatsiya viddalenoii roboti kolektiviv bibliotek universitetiv Ukrayini za chasiv dramatichnih nevidomostey* [Organization of Remote Work for University Library Staff in Ukraine During Dramatic Uncertainties] [preprint]. Retrieved from <http://eadnurt.diit.edu.ua/jspui/handle/123456789/11914> (in Ukrainian)
- Lebbin, V. (2022). Tackling a reorganization as an interim administrator. In *Interim leadership in libraries: building relationships, making decisions, and moving on* (J. E. Knievel, & L. J. Reynolds, Eds., Chap. 9, pp. 107-122). United States: Association of College & Research Libraries. Retrieved from <https://scholarspace.manoa.hawaii.edu/server/api/core/bitstreams/6c15ef13-3186-42d6-a291-72c45c865bf9/content> (in English)
- Lobrano, K. (2018). Franklin Urbana Library Merger. *Innovative User Group Conference*. Retrieved from <https://fuse.franklin.edu/facstaff-pub/19> (in English)
- Mael, E. (2014). When one plus one remains one: The challenges and triumphs of merging two university libraries. *Library Resources and Technical Services*, 2014, 58(4), 265-278. (in English)
- Mael, E. & Münster, I. A. (2017). A tale of two libraries: A merger and its challenges. A case study. *Journal of Library Administration*, 57(2), 174-193. doi:

<https://doi.org/10.1080/01930826.2016.1222119> (in English)

Ogar, C. E., & Dushu, T. Y. (2018). Transforming library and information services delivery using innovation technologies. *Library Philosophy and Practice (e-journal)*. 2036. Retrieved from <http://digitalcommons.unl.edu/libphilprac/2036> (in English)

Rybalchenko, O. M. (2019, October). Naukova biblioteka KhNTUSH sohodni i perspektyvy rozvytku. In *Bibliotechno-informatsiine seredovyshe yak draiver zmin ta innovatsii u osviti. Materialy Vseukrainskoi naukovo-praktychnoi konferentsii* (pp. 30-38), Kharkiv Petro Vasylenko National Technical University of Agriculture. Kharkiv, Ukraine. Retrieved from <https://repo.btu.kharkov.ua/handle/123456789/15794> (in Ukrainian)

Thompson, A. M., Thompson, H. J., Jones, M., & Rosenbloom, M. (2021). One website to rule them all: lessons learned from a series of reorganizations, integrations, and creation of one university libraries' website from three. *Journal of Electronic Resources in Medical Libraries*, 18(4), 177-187. doi: <https://doi.org/10.1080/15424065.2021.2010155> (in English)

Uwamwezi, B. (2017). Academic libraries: Opportunities and challenges of resource sharing within a merger. *iConference 2017 Proceedings* (pp.798-802). doi: <https://doi.org/10.97776/17344> (in English)

Uwamwezi, B. (2020). *Merger and management: University of Rwanda libraries in a transitional context*. University of Borås. Retrieved from <http://urn.kb.se/resolve?urn=urn:nbn:se:hb:diva-23205> (in English)

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Трансформація діяльності університетської бібліотеки в умовах сучасних викликів

Мета. В статті проаналізовано діяльність університетської бібліотеки в умовах трансформаційних змін, викликаних об'єднанням книгозбірень 4х закладів вищої освіти одночасно з вирішенням проблем діяльності в умовах війни Росії проти України. **Методика.** Дослідження проводилось шляхом огляду публікацій, пов'язаних з використанням в практиці роботи сучасних університетських бібліотек дистанційних форм роботи, узагальнення досвіду Наукової бібліотеки Державного біотехнологічного університету (НБ ДБТУ) з організації роботи в умовах реструктуризації діяльності у воєнний час. **Результати.** Перегляд публікацій і вивчення досвіду дозволив знайти найкращі шляхи і очолити зміни та впоратися із завданнями реорганізації в умовах онлайн-діяльності. Підходи та методи, наведені в цьому дослідженні, ґрунтуються на особистому досвіді автора як керівника університетської бібліотеки, а також на досвіді керівників бібліотек світу. Під час дослідження автором визначено, що головна відповідь Наукової бібліотеки ДБТУ на виклики часу – це теоретичне обґрунтування, практична апробація, мобільність та своєчасність виконання завдань інформаційного забезпечення наукового та навчального процесів в умовах дистанційної роботи. **Висновки.** *Оригінальність роботи* полягає в розширенні уявлень про можливості використання дистанційних форм роботи в діяльності університетської бібліотеки, що є важливим чинником для оцінювання результативності її управлінської діяльності. *Практична цінність.* Отримані результати можуть використовуватись для удосконалення управління університетськими бібліотеками в умовах трансформаційних змін.

Ключові слова: бібліотека; трансформація діяльності; виклики часу; управління кадровим потенціалом, управління персоналом

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Design of Annotated Bibliography of Traditional Medicine in West Java, Indonesia

Objective. The existence of traditional medicine, especially in the province of West Java, Indonesia, has been recognized and has been used by the general public, one of which concerns the traditional medicine. West Java is one of the largest provinces in Indonesia which has many medicinal plants. The purpose of this study is to create an information package that stores various sources of information related to traditional medicine in West Java by designing an annotated bibliography of traditional medicine in West Java. **Methods.** The research method used is action research method. The stages of action research used are planning, action, evaluation, reflection, and the process of publishing book products. **Results.** The results obtained are the stages of action in accordance with the stages of the plan for the annotated bibliographic manuscript to be printed as a book that can be tested by experts with a questionnaire containing suggestions. After being tested and corrected, the contents of the book were then tested publicly with a background in health sciences, information science, and libraries, as well as people who use traditional medicine in West Java by means of a questionnaire containing an assessment. **Conclusions.** The results of the public test are above 89%, which means the book product is feasible and can be published as an annotated bibliographic book related to traditional medicine.

Keywords: traditional medicine; medicinal plants; annotated bibliography of traditional medicine

Introduction

People in West Java Province, Indonesia, have known about and used traditional medicine for a long time. Based on data from the Central Bureau of Statistics, through the website <https://www.bps.go.id/>, it is known that the percentage of the male population in West Java in 2009 who used traditional medicine was 17.74%; in 2010, it was 22.75%; in 2011, 19.14%; in 2012 and 2013, it was 19.46%, and in 2014, it was 16.5%.

West Java is a province that has many medicinal plants, and this is in line with the statement from Roemantyo and Riswan (1990, as cited in Muwarni, 2015) that in West Java, Central Java, and East Java, there are known to be 151 types of plants used by the community as traditional medicine. Until now, the practice of traditional medicine has been recognized and considered legal because it has been regulated in Article 1 Paragraph 6 of Law no. 36 of 2009 concerning Health. In addition, one can refer to the Decree of the Minister of Health No. 659/Menkes/SK/X/1991 regarding how to make good traditional medicines, which regulates raw materials, technical responsibility, buildings where traditional medicines are made, equipment used to produce traditional medicines, sanitation, and hygiene, and processing and packaging.

Cholis (2012) states that of the 60% of people who use herbal medicine, 95% claim to benefit from traditional ingredients for health. In addition, he also stated that currently, 44 government hospitals include traditional medicine in their health services, although private hospitals do not. Ghosh (2011) stated that traditional medicine in terms of medicine is an essential aspect of traditional knowledge, which is indeed traditional medicine, including local knowledge based on experience for individuals in the community, then transmitted orally, becoming new information in the field of public health that is still being used today. With more people using traditional medicine, it is essential to have a place to store information from different sources. One

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of these sources is a book that gathers information from different places about traditional medicine in West Java. Where sources of information can be found from research results, printed books, ancient manuscripts, films, and recordings regarding traditional medicine in West Java, there are many of them. However, all of these sources of information have yet to be collected into one, so finding information is still challenging.

Never been an annotated bibliography of traditional medicine in West Java to make it easier to find information. All sources of information collected are combined into an annotated bibliography. A bibliography is a systematic list or enumeration of written works by a particular author or subject with one or more general characteristics (language, form, period, place of publication, etc.). The type of bibliography that the author chose, a descriptive bibliography, is shown in several forms of notes. This type of bibliography requires all the information needed to definitively identify certain documents.

A bibliography can be used as a guide to literature, saving time for people looking for information. It can also be used in the library field to introduce and promote specific libraries and find out how books, magazines, and recorded works have changed over time (Saleh, Nurwati, Tangkawarow, Bahri, & Wulandari, 2012; Lasa, 2009). Annotated bibliographies can be interpreted as a list of primary documents that usually consist of one or more subjects arranged systematically, followed by annotations or essays explaining the document's contents (Feranisa, Sukaesih, & Erwina, 2017). According to Kartadinata (2012), bibliographic annotations discuss a study from several interrelated sources. In addition, the description illustrates the reader's understanding of the collection source discussed.

The purpose of an annotated bibliography is to serve as reference material, with annotations that can assist researchers in evaluating whether the source is relevant to the topic (Reitz, 2004). By making this annotated bibliography of traditional medicine, it is hoped that the existence of traditional medicine will not only be in the form of utilization of natural resources through the actions of each individual, but also from a scientific point of view, one of which is through an annotated bibliography that can be used as reference material in further research or as a source of basic information on traditional medicine. The purpose of this study is to determine the possibility of creating an information package that stores various sources of information related to the folk medicine of West Java by developing an annotated bibliography of the folk medicine of West Java.

Methods

In the course of the study, scientists used action research methods. Coghlan and Brannick (2005) point out that action research is a democratic process that uses practical knowledge to find goals that will help people and the world. When creating an annotated bibliography as a book that could be used in the future as a source of health information according to Sulistio Basuki (1991), the researchers used the following stages: planning; activity, including data search using OPAC, as well as during the visits of university libraries, scientific research institutions, institutions of traditional medicine; assessment, including public testing; reflections.

Results and Discussion

The approach to designing an annotated bibliography uses the action research process cycle from Lee et al. (2019) with a modification for the researchers. The action research diagram is as follows:

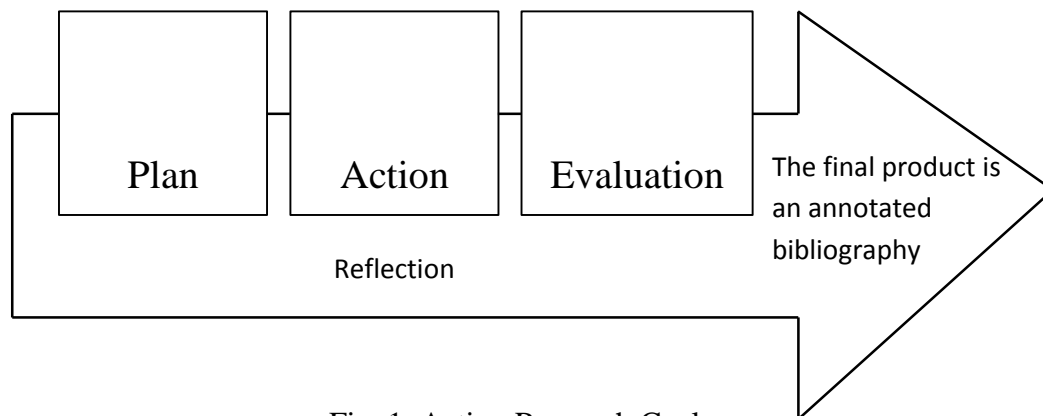


Fig. 1. Action Research Cycle

(Source: Lee et al, 2019 with modification of the researchers)

The initial step begins with careful planning of what steps will be taken so that, when carrying out the research, nothing is left behind or forgotten with the desired end result. This stage is still a plan or initial activity design, the results of which are likely to change with ongoing research in the field. The plans carried out by the researchers include visiting various research institutions that have research on traditional medicine in West Java, visiting university libraries, and searching online using the OPAC facility of various institutional libraries and institutions on traditional medicine in West Java. Furthermore, the researchers determine the division of subject headings under 'traditional medicine' to facilitate the distribution of annotated bibliographical texts, determines the classification number of each subject heading, and determines how to make a good and correct annotated bibliographic index and bibliography. Then the researchers developed a concept for the content and appearance of the annotated bibliography so that it would not be monotonous and be able to invite readers to understand the contents of the book, and published an annotated bibliography in West Java as a published printed book.

After determining what plans will be carried out to design an annotated bibliography, the next step is to take various actions with different results as research in the field progresses. As for the several action steps of the researchers' plan, namely visiting research institutions, this was done to find out about annotated bibliographies and find sources of information as bibliographical data on traditional medicine in West Java. First, the researchers visited the Indonesian Institute of Sciences (LIPI-Lembaga Ilmu Pengetahuan Indonesia) in Bandung, then the Center for the Preservation of Cultural Values (BPNB- Balai Pelestarian Nilai Budaya) in Bandung. After obtaining some data from research institutions, the next step was to visit the university library to check the availability of the data that had been found through the OPAC at the university. The universities visited were Universitas Padjadjaran and Universitas Indonesia.

The search for data is still continuing through the OPAC. First, the researchers collect fifty data from various sources with various types of data on one subject, namely traditional medicine in West Java. After that, verify the data, namely by first entering all data into Microsoft Excel to avoid data duplication and ensure that the data found discusses traditional medicine in West Java. As for the results of data verification, it was found that six of them were no longer collecting materials from the library of the relevant institution, because researchers found the data from search engines such as Indonesia OneSearch, Garuda Dikti, etc. As a result, the data was collected into 44 (forty-four) data sources of information whose existence can be found according to the locations listed. Data in the form of library materials is found more in terms of titles, which already describe the scope of the discussion in the West Java region. The library materials used are divided

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into several types, including research results such as theses, journals, and research reports, as well as articles or news articles. After finding the data, the next step is to divide the subject header and classification number. Based on the data that has been found, the subject headings are divided into two, namely 'Traditional Medicine' and 'Medicinal Plants', along with the division of subject headings in the annotated bibliography of traditional medicine in West Java:

1. Traditional Medicine
2. Traditional Medicine -- Traditional Medicine Practices
3. Medicinal Plants
4. Medicinal Plants – Ethnobotany
5. Medicinal Plants – Ethnopharmacology
6. Medicinal Plants – Ethnopharmacy

Because the subjects 'Traditional Medicine' and 'Medicinal Plants' were not in DDC 23, the researchers decided to find out what the classification number for the two subject headers was at the National Library of Indonesia. Through the book 'Subject Heading' written by Kuswosedjati, it is known that the subject 'Traditional Medicine' has a classification number of 615,882, while for 'Medicinal Plants' the classification number is 581,634.

Furthermore, for the manufacture of manuscripts, in accordance with the standards set by the National Library of Indonesia, the preparation of bibliographical manuscripts uses the National Library of Indonesia Main Catalog Application (KIN) to fill in all bibliographic data, which is then extracted into Microsoft Excel. All columns in Microsoft Excel will follow the columns in KIN. To make it easier to enter Mail Merger in Microsoft Word to create a bibliographical text, the sheets in Microsoft Excel are separated according to the discussion. The bibliographical manuscript is then created in Word Processor format using the Feature Mail Merge facility, in accordance with AACR2 guidelines. Then a title index is created that is divided into two according to the subject, namely for the subject headings 'Traditional Medicine' and 'Medicinal Plants'. Whereas the keyword index is the same as the 'title index', after mail merge it is arranged alphabetically, and the page numbers are listed according to the page numbers in the book.

581.634

Aulana Yatias

Etnobotani tumbuhan obat di desa Neglasari, kecamatan Nyalindung, kabupaten Sukabumi, provinsi Jawa Barat / Aulana Yatias —Jakarta: Universitas Islam Negeri Syarif Hidayatullah, 2014

85 halaman; 28 cm.

1. Tanaman obat -- Etnobotani

I. Judul

Penelitian ini bertujuan untuk mengetahui jenis-jenis tumbuhan obat, bagian tumbuhan yang digunakan oleh masyarakat desa Neglasari, kelompok penyakit yang diobati, dan cara pengolahannya. Dari penelitian ini dapat diketahui bahwa masyarakatnya memanfaatkan 64 jenis tumbuhan sebagai obat. Adapun tumbuhan yang paling banyak dimanfaatkan sebagai bahan obat tradisional oleh masyarakat didominasi oleh jenis tumbuhan dari famili Zingiberaceae. Tumbuhan obat terdiri dari 7 habitus yaitu perdu (20 jenis), pohon (14 jenis), herba (16 jenis), semak (7 jenis), tumbuhan memanjat (5 jenis), rumput (1 jenis), dan liana (1 jenis).

Kata kunci: Masyarakat desa, Sukabumi, Zingiberaceae

581.634

Billyardi Ramdhan

Keanekaragaman dan pemanfaatan tumbuhan obat asal kampung adat Cikondang, kabupaten Bandung, Jawa Barat / Billyardi Ramdhan —India: International Network for Natural Sciences, 2015

324 halaman ; 27 cm.

Fig. 2. Sample of Bibliography Page

At the evaluation stage, the researchers met with several experts (observation) to ask for an assessment of the book products that had been printed and asked for opinions and reviews from the experts to help the researchers correct the errors found in the book before the book was published or traded. An evaluation regarding the principles of annotated bibliography was carried out by one of the Unpad librarians and a scientific lecturer from the Biology department, FMIPA Unpad. The evaluation showed that the scientific names of the plants and fruits of the researchers were often wrong, so it also gave direction to the researchers to open links related to the scientific names of plants, namely theplantlist.org. After improving the contents of the book in accordance with the directions or revisions from experts, the next step is to distribute the book draft assessment questionnaire to the public, which represents the world of health in general and library science related to bibliographical manuscripts. The public test results were very good, with a percentage of ratings above 88% for ease of use and 90% for easy understanding of content, suitability of information, usefulness of bibliography, tidiness of bibliographical structure, as well as suitability and attractiveness of the cover and layout of the book.

The final stage is reflection. In order to improve the draft bibliographic book product, we should reflect on previous mistakes so that the research book product will be even better in the future. The plan's execution has changed, such as the use of the KIN application to create manuscripts, whereas the original plan only used Microsoft Excel as a database. In the action, the researchers use a list of subject headers as a search for classification numbers for each predetermined subject header, because the classification number for each subject heading is not found in DDC23. In addition, after completing the data verification stage, there are left forty-four

sources of data. There is a change in the scientific name of each plant, which is the result of an improvement by one of the Unpad Biology lecturers. Furthermore, there was also a change in the cover because the image on the first book's cover was monotonous and did not attract attention. Annotated Bibliography Guide: Accompanied by an Annotated Bibliography of Traditional Medicine in West Java is a book published by Unpad Press and has the ISBN: 978-602-439-839-2.

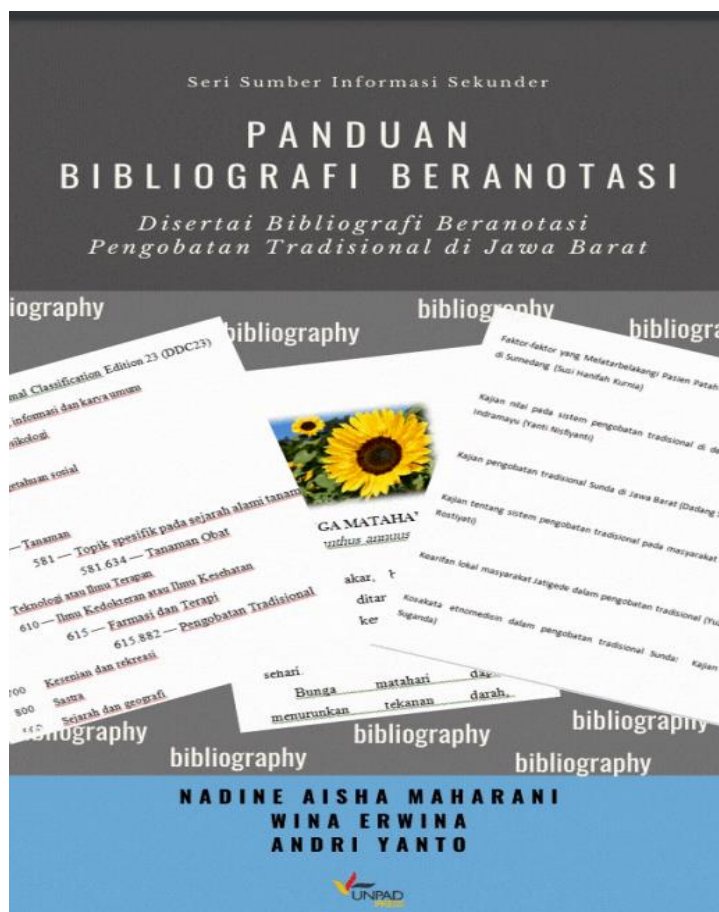


Fig. 3. Book Cover

Conclusion

The results of the public test are above 89%, which means the book product is feasible and can be published as an annotated bibliographic book related to traditional medicine. The public test results were very good, with a percentage of ratings above 88% for ease of use and 90% for easy understanding of content, suitability of information, usefulness of bibliography, tidiness of bibliographical structure, as well as suitability and attractiveness of the cover and layout of the book. In order to improve the draft bibliographic book product, it is necessary to reflect on previous mistakes so that the research book product will be even better in the future. The plan's execution has changed, such as the use of the KIN application to create manuscripts, whereas the original plan only used Microsoft Excel as a database. In the action, the researchers use a list of subject headers as a search for classification numbers for each predetermined subject header, because the classification number for each subject heading is not found in DDC23. In addition, after completing the data verification stage, there are left forty-four sources of data. There is a change in the scientific name of each plant, which is the result of an improvement by one of the Unpad

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REFERENCES

- Cholis, A. (2012, July 27). *60 persen masyarakat beralih ke pengobatan herbal*. Hidayatullah.com. Retrieved from <https://www.hidayatullah.com/iptekes/kesehatan/read/2012/07/27/1917/60-persen-masyarakat-beralih-ke-pengobatan-herbal.html> (in Indonesian)
- Coghlan, D., & Brannick, T. (2005). *Doing action research in your own organization* (2nd ed.). London, UK: Sage Publications Ltd. Retrieved from http://kyptraining.com/wp-content/uploads/2020/05/DOING_ACTION_RESEARCH_IN_YOUR_OWN_ORGANI.pdf (in English)
- Feranisa, F., Sukaesih, S., & Erwina, W. (2017). Rancang bangun bibliografi beranotasi Debus Banten. *Jurnal Kajian Informasi & Perpustakaan*, 5(1), 65-78. doi: <https://doi.org/10.24198/jkip.v5i1.11194> (in Indonesian)
- Ghosh, P. K., & Sahoo, B. (2011). Indigenous traditional knowledge. *Orissa Review, January*, 66-71. Retrieved from <http://magazines.odisha.gov.in/Orissareview/2011/Jan/Janreview.htm> (in English)
- Kartadinata, S. (2012). *Pedoman penulisan karya ilmiah Universitas Pendidikan Indonesia*. Bandung, Indonesia: UPI Press. (in Indonesian)
- Lasa, Hs. (2009). *Kamus kepustakawanan Indonesia*. Yogyakarta, Indonesia: Pustaka Book Publisher. (in Indonesian)
- Lee, T., Sheu, S., Chang, H., Tseng, L., Chou, S., Liang, T., ... Sun, J. (2019). Developing a web-based comic for newly diagnosed women with breast cancer: An action research approach. *Journal of Medical Internet Research*, 21(2), 10716. doi: <https://doi.org/10.2196/10716> (in English)
- Muwarni, S. (2015). *Ramuan tradisional nusantara: Berbasis koleksi deposit*. Jakarta, Indonesia: Perpustakaan Nasional R.I.
- Reitz, J. M. (2004). *Dictionary for library and information science*. London, UK: Libraries Unlimited. (in English)
- Saleh, Hj. S, Nurwati, Tangkawarow, S. A. (Comps.), Bahri, H. T. S., & Wulandari, P. (Eds.). (2012). *Pedoman penyusunan bibliografi daerah dan katalog induk daerah*. Jakarta, Indonesia: Perpustakaan Nasional R. I. Retrieved from https://disperpusip.jatimprov.go.id/wp-content/uploads/2018/11/Pedoman_BID-KIDApril-2012.pdf (in Indonesian)
- Sulistyo-Basuki. (1991). *Pengantar ilmu perpustakaan*. Jakarta, Indonesia: Gramedia Pustaka Utama. Retrieved from <http://repository.ut.ac.id/4135/> (in Indonesian)

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Розробка анотованої бібліографії традиційної медицини на Західній Яві, Індонезія

Мета. Традиційна медицина, особливо в провінції Західна Ява, Індонезія, була визнана та використовується широкою громадськістю. Західна Ява – одна з найбільших провінцій Індонезії, де росте

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безліч лікарських рослин. Метою даного дослідження є створення інформаційного ресурсу з традиційної медицини в Західній Яві шляхом розробки анотованої бібліографії. **Методика.** Використаний метод дослідження – метод дослідження дією. Використовувані етапи дослідження дії – планування, дія, оцінка, обмірковування, процес видання книжкової продукції. **Результати.** Отримані результати є етапами дій відповідно до етапів плану підготовки анотованого бібліографічного рукопису до друку у вигляді книги, яка може бути перевірена експертами за допомогою анкети з пропозиціями. Після тестування та виправлення зміст книги було публічно протестовано шляхом оцінного опитування за участю представників медичних наук, інформатики та бібліотек, а також людей, які використовують традиційну медицину в Західній Яві. **Висновки.** Результати публічного тестування перевищують 89 %; це означає, що книжковий продукт прийнятний і може бути виданий як анотована бібліографічна книга, пов'язана з традиційною медициною.

Ключові слова: традиційна медицина; лікарські рослини; анотована бібліографія традиційної медицини

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e-mail: strungar@nbuv.gov.ua, ORCID 0000-0002-6706-8427**Legal Resources of Historical and Cultural Heritage: Presentation in Library Collections and Their Popularization**

Objective: to substantiate the significance of historical documents of legal concern in digital library resources of historical and cultural heritage as an important component of cultural memory; to generalize modern approaches to improving the popularization of these library resources in the information space. **The methods** of systematic analysis of library databases of historical and cultural heritage have been used in the research, in particular, the V. I. Vernadsky National Library (Ukraine), World Digital Library, Europeana, Gallica, Bavarian State Library, etc. **Results.** The monuments of law as a component of historical and cultural heritage, which need to be popularized in the information space, given the scientific, educational, and ideological significance, have been studied. **Conclusions.** The resources of monuments of law testify to the longevity of historical development, the heredity of legal culture, and the involvement of Ukrainian political and legal thought in the European context. Digitization of such documents and their inclusion in digital collections expands user access to monuments of law and intensifies their circulation in the cultural information space. Effective work directions on the popularization of digital sources of historical and cultural heritage according to the results of the analysis of foreign experience are the use of mobile technologies and the representation of resources in social media.

Keywords: historical and cultural heritage; monuments of law; digital libraries; mobile technology, social media

Introduction

An important task facing Ukrainian society at the present stage is the formation and strengthening of the worldview values-based orientations of citizens that determine their patriotic focus, and thus – it will determine political and civic behaviour. To solve this issue, we need the formation of a full-fledged national information space, overcoming its existing destruction, filling it with information that will contribute to the formation of a common, constructive vision of the national future. Building such a common vision involves, among other things, an appeal to the past and, importantly, to successful projects in it, examples of harmony between the individual and the state.

In this context, among the many areas of national cultural heritage, the monuments of law deserve special attention. They are fundamental for illustrating the state's progress from historical times to the present ones and affirm the longevity of the political and legal tradition. Monuments of law by their nature comprehensively reveal various aspects of public life in a certain historical period – economic and social relations, and political system. What is more, based on ideas relevant

to their time, they characterize the level of intellectual understanding of social development and are even the subject of linguistic discussions, as they provide material for clarifying the features of language practices of their time. Their complex, integrative nature determines the significance of the monuments of law at the present stage of understanding the national past: they have not only scientific, but also ideological value, and they are promising in terms of the educational process. The monuments of law are logically a part of the national myth – such as the Magna Carta, the Declaration of Independence of the United States, the Constitution of Pylyp Orlyk, the Declaration of the Rights of Man and of the Citizen, 26 August 1789, etc.

An important way to promote the national cultural heritage in recent decades has been a variety of national and international digital projects aimed at "informing and inspiring", preserving and expanding access to critical cultural treasures and important historical documents "for fun, education and research"; filling the information space with various cultural content.

Analysis of studies and publications. Ukrainian scientists are actively developing issues of both the general role of memory institutions in shaping the sociocultural environment (Dubrovina, Kyrydon, & Matiash, 2017; Dubrovina, Lobuzina, Onyshchenko, & Boriak, 2020; Rybachok, 2017) and the functioning and development of individual projects of integrated digital resources (Dobrovolska, 2020; Lobuzina, Perenesienko, & Loshhinskaja, 2019). Technological aspects of creating and ensuring the functioning of such projects, taking into account modern requirements for digital library resources and sources of scientific information, have also been reflected in historiography (Lobuzin & Perenesienko, 2020). Thus, the scientific challenge of digital representation of the national cultural heritage is being developed quite actively. However, given the dynamic development of digital resources, the constant emergence of new technologies and areas of work, scientific interest in the issue is preserved. At the same time, we can talk about the evolution of this interest – along with research on the formation of digital resources, the issue of support and management of digital information collections, their promotion is being brought up to date. Active assimilation of national cultural heritage by society, which due to libraries, archives, and museums became available through digital resources, their introduction into educational, popular science, artistic discourses is an important task both at the practical level of organization of activities of cultural and scientific institutions and at the level of scientific understanding.

Thus, the **objective of the study** is to generalize modern approaches to improving the promotion of library resources, in particular, the documents of legal concern of digital library collections of historical and cultural heritage as an important component of cultural memory in the information space.

Methods

The methods of systematic analysis of library databases of historical and cultural heritage have been used in the research. In particular, the V. I. Vernadsky National Library (Ukraine), World Digital Library, Europeana, Gallica, Bavarian State Library, etc. The use of social and cultural methods allows for finding out the features of the audience of the educational process, the specifics of perception, and the assimilation of information by modern youth. The study of the specifics of mobile application use in social and cultural processes requires a combination of methods of technical sciences and humanities. The integration of the methods of humanities and information technology has provided research on technologies for accessing and popularizing resources and collections.

Results and Discussion

The active popularization of the monuments of political and legal public opinion for Ukrainian realities acquires special significance for several reasons. Firstly, given the long stateless existence of Ukrainians, it is the evolution of legal thought, expressed by specific monuments (from medieval "truths" through the documents of the Grand Duchy of Lithuania, Rus and Samogitia when the Ukrainian (Rus) nobility defended not only their class privileges but also national status, to the monuments of the Cossack state and further – documents of the period of the First Liberation Struggles), which is among the elements of assimilation and mastering of the past. Emphasizing the continuity and succession of norms and institutions of law, along with emphasizing the organic combination of local and European sources, is an important element in establishing the longevity of the Ukrainian political and legal tradition in the public consciousness.

Equally important is the emphasis on the corpus of Ukrainian monuments of law and in terms of stay of Ukrainian lands within foreign countries, therefore, the commonality of these monuments with the history of Lithuania, Poland, Belarus, Austria, and Russia, their representation in the national collections of these states, sometimes – as exclusively their monuments. Thus, there is a need to emphasize their Ukrainian nature (or Ukrainian component), and the active introduction of documents and information about them into the national information space. An important factor in this emphasis, its visualization, and expression is the representation by the institutions of memory of book monuments as historical, cultural, and legal sources.

Therefore, the activity of libraries on the accumulation, preservation, representation, and popularization of such documents of national memory is becoming especially important. V. I. Vernadsky National Library is not only the largest holder in Ukraine of an invaluable collection of unique and rare documents on the history of national law but also a scientific institution that systematically and actively carries out works on their presentation in the digital information space.

The main projects on the accumulation, presentation and dissemination of cultural heritage are the resources of the VNLU – Digital Library of Historical and Cultural Heritage, which contains a number of valuable and unique legal documents and a consolidated bibliographic and electronic resource of the documentary heritage of Ukraine – "Ukrainika Electronic Library", which is an analogue of digital projects of national libraries of other countries (Polona, Gallica, American memory, Canadiana, etc.). The collections of sources of law in these resources occupy a prominent place – the monuments of law in the Digital Library of Historical and Cultural Heritage are cross-presented in the categories "History" and "Jurisprudence"; an electronic library "Ukrainika" accumulates relevant resources under the categories "History", "State and Law".

Among the monuments of law that are of interest as sources for research, awareness-raising, educational projects, both due to historical and socio-political value, and accessibility for widespread use through the technology of digital libraries and collections, one should note the Statutes of the Grand Duchy of Lithuanian Rus', Samogitian as worded in 1529, 1566 and 1588 presented in digital collections of the VNLU; documents disclosing the contractual relations of the Zaporozhian Army with the Moscow tsars; a facsimile of the Ukrainian-language original of the Covenants and the Constitution of Rights and Freedoms of the Zaporozhian Army; a collection of norms of the Hetmanate of the XVIII century "Rights under which the Little Russian people are judged"; documents relating to the legislation of the Austro-Hungarian and Russian empires; documents disclosing the law-making and law-enforcement of the period of the First Liberation Struggle and the Soviet era.

The materials presented in the collections of the "Archive of South-Western Russia" series are noteworthy. They include acts on Ukrainian administrative, marriage, and family law,

materials on the history of local government, and public relations of the XV-XVII centuries. In a user-friendly form, there are such important and interesting documents for research and introduction not only in scientific but also educational and popular science discourse, as privileges and charters of princes of the GDL (Grand Duchy of Lithuania) and Polish kings to the Ukrainian nobility, to cities – on Magdeburg law and others aspects of governance, confirmation of the "rights and privileges" of the burghers by kings and voivodes; charters on peasant and bourgeois duties, a number of "supplications" – both noble and commonwealth appeals, court verdicts and decrees; protocols of self-governing bodies; also "Sejm constitutions" (decisions) on cities; documents determining the legal status of fraternities; documents on the functioning of sejmiks and delegation to higher bodies; evidence of property conflicts, recognition of status and responsibilities, etc.

It should be noted here that the trend according to which in the collections of historical and cultural heritage a prominent place is occupied by monuments that reveal the formation of the state, the struggle for human rights, and therefore belong to the realm of law, is a characteristic feature of digital projects. For example, the World Digital Library on keyword queries (in English): "law" provides 292 links to old prints that can be viewed by the user; "declaration" – 1015 links, "constitutions" – 982, "proclamation" – 335; "legislation" – 321. Europeana on similar inquiries gives the following result: "law" – 2300 sources, "constitutions" – 205, "declaration/proclamation" – 1377, "legislation" – 1377. Among these documents – there are the most various monuments – from handwritten "barbaric truths" of medieval Europe to the first editions of constitutions and declarations of the New Age.

As already mentioned, the presentation in digital collections of a wide range of documents that reveal the features of lawmaking and law enforcement in historical retrospect is an important area of formation of the national information space. At the same time, an important task is to ensure the usability of these documents, and their circulation in the information space, creating conditions for constant access to them by users.

Along with traditional methods, there are virtual and real exhibitions, events dedicated to memorable dates associated with some documents, the latest information and communication technologies deserve attention and widespread use. We will dwell on the use of mobile technology for access to library resources and features of representation of library projects and funds in social media.

Current trends in media consumption, characterized by the growing role of mobile devices and the intensification of their use in the consumption of scientific and cultural information produced by various information centers, including libraries, bring up to date the trend of adapting servicing with information resources to them (Bondarenko, 2016). Intensification of "mobilization" of libraries, which provides speed, convenience, personalization, and interactivity of user servicing, takes place in two directions – expanding the number of users willing to consume library mobile content and complicating the range of library services provided by mobile technology. If the adaptation of library websites to mobile versions is the initial stage of the mentioned "mobilization", the disclosure of unique funds or publications stored in special collections of the library requires additional requirements for mobile applications¹.

The creation of thematic mobile applications allows you to single out and disclose documents of special historical, cultural and artistic value from special library collections. A number of national and state libraries thus distribute resources of national and historical

¹ Mobile applications are computer programs created specifically for use on a mobile device, designed to perform some tasks as one of the tools of up-to-date communication, in particular, dissemination and promotion of scientific and socio-cultural information resources.

significance. An important thing in the presentation of digital collections, according to the analysis of LOC Collections applications of the Library of Congress, Gallica online library, Bavarian State Library, World Digital Library, Europeana is not only the accessibility and search through mobile devices to millions of documents of digitized collections, but also, given the features of the screens – the technology of presenting documents in full, with a scaling-up option of certain details.

Equally important is the increase in interactivity in working with documents – the ability to add to the list of favorites by creating your own selections of collection objects and sharing them with other users, downloading, e-mailing documents, or distributing via social media, creating tools for further promotion of such resources. Current mobile technology recently used by libraries in the context of promotion of their resources and making access to them easier is augmented reality features, such as 3D image recognition, where digital objects are displayed on the screen of a mobile device in a real place (for example, related to a document) and time. Such technologies are allocated to a separate group of AR applications. In this context, the British project SCARLET (Special Collections using Augmented Reality to Enhance Learning and Teaching) is noteworthy. It was introduced to improve the use of special collection materials in teaching and learning to help students interact with primary sources and facilitate their access to Internet resources. As part of the SCARLET project, the University of Manchester and Jisc, an advanced technology and services research company, have developed an AR application for collections of outstanding rare books, manuscripts and archives stored in the John Ryland Library. The project aims to remove one of the main obstacles to the use of special collections in teaching and learning – the need to work with archives, manuscripts and rare books in controlled reading rooms, isolated from most other supporting materials and the growing mass of related digital resources. The augmented reality project allows a large number of students at any time to explore in detail the delicate and valuable academic materials that would otherwise be locked behind display windows or would not be available to everyone. The rich variety of materials that can be linked virtually to objects allows students to immerse themselves in the subject and its relevance in ways that were previously unthinkable. This methodology has been designed with the expectation that it can be used by other libraries holding special collections, making them available for research, teaching and learning.

Another important area of promotion and popularization of library content of historical and cultural heritage is the intensification of interaction between libraries and social media. Due to the fact that legal documents that are the subject of our scientific interest are represented mainly by visual content or full-text versions in PDF format, the most promising social media in terms of representation of these documents are graphic and video content networks, such as Flickr, Instagram, Pinterest. Despite the existing functional differences, they can all be considered as photo hosting networks, in which libraries present their activities through a stream of collections grouped by thematic or another principle of visual content (albums) with accompanying information and systematization through tagging, with the possibility of user discussion, evaluation, download, and publication of library materials in other networks and adding user content. In addition, networks are a way to promote the library's official website by providing links to detailed information and embedding recommendation tools that allow viewing of similar thematic collections. The results of the analysis of library galleries on these social networks showed that the leader of these networks in terms of the number of readers and downloaded works is the Library of Congress of the United States. Active users of social media for the promotion of historical and cultural monuments are also the British Library, Harvard Library, etc. Expectedly, the most popular documents of the Library of Congress are monuments outlining the formation of the state – Declaration of Independence, Constitution of the United States, Bill of Rights; a significant place is occupied by collections relating to the movement for rights of various groups:

abolitionist, suffragette, etc. The legal "gem" in the British Library's collections is the Magna Carta and related documents and artifacts. It is revealing that even presenting the French Declaration of the Rights of Man and of the Citizen of 1789, the British Library emphasizes its imitation of the Grand Charter of Liberties "in some basic principles".

It is noteworthy that in the case of the popularization of library collections and funds on social media, it is a combination of different forms of representation – social networks publish digitized memorabilia and inform about the presentation of these documents in traditional library exhibitions. The presentation of the monuments includes significant scientific and educational work, the creation of a large-scale reference block, which is also represented on social networks.

Conclusions

The importance of popularizing the monuments of law in the funds and collections of libraries is determined by their ideological influence, scientific, educational, awareness-raising potential. Filling the national information space with relevant information is a component of image strategies for cultural and historical positioning in the global space, and an important component of establishing a national vision of the past, the longevity of historical development, heredity of legal culture, and involvement in the global context. The digitization of such documents and their inclusion in digital collections characterizes the activities of the world's leading libraries, thus expanding user access to monuments of law, and intensifying their circulation in the cultural information space. Additional tools for promoting digital sources of historical and cultural heritage based on the results of the analysis of foreign experience are the use of mobile technology and the representation of resources in visual content social media. These measures make it possible to expand the circle of users, improve the disclosure of library funds, simplify access to resources, and increase their circulation in society. At the present stage, the popularity of thematic library applications created to promote national cultural heritage is growing; the popularization of historical and cultural, in particular, legal resources through social media tools remains relevant.

REFERENCES

- Bondarenko, V. (2016). Mobilni dodatky v bibliotechnii praktytsi: zarubizhnyi dosvid ta vitchyzniani realii [Mobile applications in library practice: International experience and domestic realities]. *Naukovi pratsi Natsionalnoi biblioteky Ukrainy imeni V. I. Vernadskoho*, 43, 382-407. Retrieved from http://nbuv.gov.ua/UJRN/nbnbuimviv_2016_43_26 (in Ukrainian)
- Dobrovolska, V. (2020). Elektronna biblioteka «Ukrainika» – unikalnyi intehrovanyi resurs tsyfrovoyi dokumentalnoi spadshchyny [The electronic library “Ukrainika” as the unique integrated resource of digital documentary heritage]. *Bibliotekoznavstvo. Dokumentoznavstvo. Informolohiia*, 1, 79-87. doi: <https://doi.org/10.32461/2409-9805.1.2020.205424> (in Ukrainian)
- Dubrovina, L., Kyrydon, A., & Matiash, I. (2017). Arkhivy, biblioteky, muzei – dzherelna osnova natsionalnoi pamiaty, kulturnoi spadshchyny Ukrainy [Archives, libraries and museums – the sources base of the national memory and cultural heritage of Ukraine]. *Bibliotechnyi visnyk*, 1, 3-10. Retrieved from http://nbuv.gov.ua/UJRN/bv_2017_1_3 (in Ukrainian)
- Dubrovina, L. A., Lobuzina, K. V., Onyshchenko, O. S., & Boriak, H. V. (2020). Tsyfrova humanitarystyka ta bazy danykh dokumentalnoi kulturnoi spadshchyny v bibliotekakh Ukrainy [Digital humanities and databases of cultural heritage in libraries of Ukraine]. *Rukopysna ta knyžkova spadshina Ukraini*, 25, 290-309. doi: <https://doi.org/10.15407/rksu.25.290> (in Ukrainian)

- Lobuzin, I., & Perenesienko, I. (2020). Elektronni kolektsii ukrainiky u vebseredovyshchi: orhanizatsiia ta tekhnolohiia formuvannia resursiv rukopysnykh ta knyzhkovykh dzherel u Natsionalnii bibliotetsi Ukrainy imeni V. I. Vernadskoho [Electronic collections of Ukrainica in web environment: organization and technology of formation of resources of manuscript and book sources in V. I. Vernadskyi National Library of Ukraine]. *Rukopysna ta knyzhkova spadshina Ukraini*, 25, 324-336. doi: <https://doi.org/10.15407/rksu.25.324> (in Ukrainian)
- Lobuzina, E., Perenesienko, I., & Loshhinskaja, N. (2019). Elektronna biblioteka «Ukrainika»: portal znanij nacional'noj biblioteki [Electronic library “Ukrainica”: knowledge portal of the national library]. *Biblioteki nacional'nyh akademij nauk: problemy funkcionirovaniia, tendencii razvitija*, 17, 50-64. doi: <https://doi.org/10.15407/maan2019.17.050> (in Russian)
- Rybachok, O. (2017). Dokumentalna spadshchyna yak skladova kulturnykh tsinnosti i kulturnoi spadshchyny [Documental heritage as a constituent of cultural values and cultural heritage]. *Bibliotekoznavstvo. Dokumentoznavstvo. Informolohiia*, 2, 81-91. Retrieved from http://nbuv.gov.ua/UJRN/bdi_2017_2_13 (in Ukrainian)

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Правові ресурси історико-культурної спадщини: представлення в бібліотечних колекціях та їх популяризація

Мета дослідження. Обґрунтувати світоглядне, освітнє, культурне значення історичних документів правового спрямування у цифрових бібліотечних ресурсах історико-культурної спадщини як важливої складової культурної пам'яті. **Методологія.** У дослідженні використано методи системного аналізу бібліотечних баз даних історико-культурної спадщини. **Результати.** Досліджено пам'ятки права як складової історико-культурної спадщини, що потребує популяризації в інформаційному просторі з огляду на наукове, освітнє, світоглядне значення. **Висновки.** Ресурси пам'яток права засвідчують тяглість історичного розвитку, спадковість правової культури, включеність української політико-правової думки в європейський контекст. Оцифрування таких документів та включення їх до цифрових колекцій розширює користувацький доступ до пам'яток права, інтенсифікує їх циркуляцію у культурному інформаційному просторі. Ефективними напрямками роботи з популяризації цифрових джерел історико-культурної спадщини за результатами аналізу зарубіжного досвіду є застосування мобільних технологій та репрезентація ресурсів у соціальних медіа.

Ключові слова: історико-культурна спадщина; пам'ятки права; цифрові бібліотеки; мобільні технології; соціальні медіа

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Getting Ready to Hyflex: An Assessment of the DLSU Law Students' Use of Online Library Resources and Resources

Objective. The onset of the pandemic in 2020 forced the education sector to shift to the online learning modality. This paper aims to determine the law students' actual utilization rate and patterns of online resources and services. **Methods.** This paper used a quantitative method to arrive at its primary purpose. It collected use statistics on all online legal databases and online services offered by the Law Library. This paper analyzed the collected statistics by applying the different statistical measures such as the extraction of mean, averages, and percentages. **Results.** This study found that law students used online resources to a great extent. Academic activities, databases' contents, and titles' availability are the factors affecting the frequency of use of online resources. The results of this study will become the bases for planning for the continuous improvement of the law library's resources and services in preparation for the permanent offering of the hyflex learning modality in the Tanada-Diokno College of Law of the De La Salle University. **Conclusions.** The low extent of use of the online reference services and the great degree of use of the different online databases prove that law students can access online information independently, strengthening the proof that they are now ready for the hyflex modality of library service.

Keywords: law students; library collection assessment; library service assessment; hyflex learning modality; use analysis; comparative analysis

Introduction

De La Salle University College of Law was renamed Tañada-Diokno College of Law on February 26, 2022, after former senators Lorenzo M. Tañada, Sr., and Jose W. Diokno (DLSU Names College of Law after Patriots Tañada and Diokno, 2022). The College hoped to dynamically implant the virtues of the two dignified human rights lawyers into its students. Aside from loving God and country, the newly named college also endeavors to produce graduates who excel academically like the two outstanding lawyers.

The DLSU Law Library feels responsible for supporting law students' quest for academic excellence. Brown and Malenfant (2017) say that providing a conducive learning environment creates a positive impact on students' academic success. Added to it, teaching students to be information literate, and instilling into them life-long independent learning are the library tasks that help students achieve academic excellence (Brown & Malenfant, 2017; Gaha, Hinnefeld, & Pellegrino, 2018). Incidentally, those tasks are the hardest to fulfill in the library. Said tasks became even harder to perform when the pandemic broke, and most of the Academic Community members were not allowed entry to all DLSU campuses. Because the DLSU administration closed the whole campus, the Law Library could not function normally. Like the standard academic law libraries, the DLSU Law Library's most used collection is the print book collection. Frias (2017) said that the Law Library's 7,208 titles (equivalent to 14,141 volumes) of print books were used 60,945 times by around 400 students per year for a period of 7 years (2010-2017). These figures present an annual average use of 22 print books per student per year. This data means that print books are heavily used in the said library. But when the law library closed, it could not lend its most-used collection. In opting to gear students to using online resources, several limitations also surfaced, such as: (1) the Law Library only subscribes to three (3) legal databases; (2) the Law Library only have a limited number of e-books before the pandemic; and (3) because there was only one general library orientation per batch which happens every beginning of an academic year,

the currently enrolled law students then were not given much information about the different online databases that they can use, much more taught them how to access these databases.

Moreover, the pandemic that started in 2020 paved the way to open opportunities for legal education to broaden its horizon. While the Commission on Higher Education (CHED) declared that the education system would not return to the complete face-to-face modality anymore (ABS-CBN News, 2021), the Legal Education Board (LEB) confirmed it when the revised model curriculum of the basic law program became law in 2021 (Legal Education Board, 2021). Section 20 of the said law pertained to the following: d) Learning time/contact vs. non-contact hours, which mandated Higher Education Institutions (HEIs) to provide their students with own time to learn by themselves by using all the resources they need, which includes the library resources; e) Flexible learning, which directed HEIs to provide other modes of learning in consideration with the student's learning needs and styles; and, f) Leveraging technology, pushes the HEIs to provide high-end technology that would help elevate "application of a holistic view of the law" (Legal Education Board, 2021, p. 22). In consonance with LEB's move for flexible learning modalities, DLSU also pushes for hyflex classes, a modernized blended learning (Koskinen, 2018), and a coined word for hybrid and flexible modes of teaching and learning that utilizes online and face-to-face modality (Graffy, 2021).

Receiving online education over the past two years may have prepared law students for this modality of learning. But accepting this as a permanent fixture in the legal education system may present a difference. They may have been employing band-aid solutions in completing assignments and other tasks during the 2-year online modality. But those solutions will not make them achieve academic excellence. They must be ready for the permanent hyflex modality in learning. Educating the law students in using the online collection and in availing of its online services must be the primary solution. It is then imperative for the Law Library to know the strategies it must undertake to provide the best services and collections to its students in either modality.

This study, therefore, aims to assess the frequency, patterns, and extent of use of the different online resources and services that reflect students' readiness to hyflex modality of learning. This assessment will provide factual information in improving the collection of online resources and drawing better online services that will help law students achieve academic excellence. This study aims to answer the following problems:

1. Are TDCOL students ready for hyflex modality in terms of access to online resources and services?
2. What are the patterns of use of the Law Library's online resources and services?
3. Do patterns of use of online resources and services differ before and during the pandemic?
4. What is the students' extent of use of the different online resources and services of the Law Library?

Purpose of the study

This paper aims to determine if law students are ready for the hyflex learning modality as far as library use is concerned. Through their actual utilization rate and patterns of use of the law library's online resources and services, this paper will be able to come up with a set of bases for building and improving electronic resources and developing online services that would make the Law Library's support for the hyflex learning modality more vital, deeper and more significant. The recommendations of this study will be instrumental in honing law students to be confidently ready for the hyflex learning modality, which can help them achieve academic excellence.

Review of related literature

The COVID-19 pandemic, which is so far the most serious and the deadliest calamity of all time (Chakraborty & Maity, 2020), affected all types of societies all over the world. For a moment, the world stopped operating due to lockdowns and isolation. But when it was deemed necessary to move forward, people looked for ways to work along with the deadly virus. Thus online modality in working, represented by a work-from-home arrangement which was minimally observed before the pandemic, became the main practice all over the world (The Economist, 2021). As the pandemic moved forward, vaccines were developed and administered. This time, people learned to move along with the pandemic. The education sector re-opened its doors via the hyflex teaching and learning modality. Hyflex modality, which is a combination of online and face-to-face modalities (Vilhauer, 2021), is a more convenient and safer modality to adopt while vaccinated people deal with COVID-19. Through the hyflex modality, most of the concerns brought about by the pandemic were addressed, such as the need for social distancing, learners' variety of needs, and mental health concerns (Kohnke & Moorhouse, 2021). Hyflex modality became very beneficial both to students and teachers because of its flexibility. Students get to choose which modality to adopt to learn better, while teachers were able to teach courses wherever they are (Rutledge, Casucci, Mowdood, & Ziegenfuss, 2021).

Libraries adopted the hyflex modality to continuously perform their main objective, which is to provide information, no matter what the situation is at hand. Libraries turn to hyflex modality to keep astride with what education institutions are offering. The Teaching and Learning Team of Oklahoma State University Library first used the hyflex modality in providing library instructions during the onset of the pandemic (Colquhoun, Essmiller, Baeza, Reiter, & Stroud, 2021). Mariott Library of the University of Utah first provided a hyflex modality by developing open online courses that contributed to the One-stop resource for the stakeholders of their university (Rutledge et al., 2021). The Libraries of De La Salle University, on the other hand, developed its online Library Research course for its information literacy program. The said course is now integrated into the University's Learning Management System (Canvas). Further, the University of Alabama Libraries utilized the hyflex modality in enhancing their online reference service through their LibChat, which became a hit with their students (Decker, 2021). Generally, libraries use the hyflex modality to make their resources accessible to their stakeholders in both online and face-to-face modalities and provide reference services, also in both modalities (Garner & Logue, 2020; Rutledge et al., 2021).

While more libraries all over the world are now geared toward hyflex modality in providing access and services, two main questions arise: (1) are libraries prepared to offer hyflex modality for good?, and (2) are the stakeholders ready for this type of modality? Romero-Hall and Ripine (2021) raised the issue of teachers' preparedness in providing hyflex modality in teaching. This issue can also be equated to the library's preparedness in providing hyflex modality in providing access and services. Are the resources ready to be used online? Are the staff trained to provide hyflex services? The concern about students' readiness, on the other hand, lies in their ability to do independent learning (Kohnke & Moorhouse, 2021). Equating it to using library resources, are they ready to do independent searching for appropriate information? Can they locate the best information for their class assignments? Or do they know all the library privileges they are entitled to as bonafide students?

Concerns such as preparedness and readiness need answers for a system to operate smoothly. In the library world, where hyflex modality is a relatively new offering, it is necessary to answer such concerns to know how to steer the library's operations shortly as it goes astride its greatest challenge, which is the pandemic.

Methodology

This study used the quantitative method to analyze data and answer the problems raised earlier. It covers the students' annual utilization of online resources, namely: (1) CDAsia Online, (2) HeinOnline, (3) LexisNexis, and (4) e-books on law, and online services, namely: (1) email, (2) Chat and Libanswers and (3) Libguides. The culling of the utilization statistics was through IP addresses; hence, there is no way to check if usage came solely from students of TDCOL. But since most of the students who use the three legal databases are students of TDCOL, this study assumes that the said college students posted all utilization statistics. The covered dates of the extracted data are from March 01, 2019, to February 28, 2022, one year (March 01, 2019, to February 28, 2020) of pre-pandemic use and two years (March 01, 2020, to February 28, 2022) of use during the pandemic.

The researcher recorded the monthly usage statistics for CD Asia Online and Nexis Uni that the database provider regularly sends. The statistics of use are tallied according to prepared topics for future analysis. Statistics of use for HeinOnline and e-books on law, on the other hand, were extracted by the DLSU Libraries' System Assistant using the Libraries' Alma Analytics tool. The researcher also classified the extracted statistics according to prepared topics.

Chat, Libanswers, and Libguides were extracted from the Springshare facility. Springshare is a database subscribed by the Libraries to facilitate the online delivery of reference services. This facility produces reports based on the data saved in its system. For Chat and Libanswers statistics, the researcher extracted and coded all transcripts about law, legal resources, and COL students. The transcripts were coded according to prepared Springshare topics for future analysis.

Moreover, the researcher reviewed and classified all email messages from law students from March 01, 2019, to February 28, 2020, according to topics given in Springshare.

This study applied simple mathematical measures such as summation and extracting percentages and averages to help analyze results. Summation was used to get the total frequencies of use of the different online services and resources. This study extracted percentages specifically in analyzing the trends of use per topic and the ratio of monthly and annual use to the 3-year extracted data. On the other hand, averages were calculated to forecast utilization rates and future use scenarios. To answer this paper's problems, the researcher employed (1) Use Analysis which concentrated on the frequencies of use and percentages of use, and the extent of use of online resources and services; and (2) Trend Analysis to set the patterns of use of the different online services and resources.

Results and discussion

Online Resources

A. Frequency and Patterns of Use

The Law Library presently subscribes to four (4) legal databases, namely, (1) CD Asia Online, (2) e-SCRA, (3) HeinOnline, and (4) NexisUni. CD Asia and e-SCRA are local online databases, while HeinOnline and NexisUni are foreign resources. Of the four, only e-SCRA is not available for off-campus use because the database access mode is per license. This paper concentrates on the databases that are accessible off-campus that will be in full support to hyflex modality.

Aside from online legal databases, the Law Library provides access to e-books. To date, there are 805 titles of e-books on law and its related fields. All e-books are accessible off-campus

and therefore support the hyflex modality of learning.

Online Databases

CD Asia Online is the most comprehensive local legal database in the country. Aside from being the most used Jurisprudence library, it contains laws and other legal information. Use statistics for CD Asia during normal circumstances were not high. A year before the pandemic broke, use statistics for CD Asia was only 27,012, equivalent to 4,155.69 per month. Use statistics for 2020-2021 and 2021-2022 increased to 32,046 (4,930.15/month) and 39,893 (6137.38/month), respectively. Academic years 2019-2020 and 2021-2022 display the same monthly patterns of use, presenting peak use in the months of August and February, while the lowest usages were posted in December. The abnormality of the use pattern in AY 2020-2021 may be due to the adjustments in the academic calendar brought about by the pandemic. The 1st and 2nd semesters in TDCOL begin in July and January, respectively. The patterns formed an observation that the immediate months after the beginning of the semesters are the months when CD Asia Online is most used. This observation agreed with the findings of Tenopir and Read (2000) when they said that usage of online databases is in synch with the rhythm of academic life (p. 238). The onset of the pandemic in March 2020 temporarily disrupted the monthly use pattern because the schedule of classes then was also temporarily disrupted. Figure no.1 presents the trends in the use of CD Asia for the past three years.

HeinOnline is one of the two foreign legal databases of the Law Library. Aside from case laws in the United States of America, Canada, and selected countries in Europe and Asia, it contains a wide array of authoritative law journals, including the country's very own Philippine Law Journal. The law students did not very well use HeinOnline before the pandemic. There were months when students did not use this database. It only posted 6,180 usages with an average of 515 usages per month in 2019-2020. The use of HeinOnline increased 76.96% in 2020-2021 and further increased 32.02% in 2021-2022.

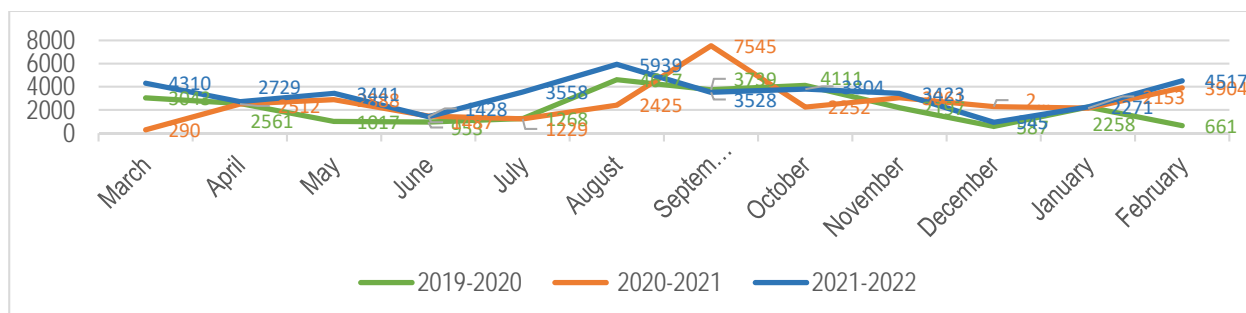


Fig. 1. Use Statistics of CD Asia Online Before and During the Pandemic

Although total usage of HeinOnline presented an uptrend, it is not easy to establish patterns of monthly use. Figure 2 shows that there were months when the usage of HeinOnline was heavier before the pandemic broke (i.e., July 2019). There were months when use was at its peak during the onslaught of the pandemic (i.e., April 2020). In contrast, the highest-ever usage was posted when everybody thought the pandemic was reaching its plateau (i.e., December 2021). Eliminating the least and highest usage, however, presents a different outlook. June and September are months where usage is relatively heavy before and one year after the pandemic broke. Like in CD Asia, similarities in use patterns between 2019-2020 and 2021-2022 are detected. The similarities in monthly patterns of use stabilize the findings earlier about the relationship between the academic

calendar and the use of library resources.

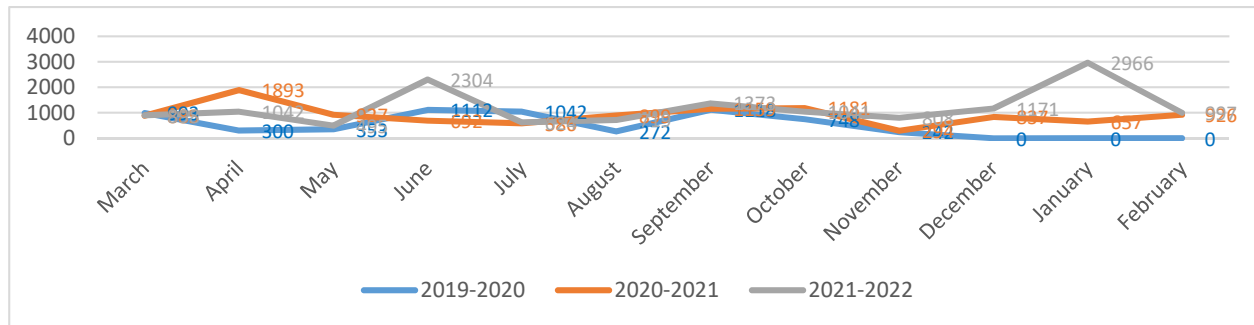


Fig. 2. Usage of HeinOnline from 2019-2020 to 2021-2022

The third online database that the Law Library is subscribing to is the Nexis Uni, a foreign database that features both legal and business resources. It also has a collection of authoritative journals published by different academic legal institutions. Usage statistics for Nexis Uni are unpredictable. First, the total usage statistics in 2019-2020 is 2,534. This figure is 32.32% higher than the usage statistics for the next year (1,715) when the pandemic broke, and classes shifted to online modality. When the online learning modality was in full blast in 2021-2022, the use of Nexis Uni (2,566) only increased by 1.26% from 2019-2020. The monthly usage pattern is also challenging to establish. When frequencies of use were graphed, the graph shows that every year has a set of different curves with no similarity with any other year. The graph means that students use this database according to their needs and preferences, not because of its relation to the academic calendar or scheduled assignment submissions. Figure 3 presents the graphed frequencies of use of Nexis Uni.

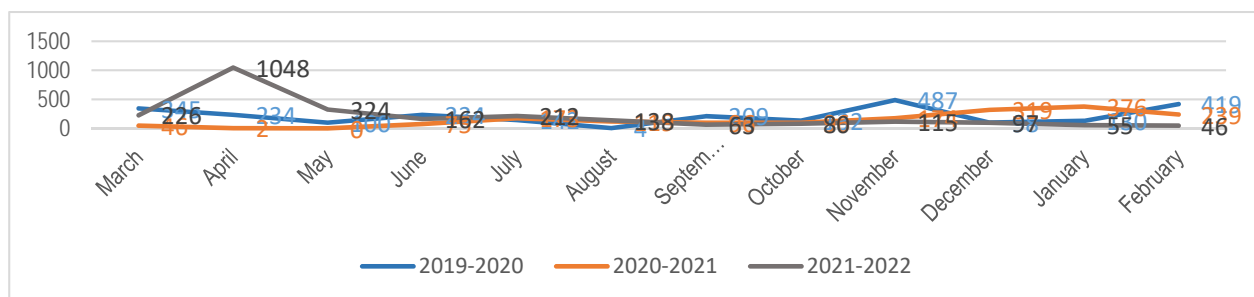


Fig. 3. Frequencies of Use of Nexis Uni from 2019-2020 to 2021-2022

E-Books

The Law Library only aggressively purchased and subscribed to e-books on law during the last three years. Thus, the usage of law e-books was only captured starting in 2020. As mentioned earlier, there are 805 circulated titles of e-books on law. Law students used 223 titles, equivalent to 27.70% of the total e-book acquisition. Of the total usage, 178 titles were used 536 times in 2020-2021, while only 61 were used 190 times in 2021-2022. Law e-books were used 726 times in 2 years during the pandemic. The higher utilization rate of e-books during the pandemic may be attributed to the length of times when professors gave students more asynchronous sessions from their classes. Students tend to look for more online resources, including e-books, during asynchronous sessions (De', Pandey, & Pal, 2020). This instance did not happen in 2021-2022, when

classes became more stable, and law professors became more apt to provide synchronous sessions in their classes. As a result, the utilization rate of e-books in 2020-2021 is higher at 79.82% than in 2021-2022, with only a 27.35% utilization rate. Table 1 presents the frequency of use of e-books for the past two years.

Table 1

Monthly Use of Law E-Books, 2020-2021 to 2021-2022

Month	2020-2021	2021-2022	Total
March	33	12	45
April	43	14	57
May	88	11	99
June	61	40	101
July	72	11	83
August	93	39	132
September	34	4	38
October	21	8	29
November	19	27	46
December	52	8	60
January	15	9	24
February	5	7	12
Total	536	190	726
No. of Titles Used	178	61	

Moreover, studying the clients' use patterns would greatly help improve the library resources and services. Patterns help librarians understand the holistic characteristics of a population. It also provides information on the essential elements that the librarians must take note of (Flood, 2019). Gyau, Jing, and Akowuah (2021) were able to know the needs of their students and what attracted them by studying the usage patterns in their library. Studying the law students' patterns of use of online resources and services is a must as the library enters a new modality in learning.

Due to the nature of reporting per database, this paper has minimal data to analyze patterns of use according to subject preferences and types of information. While all of CDAsia Online information is on laws and jurisprudence, information in HeinOnline and Nexis Uni varies from case laws to journal articles. Unfortunately, only Nexis Uni provides a more comprehensive reporting that allows this study to extract patterns of students' preferred type of information.

Generally, newspapers and magazines have been the most used information sources in Nexis Uni for the past three (3) years. It ranked number 1 in 2019-2020 and, 2020-2021, and 2 in 2021-2022. Information from blogs and websites was the least used information source. Journal articles topped the choice of information type in 2021-2022, while case laws were the consistent 2nd topmost used information type for the past three years.

Cases were the 2nd most used information because TDCOL offers Political and International Law as one of its core courses. The said course concentrates on foreign international law and jurisprudence. Another reason is the nature of our legal system, which is a mixture of civil law, common law, and Islamic law. These legal systems are discussed in the case laws in foreign countries. Law students, therefore, can get more information on how juries decide in different types of legal set-ups. Meanwhile, CDAsia Online's types of information were solely on jurisprudence and laws. When added to the data from Nexis Uni, Cases tops the most used type of legal information for law students to patronize.

Surprisingly, although relatively few, law students also used information from blogs and websites. Blogs also contain authoritative information, though informally written. In some cases, more readers prefer to read blogs because they are written literarily, easier to understand, and are more up-to-date, even if researchers treat them as less academic because they are not peer-reviewed (PeterT, 2019). Figure 4 presents the itemized use of legal information for three years.

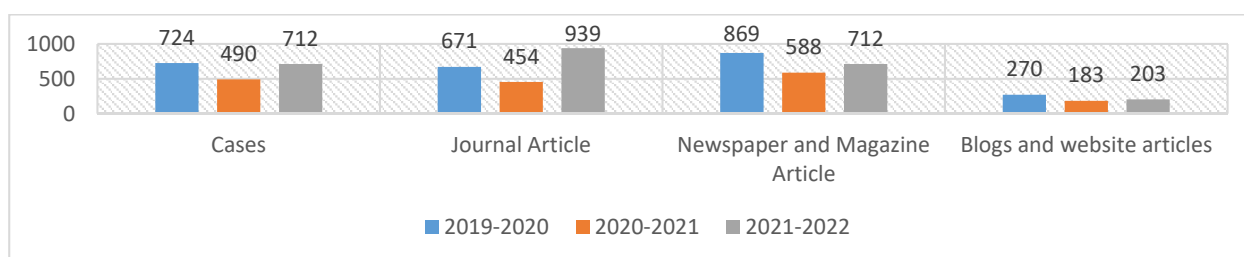


Fig. 4. Law Students' Preferred Types of Legal Information from 2019-2020 to 2021-2022

Usage patterns of e-books, on the other hand, are more comprehensive. Coding of titles according to the Library of Congress Subject Headings using the Libraries' subscription to classweb.org, this paper came out with 24 main topics on the law. As presented earlier, students used 223 titles of e-books on law 726 times in two years (2020-2021). Table 2 shows the itemized usage of e-books from 2020-2021 to 2021-2022.

Human Rights was the subject that contained the highest number of used titles with 28 titles, followed by International Law with 27 titles, and Criminal Law with 26 titles. The subject with the list number of titles used was Canon Law with only 1 title, Legal System and Medical Law with two titles apiece, and Election Law with 3 used titles. Out of the 223 used titles, Criminal Law and Human Rights Law topped the frequency of use at 98 times apiece, followed by International Law with 76 usages and Law in General, which was used 55 times. Criminal Law, Human Rights Law, and International Law are the top three subjects with the highest number of used titles. It follows, therefore, that the number of titles per subject is a factor that determines the potential usage of e-books: more titles, more use. However, the number of titles per subject is not the only factor determining potential usage. Courts, Legal System and Jurisprudence are all important subjects for law students, but students use those subjects very minimally. Whereas Canon Law, Legal Research, Law and Economics, and Law and Society have a minimal number of books, they were able to attract more users.

Therefore, E-book usage depends on the number of available titles and the nature of the subject; basic subjects, such as the legal system, are elementary to find anywhere on the internet, same with information about courts. Every jurisprudence is valuable to every law student, but apparently, books about it are not very attractive to them. E-books that are socially relevant are more patronized by law students.

Table 2

Usage of E-books per Subject, 2020-2021 to 2021-2022

Subject	2020-2021		2021-2022		Total Title Used	Total Frequency of Use	%age of Use
	Title	Frequency of Use	Title	Frequency of use			
AdministrativeLaw	9	14	2	5	11	19	0.03
Canon Law	1	12	0	0	1	12	0.02
Civil Law	13	36	2	2	16	38	0.05
Constitutional Law	9	17	0	0	10	17	0.02
Courts	5	7	1	1	6	8	0.01
Criminal Law	20	41	8	55	26	96	0.13
Election Law	3	6	1	1	3	7	0.01
Environmental Law	11	36	2	5	11	41	0.06
Human Rights Law	16	78	11	20	28	98	0.13
Intellectual Property Law	4	18	5	8	9	26	0.04
International Law	19	45	6	31	27	76	0.10
Jurisprudence	2	2	2	3	4	5	0.01
LaborLaw	6	12	0	0	6	12	0.02
Law and Economics	4	43	1	1	4	44	0.06
Law and society	4	15	1	2	5	17	0.02
Law and technology	4	11	2	26	5	37	0.05
Law in general	7	51	3	4	9	55	0.08
Legal education	4	14	4	9	6	23	0.03
Legal profession	9	18	2	5	12	23	0.03
Legal research	11	25	2	5	2	30	0.04
Legal System	2	2	2	2	4	4	0.01
Medical law	1	1	1	1	2	2	0.00
MercantileL aw	9	26	2	3	11	29	0.04
Philosophy of Law	5	6	1	1	5	7	0.01
	178	536	61	190	223	726	1.00

Moreover, recently published e-books are more preferred by law students. Of 223 used e-books, 136 (60.99%) titles were published in the last decade (2010-2019). These 136 titles were used 438 times, equivalent to 60.33% of the total usage. This result also confirms the claim earlier that more titles attract more users. However, it is interesting that law students still patronize e-books published before the 1980s. Some e-books were published even before they were born. This is because law subject is not sensitive to the year of publication. As long as the law is not repealed or obsolete, information from any legal source still stands firm. Table 3 confirms this claim.

Table 3

E-Book Usage by Year of Publication, 2020-2021 to 2021-2022

Year of Publication	Number of Titles	Frequency of Use	Percentage of Use
Pre 1980	8	9	0.01
1980-1989	10	51	0.07

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1990-1999	8	26	0.04
2000-2009	47	157	0.22
2010-2019	136	438	0.60
2020 onwards	14	45	0.06
Total	223	726	1.00

B. Extent of Use

The extent of use of a library's resources and services signifies the effectiveness and efficiency of the library's collection and services development. Several studies focused on the extent of use to assess different resources and services. Ogunmodede, Adio, and Odunola (2011) evaluated the information literacy program of a Nigerian university by correlating the extent of use of its student. Abdullahi, Isyaku Ahmad, and Ahmed (2019) studied their library's extent of utilization to support their university's teaching, learning, and research mission. In this paper, examining the extent of use determines the appropriateness of the online resources and services.

The extent of use of the different online resources was measured by relating the frequency of use and the enrollment statistics of TDCOL. The College's 3-year enrollment statistics ranged from 436 (2nd Semester, AY 2020-2021) to 530 (1st Semester, AY 2020-2021). In getting the extent of use in this study, the researcher considered the higher enrollment in every academic year instead of the average enrollment statistics. Table 4 presents the 3-year enrollment statistics for TDCOL.

Table 4

3-Year Enrollment Statistics for Tanada-Diokno College of Law

Semester	2019-2020	2020-2021	2021-2022
1 st	506	530	476
2 nd	511	436	457

The extent of use of the Law Library's online resources was great even before the pandemic broke. CD Asia Online tops the extent of use rate, having been used 5,286.11% before the pandemic and 6,046.42% and 8,380.88% during the pandemic years. Students used E-books to the least extent, but the extent of use rate in 2020-2021 was still significant at 101.13%. The only instance when the students used an online resource to a lesser extent was in 2021-2022, when only 39.92% of the e-book collection was used. The lesser extent of use of e-books may be attributed to the ease of use and functionalities that students would want to see from e-book databases (Marks, 2020) but are only present in e-journals. Students also spent a longer time reading an e-book than reading an article.

An upward trend in the extent of use pattern is evident for CDAsia Online and HeinOnline, which means that students' patronage of these online databases is growing. Nexis Uni's drop in extent of use in 2020-2021 may be due to the unstable academic calendar in AY 2020-2021, as

explained earlier, while the extent of use of e-books is a combination of factors, (1) unstable academic calendar, and (2) type of material, (3) ease of use, and (4) functionalities in accessing the resource type. Table 5 presents the individual extent of use of the different online resources for the past three years.

Table 5

Extent of Use of Law Library's Online Resources, 2019-2020 to 2021-2022

Online Resource	2019-2020	2020-2021	2021-2022
	(%)		
CD Asia Online	5286.11	6046.42	8380.88
HeinOnline	1209.39	2063.40	3033.19
Nexis Uni	495.89	323.58	539.08
Law E-books	NA	101.13	39.92

Online Services

The Law Library is currently offering two online services, namely (1) online reference assistance through the official email account and Springshare's Chat and Libanswers facilities, and (2) Libguides. Through Springshare, a commercial online reference tool, the Law Library can offer real-time reference assistance through chat and Libanswers. Also, through Springshare, the Law Library synthesizes information by putting together different pathfinders and webliographies and creating different Libguides.

A. Frequency and Patters of Use

The Law Library's online services were not popular before the pandemic broke. During normal circumstances, law students would instead go to the library and ask questions personally rather than online. It was only during the pandemic that law students started patronizing these services.

Online Reference Service

A. E-mail Service

Email is students' first line of communication with anyone in an academic setting whenever they need information. Way back early 2000's email had been one of the most preferred choices of students when it came to the mode of communication in seeking assistance. The main reason is the projected timely feedback (Kitsantas & Chow, 2007). Millennials prefer email as a means of communication because they can write long questions and can open their account on their own time (Alton, 2017). Naturally, this preference increased as online learning became the norm due to the pandemic (Broadbent & Lodge, 2021). This phenomenon is also true with the Law Library's experience.

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To assess the library's online reference service using email, the law librarian extracted all emails from law students from March 01, 2019, to February 28, 2022. The researcher coded the emails according to the subjects created in Springshare. There was very little utilization of email facilities for online reference assistance in 2019-2020. This change in the frequency of utilization is expected since students can quickly go to the law library to ask for help before the pandemic. The figures rose massively when the pandemic broke since entry to any campus of DLSU was not allowed. Students then started relying on online assistance from library personnel to obtain the needed information. Thus, online reference assistance rose 1577.78% in 2020-2021 and grew by 10.56% more in 2021-2022.

The month of August, before and during the pandemic, held the most significant number of email queries from law students. Said month was followed by June, while the month that posted the least number of online assistances is December. Table 6 presents the monthly online reference assistance through email.

Table 6

Monthly Online Reference Assistance Using E-mail, 2019-2020 to 2021-2022

Month	2019-2020	2020-2021	2021-2022
March	0	9	10
April	0	11	12
May	0	19	21
June	2	20	22
July	0	16	18
August	4	26	29
September	0	7	8
October	0	6	6
November	0	9	10
December	2	12	13
January	0	5	5
February	1	2	3
Total	9	142	157

B. Chat and Libanswers Services

While students in the early 2000s preferred to communicate via e-mail because it could give relatively timely feedback, students these days are expected to choose live chat facilities more because of their capability to provide real-time responses. In their study, Broadbent and Lodge

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(2021) found out that students have positive experiences with live chat activities. Additionally, chat facilities in the library provide a familiar place for students to ask questions and assistance they need in their research (Decker, 2021).

The Law Library started offering online reference assistance in 2013 through LERA, the LEReference Assistance, powered by Springshare. Chat queries not answered in real time go to the Libanswers facilities, where other assigned online reference assistants can answer them. This paper combined Chat and Libanswers statistics usage of Springshare facilities for online reference assistants, which gave an upward curve. Figure 5 shows that the students rarely used the chat facility of the Law Library before the pandemic. Additionally, Libanswers was not used even a single time during the pre-COVID-19 era. Chat and Libanswers services only picked-up months after the pandemic broke in the country, and online classes were in full swing. From 22 total usage in 2019-2020, use increased to 331.82% in 2020-2021 and continued to grow in 2021-2022 with a 141.09% rate increase. It is hard to get the monthly pattern of use of these facilities. Students may be using these facilities as the need arises and not because it is part of their academic work.

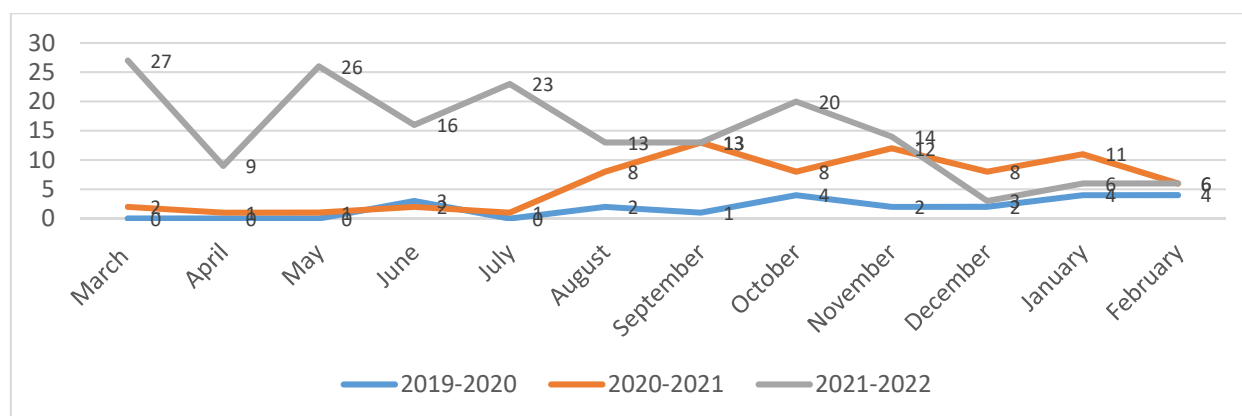


Fig. 5. Monthly Usage of Chat and Libanswers Facilities, 2019-2020 to 2021-2022

Libguides are tools for locating information in libraries. Librarians prepare libguides by synthesizing available information in their libraries, organizing them, usually by subject, and making them available to every library patron.

The Law Library currently maintains 21 libguides. All subjects directly support the curricular offering of the Tanada-Diokno College of Law. The use of this service increased tremendously during the pandemic. Total usage in 2019-2020 was only 636. It went up 555.66% in 2020-2022 and grew to 399.83% in 2022-2022. This enormous increase in usage aligned with the findings of Dotson (2021) when he said that libguides have gone viral during the pandemic, and it is because of the online modality injected into academic work. Table 7 presents the monthly usage of Libguides for the past three years.

Table 7

Libguides Monthly Usage, 2019-2020 to 2021-2022

Month	2019-2020	2020-2021	2021-2022
March	1	88	1183

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April	29	50	1118
May	18	157	1021
June	17	135	497
July	43	277	636
August	53	187	880
September	49	429	1586
October	96	639	1521
November	64	610	2477
December	91	358	692
January	58	297	789
February	117	307	1731
Total	636	3534	14130

Meanwhile, the Law Library's online reference service using the e-mail and chat and Libanswers facilities produced almost the same curves when graphed. The highest frequency of use before and during the pandemic was the topic of Services (Borrowing, Returning, Document Delivery Service, and SDI). But the similarity in use patterns between the two modes of service differs in their 2nd most used topic. The E-mail facility recorded Library Account Activation as the 2nd most used, especially during the pandemic. This is understandable because students must activate their library account before accessing all the online resources that the library is subscribing to.

Chat & Libanswers recorded Library Policies as its 2nd highest point of discussion. 3rd most used topic on both facilities was Access to Online Resources, which is very understandable. The topic Information Literacy ranked last using e-mail facility, while Clearance ranked last using chat & Libanswers facilities. The two subjects ranked lowest because they are seasonal in nature. While Information Literacy usually is a concern at the beginning of the semester, Clearance is an important topic at the end of a semester.

Moreover, only a few students would need assistance in information literacy. Usually, it is their professors who seek IL sessions with librarians. Same with the concern on clearance. Only graduating or transferring students seek clearance, which made its frequency of use lower than most of the topics of discussion. Figure 6 presents the graph comparing the patterns of use of the two online reference services.

As mentioned, Libguides were treated as a service by librarians because they prepare these documents. In contrast, law students treat them as resources because Libguides give information about the library's holdings related to the topic of interest. Because of the students' treatment of Libguides, studying its patterns of use will help librarians not only in improving the said service. Patterns of use of Libguides will also guide librarians in preparing circulation, collection development, and acquisition activities in the library. It will also help design marketing programs to increase the usage of resources and services of the library.

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Law students' use of Libguides mirrors their research interests. The top three most used libguides were (1) Money laundering, (2) Law of the Sea, and (3) Restorative justice. These top three libguides have total usage of 8,442, 1,846, and 1,248 in three successive years, respectively. The students' choices mean they are keener on discovering more information about these subjects. The three topics with the least usage are (1) Legal Writing, (2) Analysis of democracy, and (3) Legal research; these subjects are very basic and are not research subjects unless associated with other law topics.

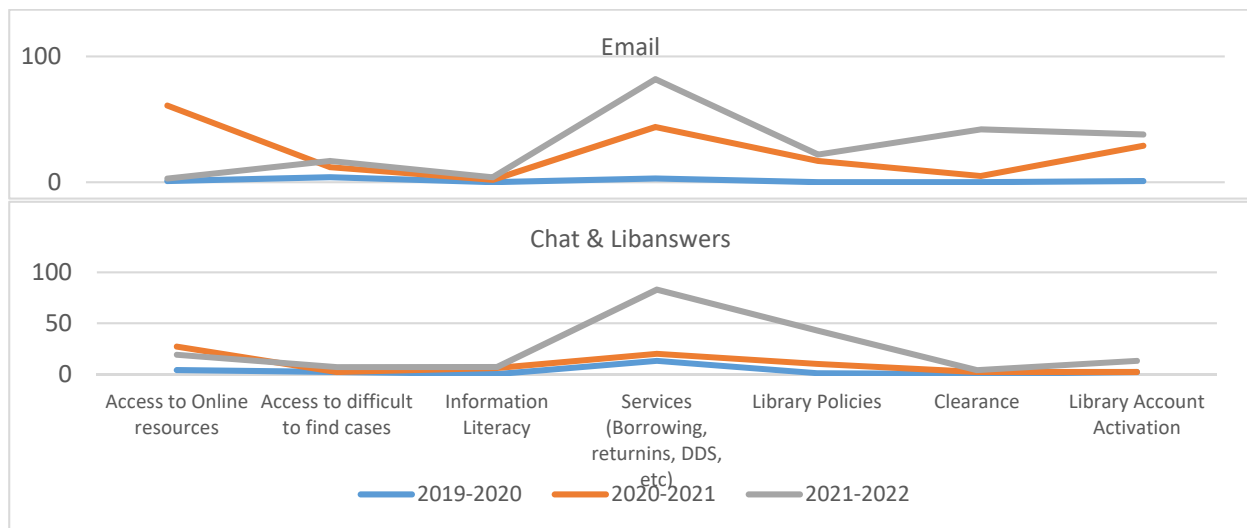


Fig. 6. Patterns of Use of Online Reference Assistance, 20219-2020 to 2021-2022

Only 5 out of 21 (23.82%) were used more than one thousand times in 3 years, another five libguides were used for less than one hundred times in 3 years, and 11 libguides (52.38%) were used more than one hundred times in three years. This data means that around 75% of the library's libguide topics were useful to the law students. Figure 7 presents the behavior of Libguide use per subject.

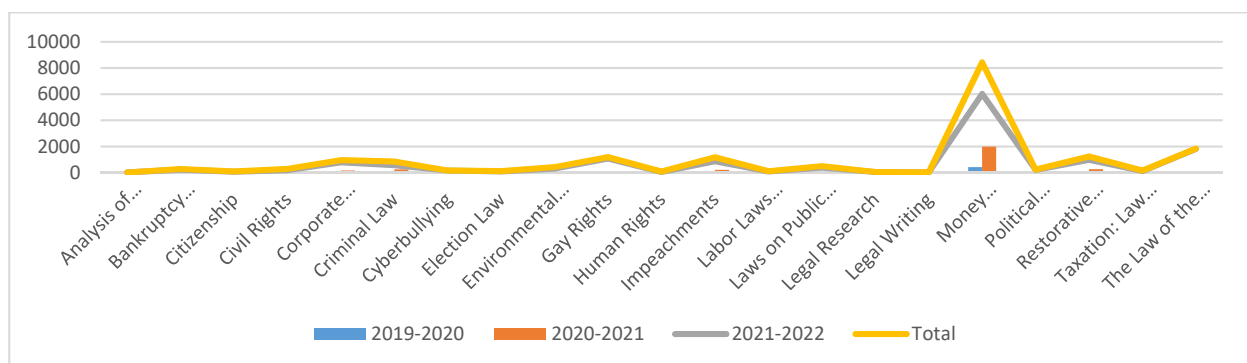


Fig. 7 Law Students' Libguide Patters of Use, 2021-2020 to 2021-2022

B. Extent of Use

Unlike online resources, law students' use of online services is not very high. Online reference assistance did poorly. Even during the pandemic, when students are expected to use the said service to ask for assistance and information, the said service did not pick up much usage. The highest usage was only 36.97% in 2021-2022 for Chat & Libanswers service. Law students are not yet keen on using the online reference service to obtain instructions and information about the Law Library, its collections, and its services.

Since Libguides can be treated as an information resource (on the part of the students), it is understandable that its extent of use is much greater than the hardcore online reference service. Libguides' extent of use was at the highest in 2021-2022, where it posted 2,968.49% extent of use, which means each law student used libguides close to 30 times in the said year. The upward trend of the extent of use of Libguides is a very promising scenario. The inclination to use lib. 2.0, such as synthesized information like libguides, means that students are now ready for the hyflex learning modality (Sivankalai, 2021). Table 8 presents the data on the extent of the Law Library's online services use.

Table 8

Online Services Extent of Use, 2019-2020 to 2021-2022

Online Services	2019-2020	2020-2021	2021-2022
	(%)		
E-mail Service	1.76	26.79	32.98
Chat & Libanswers	4.31	13.77	36.97
Libguides	124.46	742.44	2968.49

Summary

The pattern of monthly use of online databases before and during the pandemic was generally the same, although statistics were understandably higher during the pandemic. In both scenarios, law students' choices of legal databases were significantly affected by their academic activities, which also affected the monthly patterns of use. Contents of legal databases play an essential role in students' preferences, which is why CD Asia Online, a legal database that contains local legal information, tops all other legal databases in usage, both before and during the pandemic. There is an evident change in the types of materials law students prefer. Although case laws were the top choice of materials before and during the pandemic, journal articles have surpassed newspapers and magazines as their second choice of material types. And in both scenarios, law students also used blogs and other websites as the least information sources.

The use of e-books, on the other hand, was higher during the onset of the pandemic, when temporary leniency in holding classes between March to May 2020 was experienced, than when the law students got used to the situation and regular online classes resumed. Human Rights, Criminal Law, and International Law, the top three subjects with the most number of e-books, were coincidentally the most used e-books. While e-books on Medical Law, Legal Ethics, and Jurisprudence were the subjects with the least number of e-books and the least used.

As expected, all online resources experienced an increase in usage during the pandemic. E-books have the lowest extent of use, as every student used an e-book a little more than once during the pandemic. While law students used CDA Asia Online 144 times per student, HeinOnline was used 51 times per student, and Nexis Uni was used eight times per student during the pandemic.

Moreover, Online reference service is also on an upward trend. The same patterns were observed between emails and Chat & Libanswers. Queries about the library's services topped the list, followed by account activation, library policies, and access to online databases. Questions on clearances and information literacy were the least asked.

Libguides also followed an upward trend. Its monthly patterns differ before and during the pandemic since usage was not much before the pandemic hit the country. But no matter how small the use was before the pandemic, it still follows the same curve as the usage during the pandemic as far as usage pattern per subject is concerned. Money Laundering, Law of the Sea, and Restorative Justice were the top three most used Libguides for the past three years, while the least used Libguides were Legal Writing, Analysis of Democracy, and Legal Research.

Lastly, except for Libguides, all online services were used to a lesser extent. When equated with the College's population, the email and chat & Libanswers were only used 0.64 and 0.51 times per student during the pandemic. Libguides on the other hand presented use statistics that are comparable to the usage of online resources.

Conclusion and recommendations

The online learning modality brought about by the pandemic is here to stay. It is, therefore, necessary for every library to adjust and adhere to this norm. To do this, the library must gauge the readiness of its users to hyflex library resources and services and look for more ways to support them in their quest for knowledge through library research.

The high frequency and extent of use of the different online resources attest to the aptness of law students in using the said resources. The steady growth of usage statistics in all the legal databases presents students' adherence to the online research modality and thus demonstrates readiness to hyflex modality in accessing resources. Also, Sivankalai (2021) claim that the inclination to use library 2.0, such as synthesized information like libguides, means that students are now ready for the hyflex modality in accessing online library services.

The law students did not maximize the use of the hardcore online reference service during the pandemic. Very few law students availed of online reference assistance. This result is in contrast with the studies claiming that online reference services are maximized to inquire about accessing online databases (Baskaran, 2019; Fuller & Dryden, 2015; Kathuria, 2021). The said contrast and the great extent of use of the different online databases of the Law Library prove that law students are ready for the hyflex library modality.

To sustain law students' great extent of use of online resources and increase the use of online reference services, this paper recommends the following:

1. Conduct regular information literacy sessions every beginning of the semester;
2. Create infographics and video tutorials on the use of the different online resources and services;
3. Market online resources and services in different modalities (printed and online);
4. Tap faculty members to introduce online resources and services to their students;
5. For online reference service, develop Q&A for Chat & Libanswers service;
6. Purchase/subscribe to more e-books on law subjects with very few titles;

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7. Develop more Libguides to include more subjects related to TDCOL's curricular offerings;

8. Develop more online reference services, such as online DDS and ILL, subject to prevailing intellectual property law; and,

9. Develop a webpage that features all the online resources, services, and information about the Law Library.

Lastly, this study also recommends conducting the following studies to continue developing the Law Library's online resources and services:

1. Conduct a survey on the usability of online resources and services to law students and correlate it to the results of this study;

2. Assess the Law Library staff's capability in providing hyflex library service;

3. Study the usability of newly introduced online and hyflex services, such as online information literacy and by-courier mode and touchless circulation modality; and,

4. Conduct a study on the law faculty's use of resources and services of the Law Library to provide more data on improving the Library's online resources and services.

REFERENCES

ABS-CBN News. (2021, May 23). "No going back": CHED adopts flexible learning as norm. Retrieved from <https://news.abs-cbn.com/news/05/23/21/ched-flexible-learning-norm-colleges-universities> (in English)

Abdullahi, D., Isyaku Ahmad, A., & Ahmed, U. (2019). Awareness and utilization of library resources in Bauchi State College of Agriculture Library. *African Journal of Social Sciences and Humanities Research*, 2(3), 38-46. Retrieved from <https://abjournals.org/ajsshr/papers/volume-2/issue-3/awareness-and-utilization-of-library-resources-in-bauchi-state-college-of-agriculture-library/> (in English)

Alton, L. (2017, May 11). *Phone calls, texts or email? Here's how millennials prefer to communicate*. Forbes. Retrieved from <https://www.forbes.com/sites/larryalton/2017/05/11/how-do-millennials-prefer-to-communicate/?sh=3803ead36d6f> (in English)

Baskaran, D. (2019). Chat ref analysis—Exploring and analyzing chat reference transcripts specifically relating to acquisitions and discovery. *Serials Review*, 45(3), 132-136. doi: <https://doi.org/10.1080/00987913.2019.1647775> (in English)

Broadbent, J., & Lodge, J. (2021). Use of live chat in higher education to support self-regulated help seeking behaviours: a comparison of online and blended learner perspectives. *International Journal of Educational Technology in Higher Education*, 18, 17. Retrieved from <https://educationaltechnologyjournal.springeropen.com/articles/10.1186/s41239-021-00253-2> (in English)

Brown, K., & Malenfant, K. J. (2017). *Academic library impact on student learning and success: Findings from assessment in action team projects*. Chicago, IL: Association of College and Research Libraries. Retrieved from https://www.ala.org/acrl/sites/ala.org.acrl/files/content/issues/value/findings_y3.pdf (in English)

Chakraborty, I., & Maity, P. (2020). COVID-19 outbreak: Migration, effects on society, global environment and prevention. *Science of the Total Environment*, 728, 138882. doi: <https://doi.org/10.1016/J.SCITOTENV.2020.138882> (in English)

Colquhoun, C., Essmiller, K., Baeza, V., Reiter, H., & Stroud, A. (2021, November). HyFlex everything: Conversations with a HyFlex library department [PowerPoint slides]. *Presentation at the 2021 Oklahoma Association of College and Research Libraries (OK-ACRL) Conference*. Oklahoma State University. Retrieved from <https://hdl.handle.net/11244/331256> (in English)

LIBRARY SERVICES FOR SCIENCE AND EDUCATION SUPPORT

- De', R., Pandey, N., & Pal, A. (2020). Impact of digital surge during Covid-19 pandemic: A viewpoint on research and practice. *International Journal of Information Management*, 55, 102171. doi: <https://doi.org/10.1016/J.IJINFOMGT.2020.102171> (in English)
- Decker, E. N. (2021). Reaching academic library users during the COVID-19 pandemic: New and adapted approaches in access services. *Journal of Access Services*, 18(2), 77-90. doi: <https://doi.org/10.1080/15367967.2021.1900740> (in English)
- Dotson, D. S. (2021). Libguides gone viral: A giant libguides project during remote working. *Science and Technology Libraries*, 40(3), 243-259. doi: <https://doi.org/10.1080/0194262X.2021.1884169> (in English)
- Flood, K. (2019, October 12). *The importance of patterns*. SISQ Community Hub. Retrieved from <https://www.sisq.qa/news/2019-10-12/the-importance-of-patterns-written-by-kate-flood-pyp-instructional-coach> (in English)
- Frias, W. (2017). *Increasing the odds of passing the bar: An analysis of the book borrowing patterns and bar performances of DLSU College of Law graduates*. Retrieved from https://www.academia.edu/41580532/Increasing_the_odds_of_passing_the_Bar_An_Analysis_of_the_book_borrowing_patterns_and_bar_performances_of_DLSU_College_of_Law_Graduates (in English)
- Fuller, K., & Dryden, N. H. (2015). Chat reference analysis to determine accuracy and staffing needs at one academic library. *Internet Reference Services Quarterly*, 20(3-4), 163-181. doi: <https://doi.org/10.1080/10875301.2015.1106999> (in English)
- Gaha, U., Hinnefeld, S., & Pellegrino, C. (2018). The academic library's contribution to student success: Library instruction and GPA. *College & Research Libraries*, 79(6). Retrieved from <https://crl.acrl.org/index.php/crl/article/view/16824/18994> (in English)
- Garner, J. C., & Logue, N. K. (2020). Navigating the COVID-19 slipstream: A case study on living and managing access services during a global pandemic. *Journal of Access Services*, 17(4), 176-198. doi: <https://doi.org/10.1080/15367967.2020.1818570> (in English)
- Graffy, C. P. (2021). Pandemic pedagogy and its applications for international legal education and the hyflex classroom of the future. *Southern Illinois University Law Journal*, 46(1), 45-72. Retrieved from <https://law.siu.edu/academics/law-journal/issues/fall-2021.html> (in English)
- Gyau, E. B., Jing, L., & Akowuah, S. (2021). International students library usage frequency patterns in academic libraries: A user survey at Jiangsu University Library. *Open Access Library Journal*, 8(7), e7610. doi: <https://doi.org/10.4236/oalib.1107610> (in English)
- Kathuria, S. (2021). Library support in times of crisis: An analysis of chat transcripts during COVID. *Internet Reference Services Quarterly*, 25(3), 107-119. doi: <https://doi.org/10.1080/10875301.2021.1960669> (in English)
- Kitsantas, A., & Chow, A. (2007). College students' perceived threat and preference for seeking help in traditional, distributed, and distance learning environments. *Computers & Education*, 48(3), 383-395. doi: <https://doi.org/10.1016/J.COMPEDU.2005.01.008> (in English)
- Kohnke, L., & Moorhouse, B. L. (2021). Adopting hyflex in higher education in response to COVID-19: students' perspectives. *Open Learning: The Journal of Open, Distance and e-Learning*, 36(3), 231-244. doi: <https://doi.org/10.1080/02680513.2021.1906641> (in English)
- Koskinen, M. (2018). *Understanding the needs of adult graduate students: An exploratory case study of a hyflex learning environment*. Boston, MS: College of Professional Studies, Northeastern University. Retrieved from <https://repository.library.northeastern.edu/files/neu:m044c738v/fulltext.pdf> (in English)

- Legal Education Board. (2021, June 30). *The revised model curriculum of the basic law program*. LEB Memorandum Order No. 24. Retrieved from <https://leb.gov.ph/wp-content/uploads/2021/07/LEBMO-No.-24.pdf> (in English)
- Marks, N. (2020). Student engagement in improving access to taught course content at LSE Library: Practicalities and pitfalls. *New Review of Academic Librarianship*, 26(2-4), 403-418. doi: <https://doi.org/10.1080/13614533.2020.1803937> (in English)
- Ogunmodede, T. A., Adio, G., & Odunola, O. A. (2011). Library use education as a correlate of use of library resources in a Nigerian university library. *Library Philosophy and Practice (e-journal)*, 604. Retrieved from <https://digitalcommons.unl.edu/libphilprac/604> (in English)
- PeterT. (2019, October 2). *Blog posts vs journal articles*. The halfbaked.education blog. Retrieved from <https://halfbaked.education/blog-posts-vs-journal-articles/> (in English)
- Romero-Hall, E., & Ripine, C. (2021). Hybrid flexible instruction: Exploring faculty preparedness. *Online Learning*, 25(3), 289-312. doi: <https://doi.org/10.24059/olj.v25i3.2426> (in English)
- Rutledge, L., Casucci, T., Mowdood, A., & Ziegenfuss, D. (2021, April). Hyflexing library instructional materials: Getting at the heart of designing flexible instruction. In *Ascending into an Open Future. Proceedings from ACRL 2021 Virtual Conference*. Association of College and Research Libraries. Retrieved from <http://hdl.handle.net/11213/17597> (in English)
- Sivankalai, S. (2021). Academic libraries support e-learning and lifelong learning: A case study. *Library Philosophy and Practice (e-journal)*. 6154. Retrieved from <https://digitalcommons.unl.edu/libphilprac/6154> (in English)
- Tenopir, C., & Read, E. (2000). Patterns of database use in academic libraries. *College and Research Libraries*, 61(3), 234-246. doi: <https://doi.org/10.5860/CRL.61.3.234> (in English)
- The Economist. (2021, April 8). *The rise of working from home*. Retrieved from https://www.economist.com/special-report/2021/04/08/the-rise-of-working-from-home?gclid=CjwKCAjwzY2bBhB6EiwAPpUpZpZSsyIODrZxdnomApwkJXCt0Gdj3UxWNAg2rfF1oTtexDx5nl4GHRoCm58QAvD_BwE&gclid=aw.ds (in English)

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Готуємось до гіфлексу: оцінка використання студентами-правниками Університету Де Ла Салль ресурсів онлайн-бібліотеки

Мета. Початок пандемії у 2020 році змусив освітню галузь перейти до модальності онлайн-навчання. Метою цієї статті є визначення фактичного рівня використання студентами-правниками онлайн-ресурсів та послуг, а також моделей їх використання. **Методика.** Для досягнення основної мети цього дослідження було використано кількісний метод і зібрано статистику використання всіх онлайн-правових баз даних та онлайн-послуг, що пропонуються Юридичною бібліотекою. У цьому документі проаналізовано зібрані статистичні дані із застосуванням різних статистичних вимірювань, таких як обчислення середнього значення, середніх величин та відсотків. **Результати.** Це дослідження показало, що студенти-правники значною мірою використовують онлайн-ресурси. Факторами, що впливають на частоту використання онлайн-ресурсів, є академічна активність, зміст баз даних та доступність видань. Результати цього дослідження стануть основою для планування постійного вдосконалення ресурсів та послуг юридичної бібліотеки в рамках підготовки до постійної пропозиції гіфлексної форми навчання в юридичному коледжі Танада-Діокно Університету Де Ла Салль. **Висновки.** Низький рівень використання довідкових онлайн-сервісів та високий рівень використання різних онлайн-баз даних доводить, що студенти-правники можуть самостійно отримувати доступ до онлайн-інформації, що є ще одним доказом того, що вони вже готові до гібридного способу бібліотечного обслуговування.

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Ключові слова: студенти-правники; оцінка бібліотечних фондів; оцінка бібліотечних послуг; модальність навчання hуflex; аналіз використання; порівняльний аналіз

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Information Analytics in the Structure of Ukrainian National Libraries Activity (Based on Analysis of Their Sites)

The objective of the study is to determine the optimal structure for organizing information and analytical activities of Ukrainian libraries of the national level. **The method** of analysis was used for identifying the diversification of the forms of organization of information and analytical activities of the indicated libraries. **The results** of the study indicate the existence of two forms of organizing national libraries regarding the implementation of information and analytical activities, one of which is based on realizing their functions in different departments of libraries, and another one is aimed at creating a separate unit in the organizational structures of libraries. **The conclusions** of the study proved the dependence of the form of organization of information and analytical activities in national libraries on their level in the library system. Creating separate departments carrying out information and analytical activities can be considered as a perspective form of organizing information and analytical activities of Ukrainian national libraries due to the increasing responsibility of employees for the timing of the work and integration of analysts of various specializations, as well as creating conditions for developing the cognitive component of library activity.

Keywords: national library; information analytics; information and analytical activity; organizational structure; information and analytical department

Introduction

The current stage of society's development is determined by the transition to complex informatization of all social institutions and processes associated with forming information resources and transferring knowledge. The complexity and ambiguity of the processes occurring in the world, the diversity and redundancy of information, the need for its selection, and the lack of reliable knowledge are prerequisites for using information and analytical activities in all areas (Karpenko, 2017; Losiievskiy, Kobieliev, Shcherban, Solianyk, & Karpenko, 2022; Mandziuk, 2018). This tendency is reflected in libraries, which, under the conditions of informatization, are turning from a "storehouse of books" into social organizations that ensure the accumulation, storage and provision of documents, information and knowledge to users. To optimize these processes, it is necessary to revise the management guidelines of the existing library theory and practice, taking into account the changes occurring in libraries and the library social institution as a whole. In this context, it should be noted that taking into account the experience of developed countries in the conditions of the emerging knowledge society, information analytics is acquiring

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special relevance as a special sphere of human activity, designed to meet society's information needs with the help of information and analytical technologies, namely, the processing of initial information and obtaining a qualitatively new knowledge (Kobieliev, 2019). This is the reason for growing the role of the information and analytical component in national libraries' activities around the world including Ukraine (Rebmann, 2022; Roy Aalia, Mercieca, & Sarkar, 2018; Shcholokova, Paleshko, & Horozhankina, 2021; Varenko, 2019).

The purpose of the research is to analyze the current and prospective forms of organizing information and analytical activities in the national libraries of Ukraine.

The necessity of processing knowledge became one of the most important components of professional activities of certain people and structures including libraries as a logical result of fixing administrative apparatus' decisions as early as in the ancient world. It is known that Socrates widely used the interactive way of solving problems, but it was Aristotle who is still considered to be the founder of analytics thanks to his fundamental work "Analytica" which contains the foundations for analytical thinking (Teasley, 2018).

At an early stage of scientific and technological development, intellectual workers performed independently all the auxiliary operations that ensure the productivity of their main activities (registration, collection, analytical and synthetic processing, storage, search, and dissemination of information). However, gradually, with spreading and complicating communication types, auxiliary operations became to take too much time in the total balance of intellectual workers' activity, which began to affect its efficiency negatively. It led to the necessity of appearing information specialists first and information and analytical ones later, for whom realizing certain operations to ensure the functioning of social communications become professions. Therefore, since the 19th century, there has been a process of institutionalization of analytics in particular in library and bibliographic activities, archive affairs, and the editorial and publishing industry. At the end of the 20th century, this process contributed to the emergence of such professions as informant-analysts, cognitologists, etc.

It should be mentioned the availability of facts of the priority of the library theory and practice in the systematic organization of information and knowledge. In ancient libraries special "collections of fixed knowledge" were created; techniques to facilitate access to collections in the form of classifications, catalogues, bibliographic indexes, abstracts, and other search aids were developed; the content of library collections according to carefully developed models of the structure and relationships among the branches of knowledge and disciplines were described. Wherein analytical work has been a necessary component of these kinds of library activities.

In general, it can be stated that the technology and methodology of information and analytical activities have largely gradually and systematically developed from the time of appearing first scientific research in the library and bibliographic direction (Cassiodorus Senator, Isidor of Seville, Ildefonsus Toledo, Vincent from Beauvais, Richard Furnival, Gabriel Naude, etc.) to the time of publishing the first scientific journals and the beginning of the systematic abstracting of scientific papers in the 17th century. It means that the analytical function has been realized by libraries since the moment of their separation into the sphere of social practice. Its transformation into separate techniques, methods and technologies, the organizational formation took place in parallel with the deployment of basic functions of libraries and their fulfilment of social and production tasks (Kobieliev, 2019).

The information and analytical work is a component of the following kinds of library activities related to the appropriate processing of documented information, including compilations of bibliographic descriptions; cataloguing, indexing of manuscripts and printed publications; classification of documents based on certain scientific schemes; annotating, summarizing documentary sources; bibliographic search, etc. It is also reasonable to add to these kinds of library

activities that appeared as a result of developing their information components, such as forming and developing creative motivation in the field of library services; organizing library cooperation and corporate movement; creating navigators and searching for partners on the topic; organizing conferences, forums on the Internet; forming a highly intellectual environment of users, where it is possible to exchange opinions and express any ideas freely, regardless of titles, statuses and ranks.

Libraries play an important role in forming the modern information environment since they have always been centers of accumulation and dissemination of knowledge despite all the changes in society's life. Nowadays, libraries should turn into infopolises which are considered as research, information, publishing, and cultural and educational complexes with developed infrastructures for both forming and analytical and synthetic processing documentary and information flow to support science, production, education, and culture. This, in turn, contributes to the development of the information and analytical component of libraries' activities, the general strengthening of specialists' attention to research of various aspects of information and analytical activities in general and their areas.

The study of information and analytical activities in the libraries of Ukraine makes it possible to state that information analytics in libraries is an evolutionarily objective process of strengthening their communication functions in the conditions of complications in social and communication interactions. Transforming libraries became a significant factor influencing the evolution of their information and analytical activities since they have been considered leading communication centers, having gone a long way from accumulating, storing, processing, and disseminating documented information, and organizing information services to working with knowledge constructs. Library analytics solves different problems including the following ones: analysis and assessment of rapidly growing flows of information, including network, their processing and producing information and analytical products taking into account the needs of relevant categories of users; preparing information flows for use in a convenient form through the study and forecasting of users' information needs (Kobieliev, 2019; Shahid & Parveen, 2021).

The result of the evolution of the social communications system became forming and developing library's information and analytical producing, appearing its new electronic forms such as corporate information retrieval systems, virtual reference services, library systems based on branched communication channels; abstract, factual databases, which gradually become competitors for other subjects in the market of information products and services; creating special information and analytical services, the activities of which are based on the use of their generation of information resources, as well as the resources of the global network (Rebmann, 2022; Roy Aalia, Mercieca, & Sarkar, 2018).

Methods

The methodological basis of the research is the basic provisions of the general theory of social communications, reflecting the diversity of manifestations and the fundamental purpose of libraries in the system of social communications. The analysis of Ukrainian national libraries' sites was carried out from the point of view of displaying their information and analytical activities and relevant structures (Table 1). This work is a logical continuation of the research devoted to the study of information and analytical activities of Ukrainian special and regional libraries, as well as leading university libraries.

Table 1. National Libraries of Ukraine

Name	Year of Foundation	Funds, millions of copies
Vernadsky National Library of Ukraine	1918	15,8
Lviv Vasyl Stefanyk National Scientific Library of Ukraine	1940	7
Odessa National Scientific Library	1829	5
Yaroslav Mudryi National Library of Ukraine	1866	4,7
National Scientific Medical Library of Ukraine	1932	1,5
National Historical Library of Ukraine	1939	0.8
National Library of Ukraine for Children	1967	0,4

The results of the study of Ukrainian national libraries' sites concerning the trends in the distribution of functions and tasks of information and analytical activities among individual departments of libraries that is shown in Figure 1.

In particular, it was found out that among 7 analyzed national libraries only two national libraries (Vernadsky National Library of Ukraine and the Yaroslav Mudryi National Library of Ukraine) have organizationally separated and structured information and analytical subdivisions. In Vernadsky National Library of Ukraine, these are the following departments: political science analysis and operational information department, analytical and forecasting department, information and analytical department that are included in various organizational structures of the library. In Yaroslav Mudryi National Library of Ukraine, there is the department of information support for the authorities and an information center on culture and art issues.

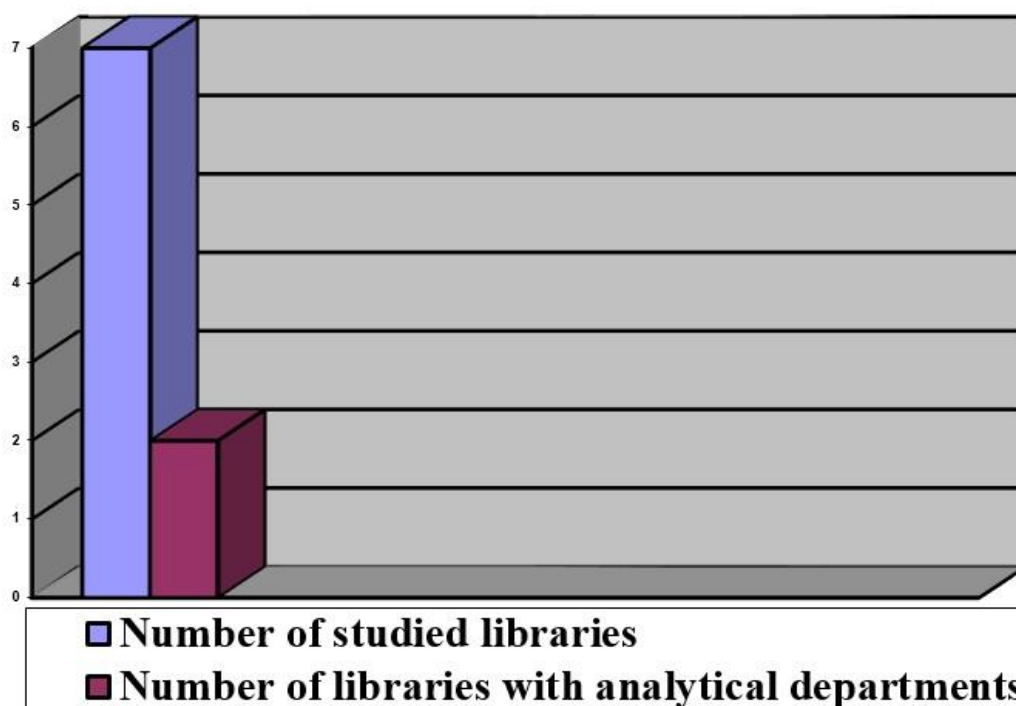


Fig. 1. Information analytics in the organizational structure of Ukrainian national libraries

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In the rest of the five national Ukrainian libraries, information and analytical work are "scattered" within several departments including, first of all, information and bibliographic (reference) departments and departments for scientific and methodological work (Figure 2). After analyzing their structures (information and reference (bibliographic) departments – 6, scientific and methodological (research) departments – 7, other departments, for example, library science – 2) it can be concluded that information and analytical activities for most national libraries remain as a tool for improving internal library processes, not for offering products or services to users.

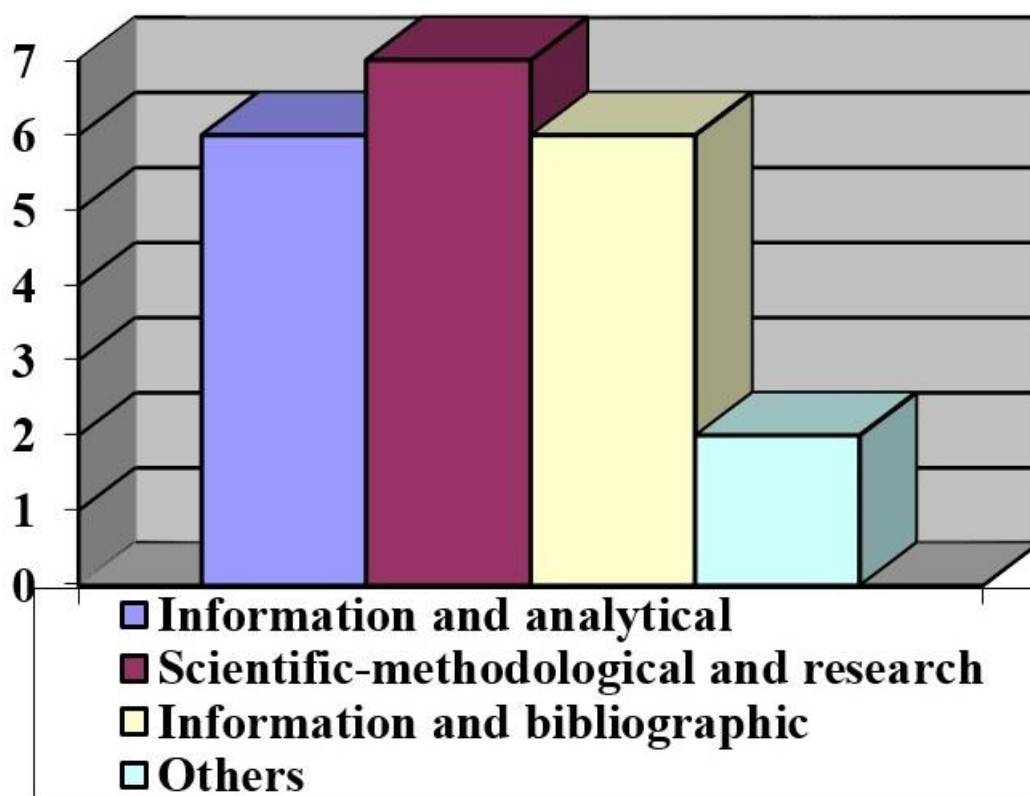


Fig. 2. Specialized information and analytical departments and departments realizing information and analytical functions

In our opinion, this situation can be explained taking into consideration several factors, including the following ones:

- rating of studied libraries among users that is shown in Figures 3, 4. The data was obtained thanks to the well-known analytical tool SimilarWeb (www.similarweb.com) shows statistics of direct user requests to 6 library websites (Vernadsky National Library of Ukraine, Yaroslav Mudryi National Library of Ukraine, National Library of Ukraine for Children, Lviv Vasyl Stefanyk National Scientific Library of Ukraine, National Scientific Medical Library of Ukraine National Historical Library of Ukraine). Odessa National Scientific Library was not shown in the figures because of its low statistic rating on SimilarWeb.
- the insufficient funding of libraries in the conditions of the socio-economic and political crisis;
- the lack of trained specialists for analytical work.



Fig. 3. Statistics of direct user requests to library websites (Vernadsky National Library of Ukraine, Yaroslav Mudryi National Library of Ukraine, National Library of Ukraine for Children)



Fig. 4. Statistics of direct user requests to library websites (Lviv Vasyl Stefanyk National Scientific Library of Ukraine, National Scientific Medical Library of Ukraine National Historical Library of Ukraine)

Taking into account the above-mentioned, it is possible to state that the indicated factors make it impossible to create appropriate information and analytical structures at the proper quality level at national libraries. Wherein, there is a clear understanding among specialists of the fact that information and analytical structures could become an important form of library participation in solving the main problems of socio-economic reforming the country.

Results and Discussions

The main result of the research is the substantiation of the integrative nature of information analytics in the system and functional organization of libraries as an element of society's social communications. Wherein such nature involves cooperation, the convergence of forms and methods of library activities, and arrays of scientific and technical information for processing the information flows and resources so that to obtain knowledge, and present it as a product in the system of library production.

Creating an effective system for producing high-quality analytical information in libraries depends not only on the level of information, organizational, technological, and financial security

but also on the state of organizational and personnel support. Wherein it should be noted that the human resource of the library's information and analytical activities can largely be solved at the level of the library and information industry, in contrast to the material and financial support that should be solved at appropriate levels of legislative and executive bodies. That is why the issue of the human resource of the library's information and analytical activities is of strategic importance. It is especially important for libraries of national, regional levels, as well as central branch libraries to solve this problem as it is underlined in the work of Shcholakova, Paleshko, Horozhankina (2021).

Taking into account the analysis of work experience of information and analytical departments in libraries, it is possible to state that there is the need for a certain specialization of analytical workers in libraries including specialists of specialized information and analytical departments (analyst-cognitologist, analyst-expert), as well as employees realizing information and analytical tasks in other library's structural divisions (bibliographer-analyst) (Kobieliev, 2019). Each of these categories of librarians requires a certain level of information and analytical training. Therefore, the modern system of training library personnel should provide for the introduction of separate specializations such as "analyst-cognitologist", "analyst-expert", "bibliographer-analyst", etc. It is possible to solve this problem through modernization of education programs of relevant higher education institutions and, therefore, curriculums, since now there are more than 30 higher education institutions in Ukraine as to training students in the specialty 029 "Information, Library and Archival Studies" (Karpenko, 2021). Such education programs should take into account the learning outcomes of students' goals to apply their knowledge, skills, abilities according to chosen specializations to meet modern labor market's needs. Besides, it is also worth increasing the information culture of both students specialized in Information, Library and Archival Studies and librarians as to analyzing, systemizing, generalizing, identifying the content of the information that customers need, as well as to its searching, processing, keeping, using within their professional fields of knowledge.

This, in turn, is a means of increasing the competitiveness of educational services of appropriate universities and library professions in the labor market.

Conclusions

The form of organization of information and analytical activities in national libraries depends on sizes, specializations and organizational structures. In relatively small, specialized national libraries, the functions for carrying out information and analytical activities can be performed in traditional library departments, in large ones – specialized departments and information and analytical centers are created. In other words, there are two possible options for organizing information and analytical activities of national libraries. The first option allows distributing tasks of information and analytical activities among library departments that is reasonable for use by those libraries where it is impractical to create information and analytical unit (departments) on a permanent basis, or impossible for the cost of their maintenance. The second one provides the creation of independent analytical units (services, departments) in organizational structures of national libraries. We consider this form of libraries' information and analytical activities to be more expedient and promising because of the greater responsibility for the timing and results of analytical work. They are structures that allow the uniting of analysts of different professional directions.

Prospects for further researches on the development of information and analytical activities in the library and information sphere are connected with the activation of using analytical

technologies in libraries, their restructuring and creating specialized information and analytical units as one of the means of their adaptation to the new social and communicative reality.

In this context, developing theoretical and methodological, personnel, organizational, and technological directions for optimizing information and analytical activities of Ukrainian libraries in the condition of forming the knowledge society is promising for our further research.

REFERENCES

- Karpenko, O. (2017). Media education as a component of reforming higher education in Ukraine. *Media@Education. Reviewed Papers of the International Scientific Conference*, 33, 59-63. Retrieved from: <http://www.media4u.cz/mav/9788087570395.pdf> (in English)
- Karpenko, O. (2021, March). Educational program as an indicator of quality in training students in the field of information, library and archival studies. In *Suchasna informatsiino-bibliotekna osvita: metamorfozy navchalnoho dyzainu. Proceedings of the International Scientific and Practical Conference* (pp. 17-20), Ukrainian Library Association. Kyiv, Ukraine. Retrieved from https://issuu.com/ukrainian_library_association/docs/zbirnyk_ula_slavske_2021 (in English)
- Kobieliev, O. (2019). Informacijno-analitychnyj servis yak vektor rozvytku suchasnyx bibliotek [Data analytics service as a vector of development of modern libraries]. *Visnik Harkivs'koï deržavnoi akademii kul'turi*, 54, 62-72. doi: <https://doi.org/10.31516/2410-5333.054.06> (in Ukrainian)
- Losiievskiy, I., Kobieliev, O., Shcherban, A., Soliany, A., & Karpenko, O. (2022). Organizational structures for preserving documentary monuments in the leading libraries of Ukraine. *Amazonia Investiga*, 11(54), 327-338. doi: <https://doi.org/10.34069/AI/2022.54.06.31> (in English)
- Mandziuk, O. A. (2018). Informatsiyno-analitichni sluzhbi, tsentri analitichnih doslidzhen yak sub'ekti analitichnoyi diyalnosti [Information-analytical services, centers of analytical studies as subjects of analytical activity]. *Naukoviy visnik Uzhgorodskogo natsionalnogo universitetu. Seriya. Pravo*, 48(1), 164-170. Retrieved from http://nbuv.gov.ua/UJRN/nvuzhpr_2018_48%281%29__40 (in Ukrainian)
- Rebmann, K. R. (2022). Equity-focused Data Analytics for Libraries [Video]. *University Scholar Series*, 47. Retrieved from <https://scholarworks.sjsu.edu/uss/47> (in English)
- Roy Aalia, P. K., Mercieca, P., & Sarkar, P. K. (2018, November). The Analytics Edge: Use of Analytics in University Libraries. In *Proceedings of the International Conference on Knowledge Management (ICKM)*. Vancouver, Canada. Retrieved from <https://digital.library.unt.edu/ark:/67531/metadc1393801/> (in English)
- Shahid, S., & Parveen, S. R. (2021). Big Data Analytics in Public Sector University Libraries in Pakistan. *Library Philosophy and Practice (e-journal)*, 6291. Retrieved from <https://digitalcommons.unl.edu/libphilprac/6291> (in English)
- Shcholokova, H. V., Paleshko, Y. S., & Horozhankina, N. A. (2021). Information and analytical activity in international regional and country studies. *Actual problems of international relations*, 1(148), 18-26. doi: <https://doi.org/10.17721/apmv.2021.148.1.18-26> (in English)
- Teasley, S. D. (2018). Learning analytics: Where information science and the learning sciences meet. *Information and Learning Sciences*, 120(1/2), 59-73. doi: <https://doi.org/10.1108/ILS-06-2018-0045> (in English)
- Varenko, V. M. (2019). Analitika: suchasni tendentsiyi ta vikliki [Analytics: current trends and challenges]. *Bibliotekoznavstvo, dokumentoznavstvo, informologîa*, 1, 118-123. doi: <https://doi.org/10.32461/2409-9805.1.2021.229852> (in Ukrainian)

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Інформаційна аналітика в структурі діяльності національних бібліотек України (на основі аналізу їх сайтів)

Метою дослідження є визначення оптимальної структури організації інформаційно-аналітичної діяльності бібліотек України національного рівня. **Методика.** У роботі застосовано метод аналізу щодо виявлення диверсифікації форм організації інформаційно-аналітичної діяльності зазначених бібліотек. **Результати дослідження** свідчать про наявність двох форм організації національних бібліотек щодо здійснення інформаційно-аналітичної діяльності, одна з яких базується на реалізації її функцій у різних відділах бібліотек, а інша – спрямована на створення окремого підрозділу в організаційних структурах бібліотек. У **висновках дослідження** доведено залежність форми організації інформаційно-аналітичної діяльності в національних бібліотеках від їх рівня в бібліотечній системі. Створення окремих відділів, що здійснюють інформаційно-аналітичну діяльність можна розглядати як перспективну форму організації інформаційно-аналітичної діяльності українських національних бібліотек завдяки зростанню відповідальності працівників за хронометраж роботи та інтеграції аналітиків різних спеціалізацій, а також створення умов для розвитку пізнавальної складової бібліотечної діяльності.

Ключові слова: національна бібліотека; інформаційна аналітика, інформаційно-аналітична діяльність; організаційна структура; інформаційно-аналітичний відділ

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Про дистанційне навчання, відкриті освітні ресурси та роль в цих процесах університетських бібліотек

Мета. Покращити розуміння університетських спільнот (викладачів, студентів, бібліотекарів) щодо розвитку дистанційного навчання, відкритих освітніх ресурсів та нової ролі університетських бібліотек в цих процесах. **Методика.** Основні дані щодо розвитку дистанційного навчання, OER та збільшення ролі в цих процесах університетських бібліотек були отримані завдяки аналізу фахових публікацій у періодичних виданнях і на сайтах університетів світу, застосуванню методів включеного і зовнішнього спостереження, опису власного досвіду авторів (директорки наукової бібліотеки, доцента з ІТ-дисциплін і завідувачки відділу наукової бібліотеки), які працюють в Українському державному університеті науки і технологій (Дніпро, Україна). **Результати.** Встановлено, що впровадження систем дистанційного навчання, використання та наявність відкритих (краще – безкоштовних) джерел інформації на платформах відкритого доступу чи відкритих освітніх ресурсів (OER), обмін науковими дослідженнями в цифровому науковому просторі тощо – ці складові тісно пов'язані між собою та використовуються серед викладачів, науковців, студентів. Дистанційна освіта потребує включення в процеси як викладачів – авторів відкритих освітніх ресурсів, так і працівників окремих служб, що здійснюють інформаційну та ІТ-підтримку викладачів і створених ними ресурсів. Такими структурами є університетські бібліотеки, які одними з перших підтримали філософію відкритості та включились в процеси підтримки відкритого доступу, відкритої науки, відкритої освіти на базі інтелектуальних інформаційних систем і технологій. Розглянуто досвід наукової бібліотеки УДУНТ – структури, що уможливорює онлайн доступ до текстових і нетекстових OER як необхідного елементу при забезпеченні обмеженої особистої взаємодії між викладачем і студентом, що навчається. **Висновки.** Сьогодні, в часи кризи, спричиненої пандемією Covid 19 та війною в Україні, активно закладаються основи, щоб надання освітніх послуг в університетах, зокрема, дистанційної освіти, стало динамічним і багатовимірним. Необхідним є інтегрування електронних бібліотечних ресурсів з платформами дистанційного навчання для забезпечення безперешкодного доступу студентів і викладачів.

Ключові слова: дистанційне навчання; дистанційна освіта; відкриті освітні ресурси; OER; роль університетської бібліотеки; бібліотекарі українських університетів; Український державний університет науки і технологій

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On Distance Learning, Open Educational Resources, and the Role of University Libraries in These Processes

Objective. The article is aimed to improve the understanding of university communities (teachers, students, librarians) concerning the development of distance learning, open educational resources, and the new role of university libraries in these processes. **Methods.** The main data on the development of distance learning, OER, and increasing the role of university libraries in these processes were obtained due to the analysis of professional publications in periodicals and on the university websites of around the world, the application of methods of method of participant and non-participant observation, a description of the authors' own experience (the director of the scientific library, the associate professor of IT disciplines and the heads of the scientific library departments) who work at the Ukrainian State University of Science and Technology (Dnipro, Ukraine). **Results.** It has been established that the implementation of distance learning systems, the use and availability of open (preferably free) information sources on open access platforms or open educational resources (OER), exchange of scientific research in the digital scientific space, etc. – these components are closely interconnected and used among teachers, scientists, students. Distance education requires inclusion in the processes of both teachers – authors of open educational resources, and employees of certain services providing information and IT support for both teachers and the resources created by them. Such structures are university libraries, which were among the first to support the philosophy of openness and to join the processes of supporting open access, open science, and open education based on intellectual information systems and technologies. The experience of the scientific library of USUST is considered – a structure that enables online access to text and non-text OER as a necessary element while ensuring limited personal interaction between a teacher and a student. **Conclusions.** Today, during the crisis caused by the Covid-19 pandemic and the war in Ukraine, the foundations are being actively laid to make the provision of educational services at universities, in particular distance education, dynamic and multidimensional. It is necessary to integrate electronic library resources with distance learning platforms to ensure unhindered access for students and teachers.

Keywords: distance learning; distance education; open educational resources; OER; university libraries role; librarians of Ukrainian universities; Ukrainian State University of Science and Technologies

Вступ

Стрімкий розвиток інформаційних технологій сформував інтерес до дистанційної освіти (ДО) ще наприкінці ХХ – поч. ХХІ століття. Кризове сьогодення (пандемія COVID-19 та повномасштабне російське вторгнення росії в Україну) вже диктує нам потребу та необхідність впровадження й широкого використання нових технологій у викладанні, навчанні та наукових дослідженнях. Нові технології пропонують велику гнучкість у тому, коли, де й як розподіляти викладання та отримання знань, а також надають більш сприятливі можливості навчання окремим студентам і цілим групам.

В даній роботі автори зосереджуються на технологіях дистанційного навчання, які покладено в основу дистанційної освіти, а також на новій ролі університетських бібліотек як важливих учасників трансформаційного навчання, а не тільки як постачальників контенту.

Дистанційне навчання (ДН) – принципово нова форма, рівноцінна (але не аналогічна) з очною, вечірньою, заочною та екстернатом. Відмінністю цих форм є чинники інтерактивності, засоби реалізації всіх компонентів системи навчання, специфіка використання Інтернет-сервісів у дистанційній освіті тощо.

Зазначимо, що для України дистанційне навчання через карантин COVID-19 стало екстремим онлайн-навчанням. До 2020 року ним користувалися лише 12% університетів країни (Bakhov, Opolska, Bogus, Anishchenko, & Biryukova, 2021).

Слід зазначити, що в науково-педагогічній літературі терміни «дистанційне навчання» та «дистанційна освіта» часто вживаються як синоніми. Проте вони суттєво відрізняються один від одного. Дистанційна освіта є базовою, і вона набагато ширша за поняття дистанційного навчання, яке є результатом або кінцевою метою освіти. Однак не виключається можливість використання цих понять як синонімічних (Bakhov, Opolska, Bogus, Anishchenko, & Viryukova, 2021).

Невід'ємним принципом дистанційної освіти є скорочення просторових, географічних, економічних та демографічних обмежень з метою забезпечення простого доступу до вищої освіти.

Дистанційна освіта потребує особливої організації багатьох складових, в тому числі інформаційної підтримки електронними освітніми ресурсами, завдяки яким відбувається передача явних знань. Повні курси, навчальні матеріали, модулі, підручники, потокове відео, тести, програмне забезпечення та будь-які інші інструменти, матеріали або методики повинні бути доступні онлайн.

Це потребує включення в процеси інформаційної підтримки ДО як викладачів – авторів освітніх ресурсів, так і працівників окремих служб, що здійснюють інформаційну та ІТ підтримку як викладачів, так і створених ними ресурсів. Тобто обов'язковою умовою є наявність в університетах організаційних структур, які б надавали оптимальний баланс між зусиллями самих викладачів і механізмом допомоги зі створення, опублікування, упорядкування, доступності електронних освітніх ресурсів, в т.ч. OER в Інтернеті.

Такими структурами є університетські бібліотеки, які одними з перших підтримали філософію відкритості та включились в процеси підтримки відкритого доступу, відкритої науки, відкритої освіти і відкритих освітніх ресурсів на базі інтелектуальних інформаційних систем і технологій (Kolesnykova, 2016; Kolesnykova & Matveyeva, 2021; Santos-Hermosa, Proudman, & Corti, 2022).

Огляд

На початку 2020 р. навчальні заклади України, включно з університетами, були змушені оперативно реагувати на виклики пандемії та перевести навчальний процес на дистанційний або гібридний (змішаний) режими. Викладачі українських вишів буквально за один день адаптували свої предмети до дистанційного формату. (Bakhov, Opolska, Bogus, Anishchenko, & Viryukova, 2021). Більшість із них не мали досвіду використання онлайн-інструментів, не мали навичок дистанційного спілкування зі студентами або не мали належного методичного та технічного забезпечення для дистанційного викладання своїх курсів. Практики дистанційного навчання, що склалися як у різних закладах вищої освіти (ЗВО), так і в межах одного університету, факультету і навіть кафедри, дуже різні та різноманітні.

Університетські бібліотеки України, в свою чергу, давно і плідно працювали в онлайн-просторі, надаючи користувачам різноманітні послуги. Тому для більшості з бібліотек перехід протягом кількох тижнів з початку пандемії у березні 2020 р. до інформаційної підтримки навчання, викладання і досліджень в дистанційному форматі відбувався достатньо швидко, якісно і безболісно, хоча й не в повному обсязі (Kolesnykova, 2020).

Дефініція «Дистанційне навчання» визначає його як сукупність інформаційних технологій та методик викладання, які передбачають здобуття освіти без фізичної присутності здобувачів у навчальному закладі (Dystantsiine navchannia, n.d.; Khmurova & Grashchenko, 2020; Nalyvaiko, Vakulenko, & Zemlin, 2020).

Законодавством України дистанційне навчання визначається, як індивідуалізований процес набуття знань, умінь, навичок і способів пізнавальної діяльності людини, який відбувається в основному за опосередкованої взаємодії віддалених один від одного учасників навчального процесу в спеціалізованому середовищі, яке функціонує на базі сучасних психолого-педагогічних та інформаційно-комунікаційних технологій (“Pro zatverdzhennia Polozhennia pro dystantsiine navchannia”, 2020).

Дистанційна освіта – це сфера освіти, основні елементи якої включають фізичне розділення викладачів і студентів під час навчального процесу та відкриті освітні ресурси, такі як – вільно доступні й відкрито ліцензовані тексти та медіа, а також інші цифрові ресурси, корисні для навчання, викладання та оцінювання. а також для дослідницьких цілей (The Scientific World, 2020).

Під дистанційною освітою розуміють також таку форму навчання, котра використовує комп’ютерні комунікації і в основу якої покладено індивідуальну роботу студентів із навчальним матеріалом та активне спілкування їх з викладачами й іншими студентами (Shprak, 2021; Nalyvaiko, Vakulenko, & Zemlin, 2020).

Складові дистанційного навчання активно досліджуються вже з початку 2000-х років. Аналіз концептуального інструменту дистанційної освіти показує, що його сутність містить три основні компоненти: відкрита освіта, комп’ютерна освіта та система комп’ютерної комунікації. Однією з головних проблем дистанційної освіти є створення єдиного інформаційно-освітнього середовища навчального процесу, до складу якого входять різні електронні засоби (Lendyuk, Ripra, & Strime, 2003).

Надзвичайно великі можливості для інформаційної підтримки дистанційної освіти та покращення її якості шляхом вільного обміну знаннями надає використання **відкритих освітніх ресурсів** (OER). Втім в Україні поки що спостерігається відсутність широкої зацікавленості OER викладачами та інституційної підтримки для їх активного створення, адаптації, використання.

Особлива роль в підтримці OER належить університетським бібліотекам (Santos-Hermosa, Proudman, & Corti, 2022; Kolesnykova & Matveyeva, 2021; OE Awards for Excellence, 2022). Незважаючи на подібність напрямів щодо впровадження OER бібліотеками вищої школи в різних країнах, в бібліотечних підходах і практиках спостерігаються національні особливості через різні рівні технологічного розвитку і матеріальної підтримки (Inegbedion & Opatyeu, 2018).

Мета дослідження. Покращити розуміння університетських спільнот (викладачів, студентів, бібліотекарів) щодо розвитку дистанційного навчання, відкритих освітніх ресурсів та нової ролі університетських бібліотек в цих процесах.

Методика

Основні дані щодо розвитку дистанційного навчання, OER та збільшення ролі в цих процесах університетських бібліотек були отримані завдяки аналізу фахових публікацій у періодичних виданнях і на сайтах університетів світу, застосуванню методів включеного і зовнішнього спостереження, опису власного досвіду авторів (директорки наукової бібліотеки, доцента з ІТ-дисциплін і завідувачки відділу наукової бібліотеки), які працюють в Українському державному університеті науки і технологій (Дніпро, Україна).

Результати

24 лютого 2022 р. змінило життя кожного українця. Жорстока війна, розпочата росією проти України з наміром захопити її територію, знищити український народ як націю, її культуру, освіту, науку, в рази заглибила кризу в освіті, розпочату пандемією COVID-19.

В той же час прискореними темпами йде опанування й застосування практик дистанційного навчання в українських університетах. Але з ряду різноманітних причин, в т.ч. обумовлених наслідками російської агресії (недостатність розширених інформаційно-комунікаційних практик у веб-просторі, часта відсутність електрики і зв'язку, зношене технічне обладнання, вік викладачів тощо), рівень розуміння можливостей та застосування практик ДН викладачами університетів, є недостатнім. Достатньо низькими для більшості викладачів, студентів, а іноді – і самих бібліотекарів все ще залишається також розуміння нових можливостей включення університетських бібліотек в інформаційну підтримку (послугами і ресурсами) дистанційних процесів викладання, навчання і досліджень, в т.ч. відкритими освітніми ресурсами.

Встановлено, що дистанційне навчання зосереджено на педагогіці, технологіях і навчальному дизайні для забезпечення навчання студентів, які фізично не перебувають «на місці» в традиційних аудиторіях. Основними рисами дистанційного навчання є інтерактивна взаємодія у процесі навчання із виокремлення часу для самостійного освоєння матеріалу, консультаційний супровід у процесі навчання.

Існуючі види дистанційного навчання (Types of Distance Learning) класифікуються: по-перше, за методом доставки (method of delivery) – Online чи Offline, та, по-друге, за способом чи темпом (by mode or pacing) – Synchronous (Paced), Asynchronous (Self-Paced), Hybrid (Pishchev & Pishcheva, 2021).

Для синхронного або темпового навчання університети встановлюють розклади, яких студенти дотримуються, що дозволяє їм знати початок і кінець курсу та модулів, які він містить. Існують лекції чи практичні заняття, які студенти повинні відвідувати, а також фіксовані терміни виконання іспитів, завдань або проектів. Приклади синхронного онлайн-навчання можуть включати, але не обмежуватися цим:

- Відеоконференція або телеконференція;
- Лекції в прямому ефірі;
- Живі чати;

Асинхронне навчання або самостійне навчання, з іншого боку, дозволяє студентам вибирати, коли починати навчальну роботу та скільки часу приділяти кожному завданню. Асинхронне навчання використовує інші, ніж синхронне, інструменти та системи, що дозволяє викладачам і студентам взаємодіяти за власним графіком. До асинхронного навчання входять:

- Записані презентації або лекції доступні за запитом;
- Дошки обговорень;
- Обмін електронною поштою; Хмарні документи;
- Групи в соціальних мережах

Гібридне навчання поєднує елементи синхронного та асинхронного навчання. Студенти повинні зібратися в онлайн-чаті або в аудиторії в певний час. На цій платформі вони працюють у своєму власному темпі.

Веб-середовище дистанційного навчання – це специфічна сукупність умов, методів та форм навчання; а також засобів для спільного дистанційного навчання, виховання та розвитку здобувачів освіти. Веб-середовище має включати в себе як засоби взаємодії

суб'єктів дистанційного навчання, так і засоби управління дистанційним навчанням. При цьому взаємодія між учасниками освітнього процесу передбачає доступ до різноманітних освітніх веб-ресурсів (Zadorozhna, Bondar & Yakunina, 2022).

До розміщених у веб-просторі освітніх інформаційних ресурсів (або освітніх веб-ресурсів) можна віднести:

- електронні підручники та навчально-методичні комплекси;
- освітні сайти;
- засоби тестового контролю (наприклад, сайт ЗНО-онлайн, програмне забезпечення для онлайн тестування ClassMarker, мобільний додаток для створення тестів Easy TestMaker, вбудований сервіс для тестування на платформі Moodle, сервіс Online Test Pad, інструменти Google форми, автоматизовані програми, які працюють в локальній мережі: «x-tls 1.0.6 public», «MiniTest-SL», «ExeTest-SL», «Sunrav Testofficepro», конструктори тестів «Keepsoft» та інші);
- засоби автоматизації професійної діяльності;
- інформаційно-довідкові системи;
- засоби математичного та імітаційного моделювання (математичний додаток GeoGebra, програма GRAN-3D для графічного аналізу просторових об'єктів, табличний редактор Microsoft Excel, додаток для математичних та інженерних обчислень MathCad тощо);
- віртуальні лабораторії або лабораторії з віддаленим доступом до приладів;
- програмні засоби автоматизації навчального середовища (платформа дистанційного навчання Moodle)

Унікальність онлайн-навчання як підходу до дистанційної освіти має наступні особливості:

- він забезпечує «багатоканальне навчання», що складається з друкованого, аудіо-, візуального і відео контенту;
- він надає доступ до різноманітних форматів для текстового, аудіо- та відеозв'язку в реальному часі та співпраці «без кордонів»;
- забезпечує безперервний процес навчання для студентів, які мають доступ в Інтернет;
- дозволяє студенту виступати разом із автором-викладачем співавтором нового навчального контенту (у випадку з відкритими освітніми ресурсами).

На наш погляд, в умовах воєнної агресії і повномасштабної війни росії проти України і на території України, розвиток дистанційної освіти нині значною мірою пов'язаний з її органічною інтеграцією із системою відкритої освіти. Наприклад,

- елементи відкритої освіти можуть широко використовуватися в дистанційній освіті та самоосвіті;
- завдяки відкритому електронному простору можна подолати проблему браку якісних навчальних та навчально-методичних матеріалів;
- відкритий освітній простір надасть змогу колективної роботи над навчальними та навчально-методичними матеріалами всіх учасників освітнього процесу.

В кризовий час це особливо стосується Відкритих освітніх ресурсів (OER) як обов'язкового елементу якісної інформаційної підтримки процесів викладання, навчання і наукових досліджень.

OER належать до категорії доступних і безкоштовних навчальних матеріалів, втім не всі доступні навчальні матеріали є OER. Таку класифікацію відкритих освітніх ресурсів і доступних матеріалів можна уявити собі як діаграму Venn, де найширший рівень вмісту –

це освітні матеріали, а після фільтрації (на доступність, відкрите ліцензування...) досягається рівень, де знаходяться OER (Elder, 2019; Kolesnykova & Shcherbatiuk, 2022).

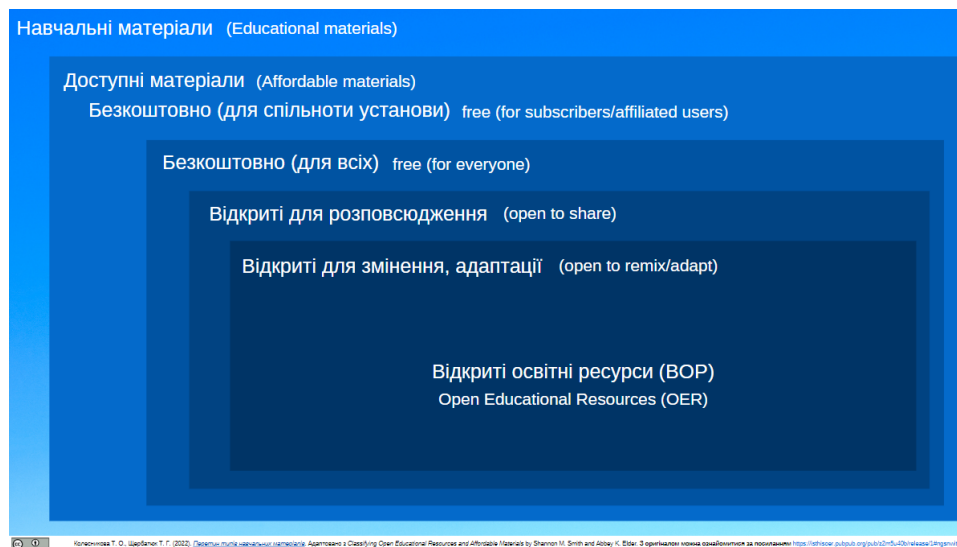


Рис. 1. Визначені перетини типів освітніх ресурсів (Smith & Elder, 2022)

Безумовно, дистанційний формат викладання й навчання накладає на викладача додаткове навантаження: організувати колективну роботу, тримати увагу великої кількості студентів, зробити цікавим навчання в онлайн-форматі, створити/оновити інформаційні ресурси – підручники, відео лекції, методичні матеріали тощо.

Така організація явних знань потребує включення в процеси як викладачів – авторів відкритих освітніх ресурсів, так і працівників окремих служб, що здійснюють інформаційну та ІТ підтримку як викладачів, так і створених ними ресурсів.

Тобто, обов'язковим комунікаційним елементом в дистанційній освіті є організаційні структури, які в змозі надавали оптимальний баланс між зусиллями самих викладачів і механізмом допомоги зі створення, упорядкування, збереження та опублікування OER в Інтернеті.

Такими структурами є університетські бібліотеки, які одними з перших підтримали філософію відкритості та включились в процеси підтримки відкритого доступу, відкритої науки, відкритої освіти на базі інтелектуальних інформаційних систем і технологій.

Наукова бібліотека Українського державного університету науки і технологій (в минулому – Дніпровського національного університету залізничного транспорту імені академіка В. Лазаряна), має великий досвід (з 2009 р.) з надання цифрових ресурсів і онлайн послуг для навчання і досліджень. Це, наприклад, адміністрування: інституційного репозитарію, сайтів 3-х наукових журналів, онлайн-платформ 2-х конференцій, баз даних «Публікаційний профіль університетської науки» і «Залізнична україніка» тощо (Kolesnykova, 2016).

Саме тому, вже маючи достатнє практичне підґрунтя та обізнаних фахівців для підтримки дистанційної освіти і досліджень, Бібліотека запропонувала запровадити в дистанційне навчання нову модель інформаційних ресурсів – відкритих освітніх ресурсів (OER) з подальшою інтеграцією цифрових ресурсів у навчальні курси дисциплін.

Бібліотекарями на першому етапі запропонована модель розміщення текстових OER (відкриті підручники, навчальні посібники, навчально-методичні матеріали) в інституційному репозитарії eDNURT, а також їх інтеграцію в міжнародну систему OERSI

(Open Educational Resources Search Index). На сьогодні креативними викладачами у партнерстві з бібліотекарями в OERSI представлено 5 підручників (OERSI, 2022).

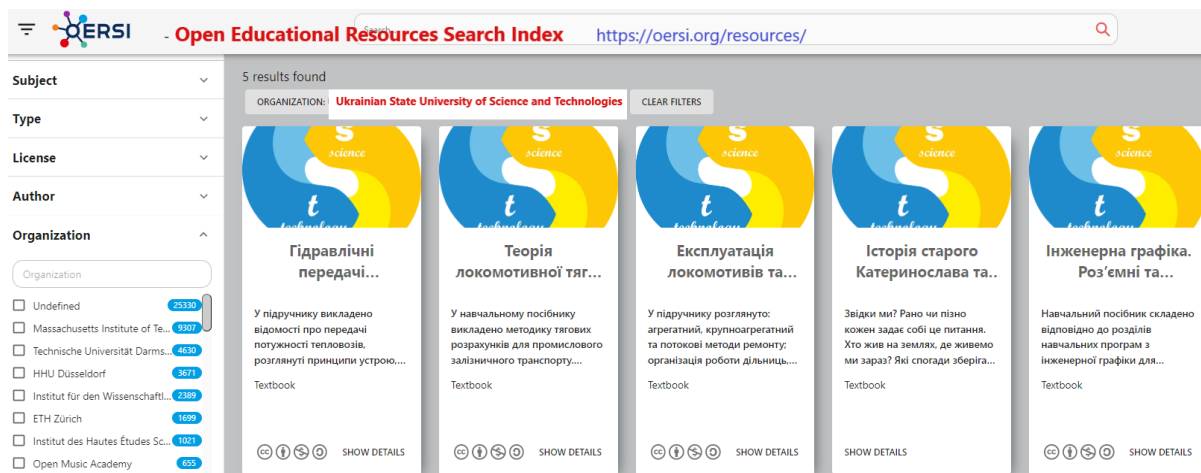


Рис. 2. Підручники, створені викладачами в партнерстві з бібліотекарями УДУНТ в OERSI

Таким чином, наукова бібліотека УДУНТ – структура, що уможливує онлайн доступ до текстових і нетекстових OER як необхідного елементу при забезпеченні обмеженої особистої взаємодії між викладачем і студентом, що навчається.

Для кращого розуміння ролі відкритої освіти та OER було створено 3 відеолекції (як OER) із серії «Відкрита освіта і відкриті освітні ресурси: важливість для української вищої освіти» (<https://www.youtube.com/playlist?list=PL5JyULThzcTTIgWcJh6Um-TiDeTbpG34d>). Всього планується 10 відеолекцій за відкритою ліцензією Creative Commons (CC).

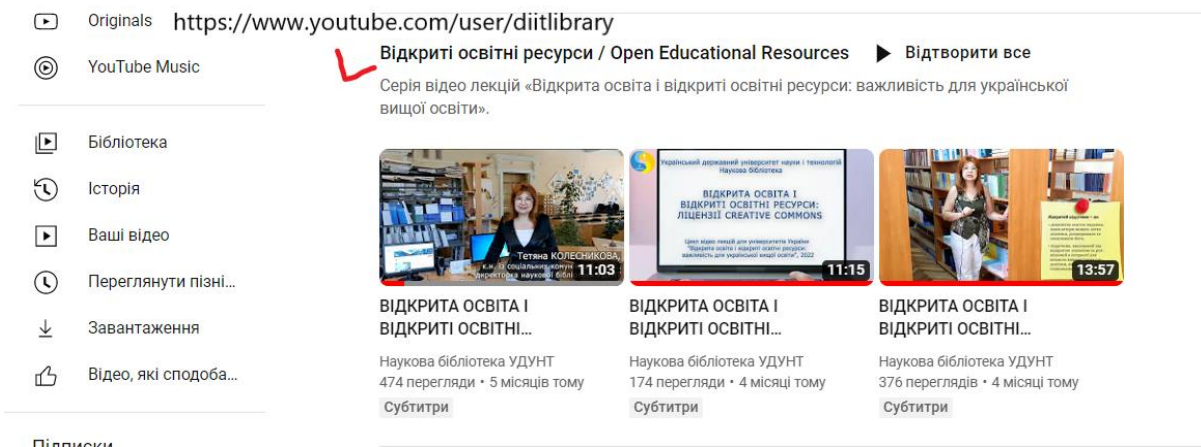


Рис. 3. Блок «Відкриті освітні ресурси» на ютюб-каналі Наукової бібліотеки УДУНТ

Процес створення нового матеріалу як OER (підручника, курсу, методичних вказівок, тощо) складається з таких етапів:

1. Дослідження та підготовка – мета створення матеріалу, визначення цільової аудиторії, споживача, наповнюваність матеріалу (що повинно бути в книзі/курсі, в якому вигляді: аудіо, відео, інтерактивні завдання, тести тощо).

2. Проектування – дослідження простору відкритих освітніх ресурсів у необхідній предметній галузі (виявлення вже існуючих потрібних курсів/підручників, пошук необхідних матеріалів).

3. Авторське право та відкрите ліцензування.

4. Розробка.

5. Публікація та розповсюдження (Elder, 2019).

Практично на всіх етапах цього процесу створення OER викладач УДУНТ може звернутися за консультацією та допомогою до спеціалістів наукової бібліотеки як фахівців в галузі цифрового видавництва (Kolesnykova, 2016). Останні декілька років наукова бібліотека активно розвивається в цьому напрямку та має багато напрацювань:

- Представлена як цифровий видавець в Library Publishing Directory (Dnipro National University of Railway Transport named after Academician V. Lazaryan (DNURT) – Ukraine, 2018-2022, <https://librarypublishing.org/lp-directory/>)
- є активним членом SPARC Europe та ENOEL (Європейської мережі бібліотекарів відкритої освіти); На грудень 2022 р. наукова бібліотека УДУНТ є єдиним представником України в цій мережі;
- на сайті наукової бібліотеки розроблена та постійно оновлюється сторінка із вичерпною інформацією по відкритим освітнім ресурсам: що таке OER, ліцензування, переваги відкритої освіти, посилання на ресурси з OER різними мовами, OER курси, репозиторії та ін. (<https://library.diit.edu.ua/uk/page/OER>);
- консультування на тему авторського права та відкритого ліцензування. Допомога у пошуку необхідної інформації в міжнародних базах відкритих освітніх ресурсів;
- створення циклу відео лекцій на тему «Відкрита освіта і відкриті освітні ресурси», де розкриваються всі сторони і аспекти цієї теми. Курс запланований із десяти відео; він розміщується на Ютуб каналі наукової бібліотеки УДУНТ (<https://www.youtube.com/playlist?list=PL5JyULThzcTTIgWcJh6Um-TiDeTbpG34d>);
- активно розвивається галузь цифрового видавництва (з використанням платформи Open Monograph Press). Послуги: модерація та редагування матеріалу, доведення його до кінцевого стану у форматі PDF, цифрове видання підручника, інтеграція отриманого продукту до інституційного репозитарію та міжнародних баз відкритих освітніх ресурсів (наприклад Open Educational Resources Search Index).

Таким чином встановлено, що впровадження систем дистанційного навчання, використання та наявність відкритих (краще – безкоштовних) джерел інформації на платформах відкритого доступу чи відкритих освітніх ресурсів (OER), обмін науковими дослідженнями в цифровому науковому просторі тощо – ці складові тісно пов'язані між собою та використовуються серед викладачів, науковців, студентів, бібліотекарів.

Висновки

Безперечно, цей період був непростим для всіх, але кризи, спричинені пандемією Covid 19 та війною (як би це не жорстко звучало), мають деякі свої переваги. Вони дедалі більше розширюють розуміння університетами своєї автономії та пришвидшують здобуття ними необхідного практичного досвіду, що лише сприятиме їхній незалежності в майбутньому.

Сьогодні активно закладаються основи, щоб надання освітніх послуг, зокрема, дистанційної освіти, стало динамічним і багатовимірним. Основними рисами дистанційного навчання є інтерактивна взаємодія у процесі навчання із виокремленням часу для самостійного освоєння матеріалу, консультаційний супровід у процесі навчання.

Але при цьому для викладачів має місце й негативний фактор – дистанційний формат викладання й навчання накладає на нього додаткове навантаження: організувати колективну роботу, тримати увагу великої кількості студентів, зробити цікавим навчання в онлайн-форматі, створити/оновити інформаційні ресурси – підручники, відео лекції, методичні матеріали тощо.

Університетські бібліотеки, підтримуючи місію своїх закладів, скористались перевагами розвитку ІКТ для впровадження цифрових бібліотечних послуг з метою задоволення інформаційних потреб: а) викладачів – для створення/використання цифрових інформаційних документів, в т.ч. OER в процесах дистанційного викладання; б) студентів, які навчаються дистанційно; в) науковців – для проведення досліджень. Тобто, роль бібліотеки особливо чітко сфокусувалась на забезпеченні якісними електронними ресурсами та цифровими послугами всіх учасників освітнього дистанційного процесу.

Для університетських бібліотек України нагальною є необхідність не тільки створення, упорядкування, адміністрування інформаційних науково-освітніх баз даних, створення власних допоміжних інструкцій і відео уроків із користування ними, реалізація партнерських проєктів з авторами-викладачами щодо створення OER тощо. Необхідним є інтегрування електронних бібліотечних ресурсів з платформами дистанційного навчання для забезпечення безперешкодного доступу студентів і викладачів.

Використання відкритих освітніх ресурсів (OER) у дистанційній освіті допомагає підвищити її якість шляхом вільного обміну знаннями, а також створює умови для впровадження освітніх взаємозв'язків до єдиного освітнього простору серед науковців та викладачів. Сьогодні, завдяки створенню відкритого освітнього простору, вирішується питання комунікації студент – викладач – науковець – суспільство, тим самим встановлюються міцні зв'язки між складовими сучасної освіти, що мають на меті розвиток, навчання та перспективи розвитку суспільства у обраній галузі.

REFERENCES

- Bakhov, I., Opolska, N., Bogus, M., Anishchenko, V., & Biryukova, Y. (2021). Emergency distance education in the conditions of COVID-19 pandemic: Experience of Ukrainian universities. *Education Sciences*, 11(7), 364. doi: <https://doi.org/10.3390/educsci11070364> (in English)
- Dystantsiine navchannia. (n.d.). In *Wikipedia*. Retrieved from https://uk.wikipedia.org/wiki/%D0%94%D0%B8%D1%81%D1%82%D0%B0%D0%BD%D1%86%D1%96%D0%B9%D0%BD%D0%B5_%D0%BD%D0%B0%D0%B2%D1%87%D0%B0%D0%BD%D0%BD%D1%8F (in Ukrainian)
- Elder, A. K. (2019). *The OER Starter Kit*. Ames, IA: Iowa State University Digital Press. doi: <https://doi.org/10.31274/isudp.7> (in English)
- Inegbedion, J. O., & Opatye, J. A. (2018). Open educational resources' adaptability and institutional supports for lecturers of open and distance education universities in Nigeria. *Pakistan Journal of Educational Research and Evaluation (PJERE)*, 4(1), 21-32. Retrieved from <http://journals.pu.edu.pk/journals/index.php/PJERE/article/view/4000> (in English)
- Khmurova, V., & Grashchenko, I. (2020). Dystantsiina osvita v period pandemiI COVID-19 [Distance education during the COVID-19 pandemic]. *Herald of Kyiv National University of Trade and Economics*, 131(3), 135-146. doi: [https://doi.org/10.31617/visnik.knute.2020\(131\)10](https://doi.org/10.31617/visnik.knute.2020(131)10) (in Ukrainian)

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- Kolesnykova, T. O. (2016, May). Servisni sluzhby suchasnoi universytetskoï biblioteki: obsluhovuvannia naukovtsiv [Service Centers of Contemporary University Library: Service of Scientists]. In *Bezpekovе innovatsiine suspilstvo: vzaiemodiia u sferi pravovoi osvity ta pravovoho vykhovannia. Conference Proceedings*. Yaroslav Mudryi National Law University. Kharkiv, Ukraine. Retrieved from <http://eadnurt.diit.edu.ua/jspui/handle/123456789/4733> (in Ukrainian)
- Kolesnykova, T. (2020). Biblioteki zakladiv vyshchoi osvity v umovakh nevyznachenosti: osoblyvosti orhanizatsii viddalenoï roboty personalu [Higher education libraries under uncertainty: The specific of the staff remote work organizing]. *Ukrainian Journal on Library and Information Science*, 6, 40-61. <https://doi.org/10.31866/2616-7654.6.2020.218608> (in Ukrainian)
- Kolesnykova, T. O., & Matveyeva, O. V. (2021). First steps before the jump: Ukrainian university librarians survey about OER. *University Library at a New Stage of Social Communications Development. Conference Proceedings*, 6, 96-107. doi: https://doi.org/10.15802/unilib/2021_248379 (in English)
- Kolesnykova, T. O., & Shcherbatiuk, T. H. (2022). *Peretyn typiv navchalnykh materialiv* [Definitional intersections of types of educational materials] [Poster]. Retrieved from <http://eadnurt.diit.edu.ua/jspui/handle/123456789/16212> (in Ukrainian)
- Lendyuk, T., Rippa, S., & Strime, E. (2003, September). Project management using in distance education. In *Second IEEE International Workshop on Intelligent Data Acquisition and Advanced Computing Systems: Technology and Applications. Proceedings*. Lviv, Ukraine. doi: <https://doi.org/10.1109/IDAACS.2003.1249616> (in English)
- Nalyvaiko, O., Vakulenko, A., & Zemlin, U. (2020). Features of forced quarantine distance learning. *Naukovi zapiski Kafedri pedagogiki*, 47, 78-86. doi: <https://doi.org/10.26565/2074-8167-2020-47-09> (in Ukrainian)
- OERSI. (2022). *Ukrainian State University of Science and Technologies*. Retrieved from <https://oersi.org/resources?sourceOrganization=%5B%22Ukrainian+State+University+of+Science+and+Technologies%22%5D> (in English)
- Pishchev, O. V., & Pishcheva, T. I. (2021). Dystantsiina osvita yak vyklyk chasu. In *Upravlinnia yakistiu pidhotovky fakhivtsiv. Materialy mizhnarodnoi naukovo-metodychnoi konferentsii* (pp. 167-169). Odesa, Ukraine. Retrieved from <http://mx.ogasa.org.ua/handle/123456789/9205> (in Ukrainian)
- Pro zatverdzhennia Polozhennia pro dystantsiine navchannia: Nakaz Ministerstva osvity i nauky Ukrainy № 466 (2020). Retrieved from <https://zakon.rada.gov.ua/laws/show/z0703-13#Text> (in Ukrainian)
- Santos-Hermosa, G., Proudman, V., & Corti, P. (2022, October). Open education in European libraries of higher education (Report). SPARC Europe, ENOEL. doi: <https://doi.org/10.5281/zenodo.7267592> (in English)
- Shpak, I. O. (2021). Particularities of organization of remote learning in modern UKRAINE. *Spiritual-intellectual upbringing and teaching of youth in the 21st century: an international periodical collection of scientific papers*, 3, 230-234. Retrieved from <https://dspace.hnpu.edu.ua/handle/123456789/8006/> (in Ukrainian)
- Smith, S. M., & Elder, A. K. (2022). Classifying Open Educational Resources and Affordable Materials. "Is this an OER?" *Addressing the Complex Relationship between Open and Affordable Course Materials*. Retrieved from <https://isthisoeer.pubpub.org/pub/z2m5u40b> (in English)
- OE Awards for Excellence. (2022). *Advocacy work of the Scientific Library to advance Open Education in Ukraine*. Retrieved from <https://awards.oeglobal.org/awards/2022/open-resilience/advocacy-work-of-the-scientific-library-to-advance-open-education-in-ukraine/> (in English)
- The Scientific World. (2020, November 28). *What are the Elements of Distance Education?* Retrieved from <https://www.scientificworldinfo.com/2020/11/what-are-elements-of-distance-education.html> (in English)

Zadorozhna, O. V., Bondar, O. P., & Yakunina, I. L. (2022). Poniattia veb-seredovysysha dystantsiinoho navchannia [The concept of distance learning web environment]. *Naukovyi visnyk Lotnoi akademii. Seriya: Pedahohichni nauky: zbirnyk naukovykh prats. Kropyvnytskyi, 11*, 110-115. doi: <https://doi.org/10.33251/2522-1477-2022-11-110-115> (in Ukrainian)

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Library Service in Ensuring the Information Ecology of An Organization: A Case Study of a Research University Library

Objective. Information products and services provided by academic libraries to support the educational process and research are a component of the information ecology of educational institutions, but their list within each academic library depends on the institutional ecology. Therefore, it is useful to study the practical experience of various academic libraries in ensuring the information ecology of research universities. As an example, we consider the successful experience of G. Denysenko Scientific and Technical Library of the National Technical University of Ukraine "Igor Sikorsky Kyiv Polytechnic Institute" (KPI Library). **Methods.** A qualitative method of longitudinal research was used to obtain data and analyze the KPI Library information services. A number of primary data sources were used, such as diaries of first-hand reflection, observations, engaged in documenting and developing a narrative about the effectiveness of interaction of students, lecturers, scientists with the information environment. Analytical and review, logical, systematic methods are applied to substantiate the place of library service in information ecology. **Results.** The experience of KPI Library in ensuring the information ecology of the university was studied. Ways of organizing prompt, effective and safe (ecological) interaction with users and support of internal information products and services are analyzed. It is shown which services (tools and information resources) and areas of activity of the library form the information ecology of Igor Sikorsky Kyiv Polytechnic Institute. The role of the library in the formation of information culture and the culture of academic integrity of scientists, teachers and students of the university is shown. **Conclusions.** The considered example of KPI Library activity confirms that an academic library is directly involved in formation of the information ecology of a research university. A deeper analysis of the value of products and the effectiveness of library services for various members of the academic community as a component of the information ecology of the university may be the subject of further research.

Keywords: information ecology; information services; library service; academic libraries; KPI Library

Introduction

Despite the relative unfamiliarity of the concept of an information ecology for the scientific environment of Ukraine, Western scientific thought has quite a long experience in conceptualizing it both at the monographic level (Davenport, 1997) and at the level of individual scientific articles (Harris, 1989; O'Day, 2000; Wang et al., 2017). In particular, Bonnie Nardi and Vicki O'Day (1999) define an information ecology "as a system of people, practices, values, and technologies in a particular local environment". Dr. D. Casagrande (n.d) says that information ecology is an emerging, loosely-defined field generally concerned with modeling information processes in human systems. Information ecology is also considered as "a collocated space enriched with a multiple interlinked heterogeneous technologies. Information ecology works as an integrated cognitive system, through the lenses of distributed cognition" (Vasiliou, Ioannou, & Zaphiris, 2014).

As an example of information ecology, researchers also consider a library that contains "a surprising variety of services and resources", and librarians appear as key subjects on whom the success of the entire information ecosystem depends (Nardi & O'Day, 1999).

Despite the mention of the library in the context of information ecology (García-Marco, 2011; Wang et al., 2018), a subject study of library service in the information and environmental dimension has not yet taken place. In view of this, the proposed research aims to substantiate the complex of products and services of an academic library as a component of a university's

information ecology.

Methods and Materials

The research results were obtained through the use of a complex of scientific methods. First of all, valuable conclusions were drawn based on the use of a longitudinal case study method, in particular, planning and reporting documentation for data collection was studied. In addition, a number of primary data sources were used, such as first-hand reflection diaries, observations, which are used here to document and develop a narrative about the effectiveness of the interaction of students, lecturers, scientists with the information environment, about the risks they had to face and the services of an academic library that they discovered for themselves. The theoretical basis for the research results was provided by the use of the analytical and review method, in particular, regarding the reflection of the representation of the information ecology topic in modern scientific thought. We also used logical and systematic methods to reveal the place of library products and services in the system of information ecology.

Results and Discussion

With the development of information and communication technologies, academic libraries are in a process of constant transformation. In this regard, their roles, tasks, services are discussed in the research environment. Some researchers even talk about denying the role of a library as a provider of scientific information due to widespread access to information resources via the internet and draw attention to the violation of its role as a gateway to information by search engines, research databases and reference tools. Many library services overlap with each other and with the search tools available on the open internet. Discovery layers will continue to be a central starting point, but libraries should strive to improve them by upholding experiences that integrate more information sources and make machine learning and artificial intelligence capabilities available in a transparent manner. Many reference and indexing databases should be undone and/or integrated with the discovery layer, and libraries should look for the next generation of reference resources that can be integrated into the user flow (Dahl, 2021).

Despite the fact that machines for a long time have no peers in terms of the speed of providing access to information, in some cases librarians are able to predict and meet the information needs of users better than artificial intelligence technologies. It should be remembered that the activities of companies that are represented on the market of information products and services are primarily aimed at making a profit, promoting products, etc. Accordingly, modern search algorithms, which are used on the pages of various popular websites, social networks, and online stores, are configured in such a way as to provide, first of all, the information that a particular user likes. This can be achieved thanks to the preliminary collection and analysis of users' personal data. Therefore, even in the case of simply informing users about the risks of careless handling of their personal data on the Internet, librarians are able to play an important role in network security and ethic issues (Nazarovets & Kulyk, 2017).

Information content and services provided by academic libraries must be in line with the specific needs and practices of their communities. "Their main question must be 'What is my added value for education and research?' And the answer should be a specific value proposition, not a general or standard offer" (Schöpfel, 2016, p. 123).

On the one hand, users can independently organize the research stage related to the search, evaluation, selection of information, using both informal channels of scientific communication and various databases, such as Scopus and Web of Science, arXiv, CORE, Google Scholar, etc., which

provide access to scientific information without the need to go to a scientific library. However, it is worth remembering that the modern information environment is more extensive than ever before, which makes it extremely complex. Therefore, when performing the tasks set, for example, organizing learning and teaching processes, carrying out research activities, researchers will use this environment with different efficiency. The possibilities of combining information and communication technologies in information ecology are wide, but they depend on the awareness of researchers and their level of competence.

An important advantage of the academic library is that it is in constant interaction with a multicomponent, complex external information environment (information resource providers, open access resources, digital tools and services, etc.) and an institutional environment whose information needs are constantly studied by the library. Achieving a reliable partnership between librarians and the academic community is now possible “by integrating internal and external digital resources and focusing on information search skills in information literacy courses. These competencies generally support group collaboration and empowerment of academics and can increase their efficacy of information use by opening a broader academic perspective on the digital transformation surrounding them” (Deja, Rak, & Bell., 2021).

Information products and services provided by academic libraries to support the educational process and research are a component of the information ecology of universities since these products and services are able to reduce the risks of consuming information products of dishonest publishers, outdated, pseudoscientific information content, improve the quality of the educational process, research activities. Various studies have proposed services that academic libraries can provide to support research (Bourg, Coleman, & Erway, 2009; Koltay, 2019), but their list within each academic library depends on institutional ecology.

A case study of the G. Denysenko Scientific and Technical Library of the National Technical University of Ukraine “Igor Sikorsky Kyiv Polytechnic Institute”

As an intermediary between a user and the external information resources necessary for performing certain tasks, the G. Denysenko Scientific and Technical Library of the National Technical University of Ukraine “Igor Sikorsky Kyiv Polytechnic Institute” (hereinafter – KPI Library) organizes their prompt, efficient and safe (environmental) interaction and supports internal information products and services taking into account specialized interests and needs of specific targeted audiences of the academic community.

The main task of the modern university library is information support of university education and research processes. A library proposes to the professors, students and scientists resources and tools; holds educational events, workshops and individual consultations for effective organization of studying, teaching and research. Taking into consideration trends in education, and challenges that grew during the pandemic, special attention is paid to informational and media literacy, the development of open science, integration of the university into the international educational and scientific environment (Bruil & Korian, 2021).

Examples of information products and services offered by KPI Library include:

- for the administration – a reliable partnership in the development of the educational and scientific environment and the formation of values; analytical, statistical information as a basis for decision-making;
- for structural divisions – information support in the educational process and research activities, a modern collection of information resources, information support for the accreditation of educational programs, subject librarians services, consultations and

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educational activities on various aspects of information literacy and the culture of academic integrity;

- for researchers-comfortable, safe, accessible physical and virtual space, electronic document delivery services and inter-library subscriptions, consultations and educational events, excursions, exhibitions.

Important components of the university's information ecosystem, the functioning of which is ensured by the library, in particular, are:

- a creative, comfortable, safe environment for learning, research, development;
- website;
- electronic catalog;
- digital library;
- institutional repository;
- publishing platform.

KPI Library aims to provide research tools and information resources that are relevant to educational programs and research areas. Library search engines help save researchers time and money by offering remote access to prepaid and open access resources filtering out dishonest informational content. In particular, in KPI Library, research and teaching staff can use the replenishment service based on an electronic catalog or order the necessary book through the online form on the website. Subject librarians of KPI Library select literature for work programs (syllabuses) of academic disciplines (educational components), and for the convenience of students' access to recommended materials, together with lecturers, they support the "Course materials" service.

Every year, KPI Library conducts research to find out how satisfied users are with the information service. In January-February 2022, an online survey was conducted, which was attended by 353 respondents (students, lecturers, scientists of the Igor Sikorsky Kyiv Polytechnic Institute). A significant part of the respondents (103) to the question: "Do you use the information resources of the KPI Library (print and electronic resources)" indicated that they constantly use it, 107 researchers use it once a semester, 28 respondents find resources on the internet, 1 respondent noted that they do not use the library resources at all.

The physical space of the library can be considered a safe (ecological) learning environment, where consultants will always provide information, conduct a training consultation or an educational event on the search and use of information resources and digital tools.

As for the virtual space of the library, its website provides access to internal information resources and services, as well as redirects to external ones, which are processed and recommended by information specialists. For example, the KPI Library website provides a list of search engines and databases that correspond to the areas of educational and research activity. Also, the library constantly updates the list of open educational resources (<https://www.library.kpi.ua/open-educational-resources>), as they are recommended to be included in the syllabuses of academic disciplines.

In September 2022, KPI Library offered users the search engine "Catalog+" (<https://discovery.kpi.ua>). The search engine runs on the VuFind software. The system librarian has localized this software in Ukrainian. This is an important result, as the modified software can be distributed to other academic libraries in Ukraine.

The system allows one to simultaneously search for materials of the desired topic among the printed publications in the library catalog, in the ELAKPI institutional repository and the digital library of valuable and rare publications of the Igor Sikorsky Kyiv Polytechnic Institute, as

well as on open access platforms: arXiv, Hindawi and IntechOpen.

Some of the "Catalog+" functions are available without user authorization (search, sending selected search results entries by e-mail), while others require mandatory authorization (ordering copies, creating lists by topic and permanently saving such lists). The system offers hints in the search bar, refinement of search results using facets, etc. Electronic resources can be downloaded immediately, and printed ones can be ordered for issuance (only authorized users can perform this).

Another platform included in the information ecology of the Igor Sikorsky Kyiv Polytechnic Institute is a publishing platform (based on the Open Monograph Press software). Currently, it presents only individual publications of the library and researchers of the university, but the plans for the future are to use this platform for publishing open educational resources.

Among the most important areas of activity of the library for improving the information ecology of the university is the formation of an information culture and a culture of academic integrity. This is an important area of activity of the academic library, as research shows that students differ in their level of information literacy: some of them have some experience with research tools and information literacy skills, but are ready to continue improving, while other students have a low level of information literacy. Such a situation requires a differentiated approach during information literacy classes (Valenza et al., 2022). A lot of engineering students lack library research skills essential to be successful in academic study (Liu, 2021).

Information literacy is important not only for students but also for researchers. To conduct high-quality research and help their universities rise in national and international rankings by implementing university research strategies and goals, researchers must be information-literate. As H. D. Daland and K. M. W. Hidle note, "this must be made a priority in university management, and academic libraries should work together with other departments in the university to strengthen and display their positions as an important part of research. Academic libraries must also be aware of their responsibility as a part of the support system for excellent research ... Faced with research, information handling is highly complex ... Teaching researchers how to search for, evaluate and use sources in an ethical manner is still a large part of the library's contribution" (Daland & Hidle, 2016).

Since 1961, KPI Library has been conducting a mandatory lecture on information literacy for first-year students of all structural divisions of the university – all institutes/faculties. Information literacy courses are held separately for young researchers – masters and postgraduates.

All researchers of the university can choose any topic for individual educational online counseling, or order training for a group of students. The approximate list of topics for consulting and training is as follows: digital tools of scientific communication, sources of educational and scientific information, information search, open access resources for searching scientific information, modern tools for identifying researchers in the digital scientific environment, managing research data, distributing the results of scientific research in the digital environment, bibliographic managers in research activities, text borrowing, making references and citations in educational and scientific papers, etc.

The library's specialists are involved in teaching educational disciplines on academic integrity – the university-wide selective academic discipline "Fundamentals of academic integrity", which can be chosen by second-year students, and the upgrade training course for research and teaching staff "Academic integrity" (specialty "Public management and administration") on the basis of the Institute of Postgraduate Education of the Igor Sikorsky Kyiv Polytechnic Institute.

Here are the feedbacks of researchers during the annual survey on the level of satisfaction with the KPI Library service:

LIBRARY SERVICES FOR SCIENCE AND EDUCATION SUPPORT

- “When she was studying, she worked a lot in the educational space "Belka" of the library. Now I mainly listen to lectures held online. I turned to the literature two or three times (and I don't think I'll turn to it more often, sorry), but I managed to find some sources that I couldn't find on the Internet” (a graduate);
- “In fact, I would live in a library:):)” (a student who constantly uses the library);
- “I am satisfied with the KPI library and its information resources” (a student who constantly uses the library);
- “Thank you for being efficient online!” (a postgraduate);
- “The library is always a place you want to go back to” (a student);
- “Good library, the most useful literature can be found” (a student);
- “It is very convenient to use the library. The electronic catalog is perfectly designed. The librarians are polite and can choose any book by topic and for your taste” (a student);
- “Thank you for the opportunity to use such a variety of books for free!” (a student);
- “There is a great lack of literature on some topics, for example biology, anatomy, chemistry” (a student);
- “Thanks to the library consultants, I have avoided a publication in a predatory journal” (a postgraduate);
- “The library saves a researcher's time and helps to quickly obtain quality sources by fair means. Consultants always inform about access to new databases, help to set up remote access” (a lecturer at the Y. O. Paton Educational and Research Institute of Materials Science and Welding of the Igor Sikorsky Kyiv Polytechnic Institute);
- “My experience of interacting with the library has demonstrated full readiness to cooperate with lecturers, in particular in updating the literature necessary for our humanitarian educational programs, so students get the opportunity to tackle up-to-date scientific sources. In addition, close communication with lecturers and spider work on organizing events (lectures, master classes, etc.) contributes to the popularization of current knowledge and the expansion of students ' educational horizons.” (a lecturer at the Publishing and Printing Institute of the Igor Sikorsky Kyiv Polytechnic Institute).

Conclusions

Based on the definition of information ecology as a system of people, practices, values and technologies, a scientific library is an example of an information-ecological system formed at the intersection of products and services of the external information environment and the internal institutional space of users' needs and practices. The role of the scientific library as a subsystem of the institutional information ecology is to adapt available information products and services to the needs of specific targeted audiences of the university.

The library supports real and virtual spaces for learning, research and development, including a website with the integrated electronic catalog and digital library, an institutional repository and a publishing platform. In the context of adapting the products and services of the Scientific Library to changes in scientific communication caused by the development of electronic technologies, KPI Library provides users with access to the "Catalog+" search engine based on the VuFind software, as well as to the services of the publishing platform for publishing open educational resources.

With the participation of an academic library, the ethical basis for the functioning of the information ecology of an organization is formed – the culture of academic integrity.

REFERENCES

- Bourg, C., Coleman R., & Erway R. (2009, November). *Support for the Research Process: An Academic Library Manifesto*. Retrieved from <https://www.oclc.org/content/dam/research/publications/library/2009/2009-07.pdf> (in English)
- Bruil, O., & Korian, Y. (comp.). (2021). *KPI Library Strategy: 2021–2025*. Kyiv, Ukraine: Lira-K. Retrieved from <https://ela.kpi.ua/handle/123456789/43216> (in English)
- Casagrande, D. (n.d). *Information ecology*. Lehigh University. Retrieved from <https://www.lehigh.edu/~dac511/pages/research/infoecol.html> (in English)
- Dahl, M. (2021). The evolving role of library collections in the broader information ecosystem. In D. Baker & L. Ellis (Eds.). *Future directions in digital information: Predictions, practice, participation* (pp. 161-174). Chandos Publishing. doi: <https://doi.org/10.1016/B978-0-12-822144-0.00010-0> (in English)
- Daland, H. D., & Hidle, K. M. W. (2016). Information Literacy Skills in the Research Process. In *New Roles for Research Librarians: Meeting the Expectations for Research Support* (pp. 7-15). Chandos Publishing. doi: <https://doi.org/10.1016/b978-0-08-100566-8.00002-4> (in English)
- Davenport, T. H. (1997). *Information Ecology: Mastering the Information and Knowledge Environment*. Oxford, United Kingdom: Oxford University Press. (in English)
- Deja, M., Rak, D., & Bell, B. (2021). Digital transformation readiness: perspectives on academia and library outcomes in information literacy. *The Journal of Academic Librarianship*, 47(5). 102403. doi: <https://doi.org/10.1016/j.acalib.2021.102403> (in English)
- García-Marco, F. (2011). Libraries in the digital ecology: reflections and trends. *The Electronic Library*, 29(1), 105-120. doi: <https://doi.org/10.1108/02640471111111460> (in English)
- Harris, K. (1989). Information ecology. *International Journal of Information Management*, 9(4), 289-290. doi: [https://doi.org/10.1016/0268-4012\(89\)90052-2](https://doi.org/10.1016/0268-4012(89)90052-2) (in English)
- Koltay, T. (2019). Accepted and emerging roles of academic libraries in supporting research 2.0. *Journal of Academic Librarianship*, 45(2), 75-80. doi: <https://doi.org/10.1016/j.acalib.2019.01.001> (in English)
- Liu, G. (2021). Information literacy instruction for international graduate engineering students: A case study at University of Windsor. *Journal of Academic Librarianship*, 47(5). 102415. doi: <https://doi.org/10.1016/j.acalib.2021.102415> (in English)
- Nardi, B. A., & O'Day V. (1999). *Information Ecologies: Using Technology with Heart*. MIT Press. doi: <https://doi.org/10.7551/mitpress/3767.001.0001> (in English)
- Nazarovets, S., & Kulyk, E. (2017). Biblioteka 4.0: tekhnolohii ta servisy maibutnoho [Library 4.0: next generation services and technologies]. *Biblioteknyi visnyk*, 5(241), 3-14. Retrieved from http://eprints.rclis.org/31968/1/bv_2017_5_3.pdf (in Ukrainian)
- O'Day, V. L. (2000). Information Ecologies. *The Serials Librarian. From the Printed Page to the Digital Age*, 38(1-2), 31-40. doi: https://doi.org/10.1300/J123v38n01_05 (in English)
- Schöpfel, J. (2016). Six Futures of Academic Libraries. In D. Baker & W. Evans (Eds.). *The End of Wisdom? The Future of Libraries in a Digital Age* (pp. 123-128). Chandos Publishing. doi: <https://doi.org/10.1016/B978-0-08-100142-4.00013-0> (in English)
- Valenza, J. K., Dalal, H., Mohamad, G., Boyer, B., Berg, C., Charles, L. H., Bushby, R., Dempsey, M., Dalrymple, J., & Dziedzic-Elliott, E. (2022). First years' information literacy backpacks: What's already packed or not packed? *The Journal of Academic Librarianship*, 48(4). 102566. doi: <https://doi.org/10.1016/j.acalib.2022.102566> (in English)

- Vasiliou, C., Ioannou, A., & Zaphiris, P. (2014). Understanding collaborative learning activities in an information ecology: A distributed cognition account. *Computers in Human Behavior*, 41, 544-553. doi: <https://doi.org/10.1016/j.chb.2014.09.057> (in English)
- Wang, X., Guo, Y., Yang, M., Chen, Y., & Zhang, W. (2017). Information ecology research: past, present, and future. *Information Technology and Management*, 18, 27-39. doi: <https://doi.org/10.1007/s10799-015-0219-3> (in English)
- Wang, X., Yang, M., Li, J., & Wang, N. (2018). Factors of mobile library user behavioral intention from the perspective of information ecology. *Electronic Library*, 36(4), 705-720. doi: <https://doi.org/10.1108/EL-03-2017-0046> (in English)

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Бібліотечне обслуговування в забезпеченні інформаційної екології організації: на прикладі бібліотеки дослідницького університету

Мета. Інформаційні продукти та послуги, що надаються науковими бібліотеками для підтримки навчального процесу та наукових досліджень, є складовою інформаційної екології навчальних закладів, але їх перелік у межах кожної наукової бібліотеки залежить від інституційної екології. Тому корисним є вивчення практичного досвіду різних академічних бібліотек у забезпеченні інформаційної екології дослідницьких університетів. Як приклад розглянемо успішний досвід Науково-технічної бібліотеки ім. Г. І. Денисенка Національного технічного університету України "Київський політехнічний інститут імені Ігоря Сікорського" (Бібліотека КПІ). **Методика.** Для отримання даних та аналізу інформаційних послуг Бібліотеки КПІ використано якісний метод лонгітюдного дослідження. Використано низку первинних джерел даних, таких як щоденники безпосередньої рефлексії, спостереження, що включали документування та розробку нарративу про ефективність взаємодії студентів, викладачів, науковців з інформаційним середовищем. Застосовано аналітико-оглядовий, логічний, системний методи для обґрунтування місця бібліотечного обслуговування в інформаційній екології. **Результати.** Вивчено досвід роботи Бібліотеки КПІ ім. Ігоря Сікорського щодо забезпечення інформаційної екології університету. Проаналізовано шляхи організації оперативної, ефективної та безпечної (екологічної) взаємодії з користувачами та підтримки внутрішніх інформаційних продуктів і сервісів. Показано, які послуги (інструменти та інформаційні ресурси) та напрями діяльності бібліотеки формують інформаційну екологію КПІ ім. Ігоря Сікорського. Показано роль бібліотеки у формуванні інформаційної культури та культури академічної доброчесності науковців, викладачів і студентів університету. **Висновки.** Розглянутий приклад діяльності Бібліотеки КПІ підтверджує, що академічна бібліотека бере безпосередню участь у формуванні інформаційної екології дослідницького університету. Більш глибокий аналіз цінності продуктів та ефективності бібліотечних послуг для різних членів академічної спільноти як складової інформаційної екології університету може бути предметом подальших досліджень.

Ключові слова: інформаційна екологія; інформаційні послуги; бібліотечне обслуговування; наукові бібліотеки; Бібліотека КПІ ім. Ігоря Сікорського

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IT Implementation Processes in Libraries: Adopting Foreign Experience

Objective. The purpose of the article is to study the problems of implementing IT technologies in university libraries of Ukraine in the context of foreign experience. The article examines the retrospective of development of library information systems, their effectiveness and problematic issues related to the transition of library staff to work with them. **Methods.** When writing the article, the review, comparative, and historical methods were used to summarize the research on the development of library information systems and to choose a sufficiently effective and convenient system among ILS (Integrated Library System), LSP (Library Service Platform), LMS (Library Management System) or LIMS (Library Information Management System) for domestic university libraries. **Results.** The article provides a periodization of the development of library systems from 1931 till 2022. Problematic issues for Ukrainian university libraries related to the replacement of software tools with modern software products are identified. Specialists of higher education libraries are suggested to use the web-resource "Library Technology Guides" to select the latest innovative automated library systems with their subsequent configuration. **Conclusions.** As a result, the ILS Koha is proposed as more adapted system in terms of financial costs and possibility of its further maintenance by existing specialists.

Keywords: integrated library system (ILS); library service platform (LSP); library management system (LMS); library information management system (LIMS); cloud technologies; cloud computing

Introduction

Among the Sustainable Development Goals of the UN (Wikipedia, 2022) "There exist goals related to peace, justice and strong institutions (goal 16) and quality of education (goal 4) - this is very relevant for libraries", and therefore librarians play an important role in preservation of endangered culture. For example, in both Afghanistan and Ukraine² the librarians, academic and public ones, use their skills to preserve the digital cultural heritage of these countries as long as possible (Willems, 2022). One of the important Sustainable Development Goals noted in the report "OECD Toolkit for a Territorial Approach to the SDGs" from the "OECD Regional Development Papers" series (OECD iLibrary, 2022) is the information provision. That is why libraries need the latest technological and technical equipment for high-quality performance of activities in the specified direction. "Today, IT is used in each of the directions of the library's work: both for the organization of library processes, and for the provision of services and establishing effective communication with the users" Ukrainian Library Association, 2021b).

The assistance of international companies Clarivate (Clarivate, 2022), Elsevier (Ministry of Education and Science of Ukraine, 2022), Research4Life (Research4Life R4L, 2022) and projects, in particular SUES (OPERAS, 2022), in the access of domestic universities to international information resources is important in providing students, postgraduates, teachers, scientists with sources of information for continuing educational and scientific activities.

Among the open access electronic resources received by institutions of higher education, there are others as well (Elektronni resursy, 2022). Unfortunately, libraries, including university ones, will not be able to join some library platforms, for example, Ex Libris (Ex Libris Knowledge Center, 2022), which includes 29 resources, in particular, Alma (Ex Libris Alma, n.d.), WorldShare (OCLC, 2022) and others, because "there are big problems with the computerization and internetization of libraries in Ukraine". In the implementation of information systems, we lag behind foreign libraries by 20 years. The majority of Ukrainian libraries either did not automate their processes, or use outdated versions of Russian-made library systems, or work with Ukrainian

software developments that do not support modern international standards" (Ukrainian Library Association, 2021b). This issue is relevant even now, because it is necessary to update software tools that were installed and used in the university libraries more than 10 years ago and do not meet modern requirements.

Methods

For this scientific publication, the comparative, review and historical methods were chosen. The chronological framework of the researched publications is 2017-2022. Individual articles indexed in the Scopus, WoS, Google Scholar databases, as well as publications on the ProQuest platform, from websites and blogs were analyzed. Publications were searched using the keywords "LSP ALMA", "ILS" and "Bibliovation". This made it possible to generalize the information obtained from the publications of foreign authors on the researched topic and draw the necessary conclusions that will be useful for solving the specified problem. A retrospective study of the use of automated library systems and their effectiveness in various countries will allow us to form an objective view of the development and formation of this field, and help Ukrainian libraries of higher education institutions to find the proper choice for replacing outdated software with more modern and innovative ones.

Results and Discussion

Among the problematic issues considered by researchers in the field of using library services platforms (LSP) and open source systems during the last five years of library technology development are: 1) how to choose provider of ILS (integrated library system) / LSP (library services platform) (Collins & Fink, 2018); 2) how to prepare an LSP migration project or implementation plan (Waterhouse, 2018); 3) balance of works related to informatics and library science; changing the nature of collections and services, taking into account the role of digital libraries (Richard E. Rubin, Rachel G. Rubin, & Alire, 2020); 4) the need to reduce the staff of libraries by creating cross-functional teams in scientific libraries (Cowan, 2021) and implementing a web-scale discovery service (WSDS) (Wong, 2020); 5) obtaining funding for the integration of the corresponding LSP (California Community Colleges, 2019); 6) problems arising when the library moves from one LSP to another (Nicholson & Tokoro, 2021); 7) annual maintenance of LSP (FedBizOpps, 2019); 8) issues of consolidation of library technology suppliers (Breeding, 2020), etc.

According to the conclusions of Chinese researchers Zhang Wanxia, Liu Bo, Sang-Bing Tsai (2022), 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. Modern libraries have a wider range of capabilities than ever before, from improving outdated ILS to implementing next-generation ILS and participating in the development of next-generation service platforms (Wanxia, Bo & Sang-Bing Tsai, 2022).

The term "library service platform" (LSP) was introduced in 2011 by Marshall Breeding to describe a new set of products designed to take a different approach to library resource management. According to Breeding, such products address the "fundamental shift that libraries have undergone over the past decade or so toward greater engagement with electronic and digital content" (2011). Some LSP options include Alma and WorldShare Management Services (WMS), which are used by more than 1,000 libraries (Breeding, 2017), and many other libraries are preparing to migrate from their 1990s ILS to a newer platform architecture (Waterhouse, 2018).

Researchers who studied the development of library technologies, in particular Enis M. (2017) noted that among the operating system (OS) for library management, it is proposed to

consider the OS called Future of Libraries is Open (FOLIO), developed by the library technology company Index Data and sponsored by EBSCO. They also discuss topics from the Open Library Environment (OLE) community supported by university libraries, other systems including Alma LSP, Sierra Service Platform, and BLUEcloud, and comments from Sebastian Hammer, founder of Index Data (Enis, 2017).

Information researchers focused on the concept of the library service platform (LSP), its features, functions and characteristics in detail. In particular, Pradhan Pallab (2019) noted that the use of information and communication technologies (ICT) in libraries has gradually changed the day-to-day functions and services of libraries. Libraries have changed dramatically over the years, from “library automation” in the 1930s to the current evolving genres of next-generation integrated library systems or library service platforms (LSPs) in more than half-decade. LSPs can be defined as the next generation of library management systems that have, in addition to all the built-in functions of ILS, built on a multi-user SaaS platform, taking advantage of cloud computing, web technologies and discovery service to provide capabilities to manage physical, digital and electronic materials and other services in a single unified system. Various LSP products are available in the market such as OCLC WorldShare Management Services, Ex Libris Alma, Sierra from Innovative Interfaces, ProQuest Intota, Kuali OLE, SirsiDynix BLUEcloud Suite and FOLIO (Pradhan, 2019).

Marshall Breeding (2018) in the 2018 Library Systems Report noted that technologies that focus on supporting traditional library services no longer meet the needs of libraries that want to increase their involvement in new service areas. Academic libraries are looking for more than the efficiency of collection management or the improvement of library-provided search services. Instead, they address broader educational needs by embedding relevant resources into platforms that support the curriculum and enhance the research activities of their institutions. The author also stressed that Library Services Platforms (LSPs) have been in use for over half-decade and are the proven solutions with products that continue to improve and evolve. The transition from the obsolete products to LSP can provide new efficiencies to internal library operations, but current models extend deeper into the academic enterprise. The researcher pointed out that libraries look for fully web-based products without sacrificing the rich functionality and efficiency embodied in the outdated platforms. It is unfortunate that at this late phase of the cloud computing cycle, development efforts are wasted on side-tracking new interfaces at the expense of innovation (Breeding, 2018a, p. 22-35).

How to choose a supplier. At the 2018 ALA Annual Conference and Exhibition in New Orleans, the most advanced library information systems, including PROQUEST and EBSCO were highlighted (Breeding, 2018b, p. 22-27).

A study of the innovative features of LSPs that distinguish them from LMSs, as well as an assessment of their importance, using the 2-round Delphi questionnaire method was conducted by Greek authors in 2020. The results show that experts most value an all-in-one system that includes all modules rather than different collaboration software. Interaction between systems, implementation of new metadata standards, SaaS architecture and multi-client model are also highly valued. On the contrary, the use of mobile library applications has a low rating (Kouis & Agiorgitis, 2020).

Among the latest cloud software products to help university libraries of Ukraine, attention should be paid to library service platforms: Libero, which understands the importance of the educational sector, which makes it an ideal LMS for educational institutions (Libero, 2022); LibraryIQ, which is the easiest way to see and understand your library's data in the key areas of work on one dashboard (IQ Platform – libraryIQ, 2022). The list of the library platforms used by

libraries around the world is presented on the portal "Main Library Technology Products (ILS / LSP)" (Library Technology Guides, 2022b).

Cloud technologies now help to work in all spheres of activity in the economy and education. Cloud computing is a model where computing resources (processors, storage, software) are offered as a utility from fuzzy locations and boundaries to the user. The adoption of cloud computing in recent years has gained momentum in various directions around the world due to features such as elasticity, virtualization and pay-as-you-go pricing. According to the trend, various companies offering web applications have evolved. These companies provide the system needed to host user application on a rental basis, eliminating the need to purchase (Mayank, 2020).

Mayank Yuvaraj (2020) in the book "Cloud Computing in Libraries: Concepts, Tools and Practical Approaches" described in detail various companies that provide cloud computing solutions and infrastructure for library and information centers. OCLC initiatives and best practices adopted by other libraries around the world were discussed at length. This research identified many ways to implement cloud computing. Various initiatives by library professionals to move their websites, their integrated library system for cataloging and acquisition, cloud-based library applications, cloud card Stack Map, and their repository and interlibrary loan systems to the cloud are mentioned (Yuvaraj, 2020).

The problem of the effectiveness of the functioning of modern library systems is relevant not only for university libraries in Europe, North America, but also in Asia. The authors in the article "Evaluation of Cloud-Based Library Services Platforms: Case Study of the National Chengchi University Libraries" stated that recently, many libraries review effectiveness of the automation tools they use and decide to implement a new Library Sender Platform (LSP) for service delivery, choosing for Chengchi University Library one of the more efficient and user-friendly LSPs among Ex Libris Alma and OCLC WMS (蔡明月, 黃淑蘭, 陳靜宜 & 張琇婷, 2018). In recognition of the performance of the Ex Libris LSP, ProQuest is pleased to announce that the Ex Libris Alma library services platform has been selected by the National Institute of Informatics (NII) in Japan, an inter-university institute that promotes research in information fields. Also, the introduction of the Alma platform is part of an effort to create a new library system and network that includes support for digitized academic materials (such as e-journals and e-books) and existing library systems in the Japanese universities. With the Ex Libris Alma platform, NII will support the Japan Alliance of University Libraries Consortium for Electronic Resources (JUSTICE) with an electronic management service. As a result, JUSTICE will be able to provide access to the lists of publishers and scholarly societies and electronic resource license terms to the member libraries of the Consortium (Ex Libris, 2021).

Among library service platforms, Bibliovation (LSP) (PTFS, 2022) is a unified software system – Software as a Service (SaaS) solution. The entire platform is 100% web-based, providing mobile access from all devices. Bibliovation uses relational databases that store all data, including metadata records covering bibliographic, patron, transactional, authoritative, and acquired ones. By design, Bibliovation is highly customizable to support many different library workflows. Users can choose individual system components (for example, a data collection and discovery layer to be used only to complement an existing integrated library system (ILS)) or the entire set of services to create a complete platform. Machine-readable cataloging (MARC) records, as well as other flexible metadata formats, are created as part of the process of importing digital objects. The mobile library application, created by Solus, fully integrates with Bibliovation library services platform (LSP). This includes a content management system (CMS), unique consortium support, user self-service with barcode and RFID tag collections, and more (Solus, 2021). US libraries use Bibliovation LSPs in many cities across states (LibLime, 2021a, 2021b, 2021c; PTFS, 2021).

The international report on library systems in 2022 summarizes the achievements of library technologies for 2021, namely: a) the acquisition of ProQuest by Clarivate, which means the joining of ProQuest, Ex Libris and Innovative Interfaces enterprises to Clarivate; b) increased consolidation of mid-sized competitors, with more acquisitions than any previous year; c) the way these competing dynamics are performed has important implications for libraries; d) library management systems based on open source software show steady growth. The library system Koha, especially with support from ByWater Solutions, continues to make inroads into US public and academic libraries; e) the major changes in academic libraries are in stark contrast to the technological sector of public libraries, where the products only marginally differ. The integrated library system (ILS) products that serve public libraries tend to evolve rather than transform, with institutions layering on additional products to modernize customer interfaces and create channels for enhanced patron engagement (Breeding, 2022).

Breeding Marshall (2017) noted that Koha was one of the first ILSs developed as open source software. Although there were some earlier projects that never became popular, Koha has been continuously developed by a growing community of developers around the world. It is currently among the most widely used ILS in the world, used in all types of libraries (Breeding, 2017).

Khan, S. A. and Ayesha, G. (2021), advocates of ILS Koha, have demonstrated its effective use in university libraries in Pakistan. Free and open source software is widely used in university libraries to manage the bibliographic information of library materials. Koha is the most used library automation software in university libraries of Pakistan. Key characteristics of a library information management system (IMS) include software reliability and security, user-friendly interface, advanced search capabilities, use of library standards (MARC, Uni MARC, RDA), online updates, developer company technical support, shared cataloging, multilingual features software etc. The study recommends that university librarians consider the above features when choosing software for library automation. The results showed that apart from the use of Koha software, there are also some other software used for library automation in university libraries of Pakistan. These systems include: Virtua, Library Management System (LMS) and Library Information Management System (LIMS) (Khan, S.A. and Ayesha, G., 2021).

Authors Robert Wilson & James Mitchell (2021) in their manual "Open Source Library Systems: A Guide" also emphasize that knowledge of an alternative to an integrated open source library system and the ability to make accurate comparisons can save a library tens of thousands up to hundreds of thousands of dollars per year, while more exactly meeting the functional needs of a library (Wilson & Mitchell, 2021).

Library Technology Guides provide comprehensive and objective information on the many different types of technology products and services used by libraries. It covers organizations that develop and maintain library-oriented software and systems. The site offers extensive databases and document repositories to help libraries consider new systems, and is an essential resource for professionals in the field to keep abreast of new developments and trends (Library Technology Guides, 2022a).

Conclusions

The development of automated library systems in the world, covering more than 80 years (1931–2022), can be classified into the following periods:

- "Automation of libraries" 1930–1991;
- Development and use of the ILS integrated library system – 1991–2010;

- Development and use of the library services platform LSP (Library Services Platform) – 2011–2021;
- Development and introduction of new generation LMS cloud library technologies – from 2022.

The experience of using automated library systems in Ukraine has not yet reached the required level. In particular, this is due to certain difficulties caused by:

- Insufficient funding of the university libraries for these needs;
- There are no state programs and grants for the provision of funds that can be used for technical and technological re-equipment of scientific libraries of higher education institutions;
- Part of the libraries of higher education institutions used software products for the automation of reader service and fund accounting, developed by Russian programmers, in particular, the library automation system (SAB) "Irbis64". Therefore, its use can be a certain problem and requires the transfer of the information developed in it to more modern library platforms and automated library systems used in foreign university libraries.

The Ukrainian Library Association offered the opportunity to use the full-featured ILS Koha, which is an open access product for library automation (Ukrainian Library Association, 2021a). Used worldwide by libraries of all sizes, Koha is a true enterprise-class ILS with full functionality, including basic and advanced options. Koha includes modules for acquisition, replication, cataloguing, series management, authorization, flexible reporting, label printing, multi-format notifications, offline replication when Internet access is not available, and much more. Koha will work with consortia of any size, multi-branch and single-branch libraries (Koha, 2022). Among Ukrainian libraries, full-featured ILS Koha has been successfully adapted in a small number of libraries of various types, in particular in Yaroslav Mudryi National Library of Ukraine.

REFERENCES

- Breeding, M. (2017). Koha: The Original Open Source ILS. *Library Technology Reports*, 53(6), 9-17. Retrieved from <https://www.proquest.com/docview/1932310551/30787A94E3FC45A8PQ/24> (in English)
- Breeding, M. (2018a). Library Systems Report 2018. *American Libraries*, 49(5), 22-35. Retrieved from <https://www.proquest.com/docview/2026328302/CDDC47C3282C47DBPQ/190> (in English)
- Breeding, M. (2018b). Tech in the Exhibit Hall: Convergence, partnerships, and niche players. *American Libraries*, 49(7/8), 22-27. Retrieved from <https://www.proquest.com/docview/2120617259/30787A94E3FC45A8PQ/25> (in English)
- Breeding, M. (2020). 2020 Library Systems Report. *American Libraries*, 51(5), 30-41. Retrieved from <https://www.proquest.com/docview/2407571042/CDDC47C3282C47DBPQ/195> (in English)
- Breeding, M. (2022). 2022 Library Systems Report: An industry disrupted. *American Libraries*, 53(5), 24-35. Retrieved from <https://www.proquest.com/docview/2659724550/30787A94E3FC45A8PQ/6> (in English)
- California Community Colleges. (2019, February 5). 110 California Community College libraries begin move to Ex Libris Alma and Primo for a new CCC library services platform. *Library Technology Guides [BLOG]*. Retrieved from <https://www.proquest.com/docview/2253923418/CDDC47C3282C47DBPQ/194> (in English)
- Clarivate. (2022). *Clarivate Ukraine statement and resources*. Retrieved from <https://bit.ly/3AyniUW> (in English)

- Collins, C. M., & Fink, E. (2018). How to select a new ILS/LSP vendor. *Computers in Libraries*, 38(3), 4-9. Retrieved from <https://www.proquest.com/docview/2028833507/CDDC47C3282C47DBPQ/189> (in English)
- Cowan, S. (2021). *Survey of use of cross-functional teams in academic libraries*. Retrieved from <https://www.proquest.com/docview/2596169636/CDDC47C3282C47DBPQ/101> (in English)
- Elektronni resursy vidkrytoho dostupu.* (2022). Retrieved from <https://sites.google.com/nlu.edu.ua/resource> (in Ukrainian)
- Enis, M. (2017). Open Future | Library Systems Landscape 2017. *Library Journal*, 142(6). Retrieved from <https://www.libraryjournal.com/story/open-future-library-systems-landscape-2017> (in English)
- Ex Libris Alma. (n.d.). *Alma Cloud-Based Library Services Platform*. Retrieved from <http://exlibrisgroup.com/products/alma-library-services-platform/> (in English)
- Ex Libris Knowledge Center.* (2022). Retrieved from <https://bit.ly/3e46Fcf> (in English)
- Ex Libris. (2021, June 17). Japan's National Institute of Informatics paves the way for Japanese libraries of the future with Ex Libris Alma services. *Library Technology Guides [BLOG]*. Retrieved from <https://www.proquest.com/docview/2541684457/C59D002D669E48EFPQ/50> (in English)
- FedBizOpps. (2019). *Annual Maintenance for ExLibris LSP*. Retrieved from <https://www.proquest.com/docview/2246288245/CDDC47C3282C47DBPQ/192> (in English)
- IQ Platform – libraryIQ: Meet your new operations platform.* (2022). Retrieved from <https://www.libraryiq.com/iqplatform> (in English)
- Khan, S. A., & Ayesha, G. (2021, February 17). Key features of information management systems (IMSs) for automation in university libraries: a view point of information professionals in Pakistan. *Library Hi Tech*. doi: <https://doi.org/10.1108/LHT-04-2020-0087/FULL/XML> (in English)
- Koha. (2022). *About – Official Website of Koha Library Software*. Retrieved from <https://kohacommunity.org/about/> (in English)
- Kouis, D., & Agiorgitis, G. (2020). Library service platforms (LSPs) characteristics classification and importance ranking through DELPHI method application. *International Information & Library Review*, 53(4), 291-305. doi: <https://doi.org/10.1080/10572317.2020.1840001> (in English)
- Libero. (2022). *LMS for Educational Institutions*. Retrieved from <https://libero.com.au/sectors/lms-academic-libraries/> (in English)
- LibLime. (2021a, July 20). Three U.S. Government Libraries Go Live Using Bibliovation 7.0. *Library Technology Guides [BLOG]*. Retrieved from <https://www.proquest.com/docview/2553329275/30787A94E3FC45A8PQ/11> (in English)
- LibLime. (2021b, September 29). LibLime Wins Multi-Million Dollar Five Year Bibliovation Contract. *Library Technology Guides [BLOG]*. Retrieved from <https://www.proquest.com/docview/2577382722/30787A94E3FC45A8PQ/8> (in English)
- LibLime. (2021c, October 22). Three libraries begin using Bibliovation 7.2 in production. *Library Technology Guides [BLOG]*. Retrieved from <https://www.proquest.com/docview/2584390072/30787A94E3FC45A8PQ/10> (in English)
- Library Technology Guides: Documents, Databases, News, and Commentary.* (2022a). Retrieved from <https://librarytechnology.org/> (in English)
- Library Technology Guides: Library Technology Product Directory.* (2022b). Retrieved from <https://librarytechnology.org/products/> (in English)
- Mayank Yuvaraj. (2020). *Cloud Computing in Libraries: Concepts, Tools and Practical Approaches*. Retrieved from <https://www.proquest.com/docview/2447479911/A1CE3C508C5E4092PQ/1/thumbnail> (in English)

LIBRARY SERVICES FOR SCIENCE AND EDUCATION SUPPORT

- Ministry of Education and Science of Ukraine. (2022). *Stvoreno resursnyi tsentr «Elsevier» dlia pidtrymky naukovykh doslidzhen ukrainskykh uchenykh*. Retrieved from <https://bit.ly/3AVawRS> (in Ukrainian)
- Nicholson, J., & Tokoro, S. (2021). Cloud Hopping: One Library's Experience Migrating from One LSP to Another. *Technical Services Quarterly*, 38(4), 377-394. doi: <https://doi.org/10.1080/07317131.2021.1973796> (in English)
- OCLC. (2022). *WorldShare: Enable shared efficiencies and innovation*. Retrieved from <https://www.oclc.org/en/worldshare.html> (in English)
- OECD iLibrary. (2022). *OECD toolkit for a territorial approach to the SDGs*. Retrieved from <https://bit.ly/3e3V7Wy> (in English)
- OPERAS. (2022). *SUES – Supporting Ukrainian Editorial Staff*. Retrieved from <https://bit.ly/3PYUYAW> (in English)
- Pradhan, P. (2019). *Library Services Platform (LSP): An Overview*. Retrieved from <https://bit.ly/3wF16Yh> (in English)
- PTFS. (2021, August 26). Three public libraries begin using Bibliovation 7.0 in production. *Library Technology Guides [BLOG]*. Retrieved from <https://www.proquest.com/docview/2564488197/30787A94E3FC45A8PQ/9> (in English)
- PTFS. (2022). *Bibliovation Library Services Platform for modern libraries*. Retrieved from <https://ptfs.com/products/bibliovation-library-services-platform/> (in English)
- Research4Life R4L*. (2022). Retrieved from <https://bit.ly/3ctEJ0Q> (in English)
- Rubin, Richard E., Rubin, Rachel G., & Alire, C. (2020). *Foundations of library and information science*. Retrieved from <https://www.proquest.com/docview/2471321513/CDDC47C3282C47DBPQ/79> (in English)
- Solus. (2021, June 18). Solus mobile Library App now integrated with the Bibliovation Library Services Platform. *Library Technology Guides [BLOG]*. Retrieved from <https://www.proquest.com/docview/2542370915/30787A94E3FC45A8PQ/12> (in English)
- Ukrainian Library Association. (2021a, April 14). *Onlainova prezentatsiia «ABIS Koha - Biblio.Center»*. Retrieved from <https://bit.ly/3TBppAj> (in Ukrainian)
- Ukrainian Library Association. (2021b). *Vprovadzhenia ta zastosuvannia informatsiinykh system u bibliotekakh*. Retrieved from <https://ula.org.ua/images/documents/4731/LibraryIT0> (in Ukrainian)
- Waterhouse, J. (2018). Mapping the LSP Migration Project: An Implementation Blueprint. *Computers in Libraries*, 38(2), 4-8. Retrieved from <https://www.proquest.com/docview/2030761081/CDDC47C3282C47DBPQ/188> (in English)
- Wikipedia. (2022). *Sustainable Development Goals*. Retrieved from https://en.wikipedia.org/wiki/Sustainable_Development_Goals (in English)
- Willems, L. (2022). *Achieving the UN SDGs – is there a role for libraries?* Retrieved from <https://www.elsevier.com/connect/library-connect/achieving-the-un-sdgs-is-there-a-role-for-libraries> (in English)
- Wilson, R., & Mitchell, J. (2021). *Open source library systems*. Retrieved from <https://www.proquest.com/docview/2561093982/CE3E27A18F7B4FA0PQ/52> (in English)
- Wong, S. (2020). Web-scale Discovery Service Adoption in Canadian Academic Libraries. *Partnership: The Canadian Journal of Library and Information Practice and Research*, 15(2), 1-24. doi: <https://doi.org/10.21083/PARTNERSHIP.V15I2.6124> (in English)

Zhang, W., Liu, B., & Tsai, S. B. (2022). Analysis and Research on Digital Reading Platform of Multimedia Library by Big Data Computing in Internet Era. *Wireless Communications and Mobile Computing*, 2022. doi: <https://doi.org/10.1155/2022/5939138> (in English)

蔡明月, 黃淑蘭, 陳靜宜, & 張琇婷. (2018). 雲端圖書館服務平台之系統評估：以國立政治大學圖書館為例 [Evaluation of Cloud-Based Library Services Platforms: Case Study of the National Chengchi University Libraries]. *Journal of Educational Media & Library Sciences*, 56(1), 1-34. Retrieved from <https://bit.ly/3PVX6JB> (in Chinese)

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Процеси впровадження ІТ у бібліотеках: переймаємо іноземний досвід

Мета. Метою статті є дослідження проблематики впровадження ІТ-технологій в університетських бібліотеках України у контексті іноземного досвіду. У статті розглядається ретроспектива розвитку бібліотечних інформаційних систем, їх ефективність й проблемні питання, пов'язані з переходом на роботу з ними персоналу бібліотек. **Методика.** Для написання статті використано методи оглядовий, порівняльний та історичний для узагальнення досліджень, присвячених розвитку бібліотечних інформаційних систем та для обрання вітчизняними університетськими бібліотеками достатньо ефективною та зручною серед ILS (Integrated Library System), LSP (Library Service Platform), LMS (Library Management System) або LIMS (Library Information Management System). **Результати.** В статті надано періодизацію розвитку бібліотечних систем, що охоплює 1931 – 2022 рр. Визначено проблемні питання для українських університетських бібліотек, пов'язані із заміною програмних засобів на сучасні програмні продукти. Запропоновано фахівцям бібліотек вишів використовувати web-ресурс «Library Technology Guides» для обрання новітніх інноваційних автоматизованих бібліотечних систем з подальшим їх налаштуванням. **Висновки.** В підсумках запропоновано використання ILS Koha як більше адаптованої з огляду фінансових витрат та можливості її подальшого обслуговування наявними фахівцями.

Ключові слова: інтегрована бібліотечна система (ILS); платформа бібліотечних послуг (LSP); система управління бібліотекою (LMS); система управління бібліотечною інформацією (LIMS); хмарні технології; хмарні обчислення

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Leadership Communication for Community Reader: Case Study at Komunitas Gada Baca, West Java, Indonesia

Objective. The Gada Membaca community is a reading park initiated by an activist for the Indonesian information literacy movement. Purpose of this research is to know how leadership communication is carried out for community reader at Komunitas Gada Membaca, West Java, Indonesia. **Methods.** This research uses a case study through qualitative approach. **Results.** The result of this research is the Gada Membaca reading garden built in the assistance of information literacy activist leader succeeded in representing this need, which became a model for other reading parks in the vicinity. Leadership communication in managing a reading garden has a strategic role. The character of the community in Indonesia in general requires assistance from a figure who has a leader character. The rise and fall of the existence of a reading parks community is much influenced by a manager who has a strong character in leading. **Conclusion** of the research is the leadership communication model needed to managing a reading garden.

Keywords: leadership communication; community reading parks; activists; information literacy; reading communities

Introduction

During the proclamation of independence of the Republic of Indonesia on August 17, 1945, 95% of the Indonesian population was still "illiterate". At that time, the national movement for the Eradication of Illiteracy (PBH) was immediately launched to make people "literate". In standard terms, "literacy" is "literate" as an adjective to the noun "literacy". Public Libraries or more precisely at that time called Taman Pustaka were established to keep people who were already "literate" able to maintain and improve their abilities. This effort to establish a public library has received appreciation from the *United Nations of Educational, Scientific, and Cultural*

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Organization (UNESCO). The award was realized in the form of assistance from library consultants who were the first to visit Indonesia (Association, 2017).

In the United States, in 1974 Paul Zurkowski, president of the *Information Industry Association* (IIA) introduced the term *Information Literacy* (IL) in his proposal to the *National Commission for Library and Information Science* (NCLIS). Since then librarians in America realized the need for skills in IL. The idea immediately went worldwide and received an international response. In 2006 *The International Federation of Library Associations and Institutions* (IFLA) published *The International Guidelines on Information Literacy*. With these IFLA guidelines, librarians in Indonesia began to introduce and teach IL concepts and techniques. A translation of the IL has been proposed with a term derived from the standard term "literacy". According to this rule, the equivalent of the word IL is "information" (Sudarsono, 2007).

TBM is an institution that provides reading materials needed by the community as a place for organizing reading and learning skills development. In addition, TBM is also a place used to obtain information for the community, especially those sourced from library materials. Library material itself is all types of reading material in various forms of media. Because of the importance of this TBM, a manager is needed, and those who become managers are those who have the dedication and technical ability in managing and implementing library services to the community. In other words, a TBM manager is a person who really has awareness and responsibility in providing library services. The objectives to be achieved with this TBM activity are to generate and increase interest in reading in order to create an intelligent society, become a forum for community learning activities, and support the improvement of the ability of new illiterates in the context of eradicating illiteracy so that those who are "literate" do not become blind and continue to develop. (Office of Archives, 2016).

Based on Law No. 20 of 2003 concerning the National Education System, article 26 paragraph (4), it is stated that non-formal education units consist of course institutions, training institutions, study groups, community learning activity centers, taklim assemblies, and similar educational units. The TBM program started in 1992/1993. Its presence is a renewal of the Taman Pustaka Rakyat (TPR), which was founded by Community Education in the 1950s. The TBM program aims to increase interest in reading and the reading culture of the community. Therefore, the existence of TBM is very important as a means of community learning.

On February 18, 2022, the Regent of Ciamis, Dr. H. Herdiat Sunarya laid the first brick for the construction of the Gajah Dawuan (Gada) reading parks on Jl Raya Ciamis-Cirebon Winduraja Village, Kawali District, Ciamis Regency. The construction of the Reading Garden is an initiative of the Reading Gada Community, which was founded by literacy activist Agus Munawar. The Ciamis Regent said that the Ciamis Regency Government in principle supports the development of this Reading Park because it is in line with the Ciamis Regency mission in improving the quality of human resources (Human Resources) in the area (Akbar, 2018).



Fig. 1. Greetings Literature. Regent of Ciamis, Dr. H. Herdiat Sunarya accompanied by the Literacy Mother, Hj. Kania Ernawati takes a group photo after laying the first brick for the construction of the Gada TBM in Winduraja Village, Kawali Ciamis District, Thursday, 18/02/2021.

The Regent appreciated the Gada Reading Community and the people who had participated in helping the development process of the Reading Gardens. The Regent also provided cash assistance for the construction to the activity committee. According to the Regent of Ciamis, in an interview, the development of human resources is important in realizing the welfare of the community. In the future, we will assist in the construction of the Gada Reading Gardens through the APBD budget. Meanwhile, the initiator of the Gada Reading community, Agus Munawar explained the purpose of building a reading garden as a space for community activities and learning through various reading materials. In addition, it facilitates access to information and communication technology to improve people's quality of life.

The previous literature conveys the same thing in the topic of reading garden studies from Akbar (2018) about management a Community Reading Parks (TBM). The Community Reading Garden (TBM) program is a form of government support to increase interest and love for reading in the community. This program can be accessed by non-formal education units, technical implementing units of non-formal education, associations, and unions that meet the requirements. One of the government's efforts to educate the nation's life and advance people's thinking is to build Community Reading Parks (TBM) in rural and remote areas in collaboration with parties who have the same mission. Community Reading Parks (TBM) are institutions that cultivate a love for reading in the community. They provide a room for reading, discussion, book review, writing and other activities, especially in non-formal education and are equipped with reading materials and existing infrastructure, as well as supported by the manager as a motivator. For example, the Batu-Bara district government in collaboration with PT. Inalum (Persero) build Community Reading Parks (TBM) in several rural areas in Batu-Bara district such as Community Reading Parks in Lubuk Cuik Village and Community Reading Gardens in Lalang Village.”

In one interview session, Agus Munawar said that various activities can be carried out in reading gardens, the community can easily get information, and of course, it will also have an impact on providing solutions to community problems. In addition, according to Agus Munawar, activities in reading gardens create prosperity in the community. Agus Munawar was awarded the Nugra Jasadarma Pustaloka award from the Indonesian Library for his work as a driver of information literacy through reading gardens. He explained that the Gada Reading Community was established on February 18, 2015. Gada Reading was born from a series of activities that were directly beneficial and involved the local community.

Other researchers in previous studies conveyed their research results. According to Rahayu and Fakhrudin (2019), Mentari Ceria's TBM management begins with the planning, organizing, implementation, monitoring and evaluation processes. The manager of Mentari Ceria TBM makes efforts to involve the community through motivational activities. The obstacles experienced in organizing Mentari Ceria's TBM consist of technical and non-technical obstacles.

In line with the stated above, Agus Munawar hopes that the existence of this Reading Garden can encourage the growth of new communities based on volunteerism. Another hope, according to Agus Munawar, is from relevant stakeholders to support the Gada Reading Community, added Agus. Agus also explained that the meaning of the name of the community, Gada, is a combination of place names, Gajah and Dawuan. At the location where the reading garden was built, there is a large rock and Dawuan Cimuntur is below it. Referring to the description in the background, the focus of the study is the leadership communication in the Gada Membaca Community, in this case the various efforts and strategies that Agus Munawar applies in managing the Gada Membaca Community.

Purpose of this research is to know how leadership communication is carried out for community reader at Komunitas Gada Membaca, West Java, Indonesia.

Methods

The research used case study through qualitative approach. Case study research is a method to analyze a characteristic phenomenon in the society. Subject of this research is Gada Membaca Community and the research object is leadership communication. The Gada Membaca Community is a reading unique park at Kawali, Ciamis, as a pioneer and role model for all reading park at West Java.

This research used observation, interview, and literature review as data collection technique. We observed Gada Membaca Community in the leadership communication. We interviewed head of Gada Membaca Community, Agus Munawar, and volunteers. As sampling technique, we used purposive sampling. We choosed informant through qualification experience to management the reading parks and active all the activities the reading parks. We searched and analysed literature about reading parks from website, books, journal, proceeding, and thesis. In addition, we made interview transcript, message compilation, and organize data.

Results and Discussion

Information Literacy in the Gada Baca Community

Gada Reading is a community engaged in the library. With a volunteer-based management consisting of students, young, local activists, adults. There are also members of the Gada Reading community, the majority of whom are children who are in elementary school and are directly supervised by volunteers. Although it includes members directly mentored by volunteers, this library is still open to the public, anyone can visit it.

The establishment of the Reading Gada Community is a little effort to increase the reading interest of the surrounding community to "BUKU". The existence of this community has received appreciation from the government. This was recorded in an event where the Governor of West Java registered to become a member of the Gada Baca community in Kawali, Ciamis some time ago. TBMs in West Java and in some other parts of Indonesia has grown as a learning media for

the information society (Lusiana, Yanto, Anwar, & Komala, 2019). The Reading Gada Community has become a learning media to Ciamis people.



Fig. 2. The Governor of West Java Ridwan Kamil writing on the painting canvas shortly after signing the member card of the Gada Reading Community

The signing of the Gada Reading Community (KGM) membership card was also attended by the West Java Literacy Mother Atalia Praratya Kamil, Ciamis Regent Herdiat Sunarya and Ciamis Literacy Mother Kania Herdiat (Persepsi. Media Tanggap dan Akurat, 2022).

"Improve Literacy So Ciamis, West Java, Indonesia #Champion," said West Java Governor Ridwan Kamil, who took the time to stop by the Gada Reading Community Saung in Winduraja Village, Kawali District, Ciamis Regency by motorbike, after inaugurating the new face of Situ Wangi on Saturday, February 19, 2022.

The initiator of the Gada Reading community, Agus Munawar, expressed his gratitude for the presence and willingness of the Governor of West Java and the Mother of Literacy of West Java to become members of Gada Reading.

"Thank you, Kang Emil, the presence of Kang Governor will be an inspiration and motivation for the people of Ciamis, especially the millennial generation in the East Priangan region, to increase people's interest in reading and strengthen the literacy movement. By liking reading, God willing, the quality of human life will increase," said Agus,

who had received an award from West Java Governor Ahmad Heryawan

as the best TBM manager in 2011.

To Governor Ridwan Kamil, the recipient of the Nugra Jasadarma Pustaloka award from the Indonesian Library, said that people actually want to read and participate in community involvement activities organized by the library as long as access to books is close to the community. Community involvement activities in line with the needs of the community, the support from the community who cares and the people who feel the benefits of library services are important factors for community involvement.

The literacy activist, who has also received an award from the Minister of Education and Culture as the manager of the 2012 Recreational Reading Park, explained to the journalists, that the Gada Reading Community was established on February 18, 2015. Gada Reading was born from a series of activities that benefited directly and involved the local community.

“We hope that the existence of this Reading Garden can encourage the growth of new communities based on volunteerism. We also expect support from relevant stakeholders to support the Gada Reading Community,” added Agus.

The Gada Reading Community has now used the Senayan Library Management System (SLiMS) application, making it easier to manage the member visits, the loan process and availability of books. Cards and books use QR codes to make it easier to provide services.

"Improving services to members using information technology is a must, and this is our commitment as the manager of the Gada Reading Community," said Agus Munawar, a persistent young man who also received an award from the Coca Cola Foundation Indonesia in 2017.

Agus also explained that the meaning of the name of the community, Gada, is a combination of place names, Gajah and Dawuan. At the location where the reading garden was built, the construction of which was inaugurated by the Regent of Ciamis, there is a large stone and Dawuan Cimuntur is below it. Agus Munawar shared his experience that "The literacy movement can be part of human development that can pave the way to break the chain of poverty in society."



Fig. 3. Mace Reading Community

Gol A Gong Shares Volunteering Tips to the Gada Reading Community. The agenda of the Indonesian Reading Ambassador's Literacy Safari to Ciamis Regency was complemented by a visit to the Gada Reading Community in Kawali District. Gol A Gong as Indonesian Reading Ambassador 2021-2025 and his team visited the Reading Gada Community after a Writing Workshop held at the Ciamis Regency Library and Archives Service (Fibrianti, 2021).

The arrival of Gol A Gong for the second time at the Gada Reading Community was warmly and enthusiastically welcomed by the Founder of the Gada Reading Community. Mr. Agus Munawar, Chairman of the Daily Reading Community Gada Naufalia Qisthi, and all the volunteers were present. This activity was also attended by the Reading Ambassador of Ciamis Regency, the Surawisesa Entrepreneurial Association, Kawali District, Kawali Muhammadiyah Vocational School Teachers, Kawali 1 SMAN 1 Students, and community leaders.

The event, which was held at the Reading Gada Community, was a *Sharing Session* with the Indonesian Reading Ambassador with the theme of volunteerism. The event was held in the new building of the Gada Reading Community, although the construction was still not finished. The new building, which is located on the banks of the Cimuntur River, adds to the comfort of the participants with its natural atmosphere. In fact, Gol A Gong himself felt very happy to be able to carry out activities accompanied by the sound of river water ripples.

Gol A Gong started the activity by telling about the beginning of the establishment of Rumah Dunia as a community reading park which he had set up behind his house. Gol A Gong said that a community needs a *basecamp*, volunteers, organizations, and programs. Likewise with the World House at that time. After deciding on the Rumah Dunia *basecamp* at Gol A Gong's own house, Gol A Gong recruited several students to become volunteers at Rumah Dunia. It was only after successful recruiting of volunteers that Gol A Gong created an organizational structure, whose chairman was himself, and made several programs.

While nurturing its volunteers, Gol A Gong also teaches journalism to its volunteers. Volunteers are taught to write news or articles and be published in newspapers. The writing honor then became a source of funding for Rumah Dunia. The volunteers are also taught to write literary works, such as novels, short stories, and poetry until their works become *best-sellers*. The Rumah Dunia program that has survived to this day is an oration. Oration is a program to convey something for three minutes, then the audience gives criticism and suggestions. This oration is usually held on Sunday nights.

Gol A Gong said that the important things in a community are commitment, mentor capacity, consistency, and connectivity. Gol A Gong also has his new book entitled "Gong Smash" published and made a donation to help the construction process of the 3rd floor of the Gada Baca Community building. The new building will later be used for the Gada Baca Community service whose construction involved donations from the community and concerned parties.

The event, which started at 15.45, ended around 18.00 with a group photo of all participants in front of the Gada Reading Community Building. However, continued with limited *sharing* at 19.30 to 21.00. In the limited *sharing*, there was a reader of *Balada si Roya* from Lumbung District who met Gol A Gong. Before continuing their journey to another area, Gol A Gong and his team stayed one night at the house of the Founder of the Gada Reading Community.

The presence of the Indonesian Reading Ambassador is an honor and pride for the Gada Reading Community. His passion for literacy and inspiring stories became new ammunition to boost the enthusiasm of the participants, especially the Gada Reading Community volunteers, to promote literacy in the surrounding environment.



Fig. 4. Mace Reading Community

Functions and Duties of Community Reading Gardens

Since the beginning of a library being established, regardless of the type, it has been mentioned that the library or community reading park has the main activity of collecting all sources of information in various forms, namely written (*printed matter*) and recorded (*recorded matter*) or in other forms. Then all the information is processed, packaged, and compiled to be presented to the public who are expected to be the target and the target will use the reading park. Therefore, the organization of reading gardens has certain goals and objectives to be achieved. To realize the content of the intent and achieve the goals that have been set previously, there are needed strategic steps, applicable and conceptually planned policies and concrete actions. A Community Reading Park is established or built with the intent of being:

1. A place to collect or gather information, in an active sense, the community reading park has continuous activities to gather as many sources of information as possible for collection.
2. A place to process all library materials with the help of certain methods or systems, such as registration, classification, cataloging and other completeness, either manually or using information technology facilities, making collections easy to use.

3. A place to maintain and store the collection. This means that there are activities to organize, arrange, maintain, care for the collection for it to remain neat, clean, durable, intact, complete, easy to access, not easily damaged, lost, and reduced.
4. A center for information, learning resources, research, preservation and other scientific activities. Provide services to users, such as reading, borrowing, researching, in a fast, precise, easy and inexpensive way.
5. A complete and "up to date" information place for the development of knowledge, skills, and behavior/attitudes.
6. Agents of change and agents of culture from the past, present and future. In a more essential concept, the existence and progress of the community reading garden becomes a pride, and a symbol of the civilization of human life.

The Role of Community Reading Gardens

The role of a TBM is part of the main task that must be carried out in a community reading park. Therefore, the role that must be carried out will determine and influence the achievement of the Vision and Mission to be achieved. TBM in Yanto, Rodiah, and Lusiana (2016) is an institution that acts as a facilitator community in self-development and development of community groups, especially engaged in enhancing culture reading of the society. Every reading garden that is built will have meaning if it can carry out its role as well as possible. The role relates to its existence, duties and functions. The roles that community reading parks can play include:

1. In general, community reading parks are a source of information, education, research, and preservation of the nation's cultural treasures as well as healthy, inexpensive and useful recreation areas.
2. Has the role of media or a bridge that serves to connect the sources of information and knowledge contained in the collection owned.
3. Has a role as a means to establish and develop communication between fellow users, and between the organizers of the community reading park and the community it serves.
4. Can act as an institution to develop interest in reading, love of reading, reading habits, and reading culture, through the provision of various reading materials in accordance with the wishes and needs of the community.
5. Take an active role as a *facilitator, mediator, motivator* for those who want to seek, utilize, and develop their knowledge and experience.
6. It is an agent of change, an agent of development, and an agent of human culture.
7. Act as a non-formal educational institution for community members and visitors to the community reading park. They can learn independently (*self-taught*), conduct research, explore, utilize and develop sources of information and knowledge.
8. Park officers can act as mentors and provide consultation to users or carry out *user education*, and coaching and instilling an understanding of the importance of community reading parks for many people.
9. Collect and preserve a collection of library materials so that they remain in good condition.

Community Reading Garden Volunteers

This study aims to determine the causes of volunteers leaving their jobs and managing reading gardens, the motivation of edelweiss volunteers in managing reading gardens and strategies for managing edelweiss reading gardens. The research was conducted at Edelweiss Reading Park, Kamal Village, Kalideres District, West Jakarta City for approximately 2 months from the end of February to April 2020. This research method uses qualitative research, with data collection techniques through observation, interviews and document analysis. The data sources in this study were the owner of the Edelweiss Reading Park as key informant and four edelweiss volunteers who were the managers of the reading garden as the core informants. This study resulted that: (1) The causes of volunteers leaving their previous jobs and preferring to manage Reading Gardens were due to internal and external factors that motivated volunteers. Internal factors include the thought that they as a human being should be useful to others, wish to channel one's potential, and a high social spirit. External factors include the surrounding environment, community, RT/RW administrators, and motivational factors from Volunteers' parents. (2) Edelweiss Volunteers' motivation in managing Reading Gardens is dominated by self-actualization. (3) The strategy for managing the Edelweiss Reading Gardens includes planning that begins with joint discussions, implementation of activities, programs and fund management as well as evaluation of activities as a reference for the next planning (Qotrunada Salsabillah, 2020).

Volunteers in the Reading Gada Community (KGM) are school and university students, as well as come from other communities. Every day KGM has activities assisted by volunteers as tutors. Even some volunteers from faraway areas took the time to help Agus Munawar in managing KGM. KGM volunteers can be said to have sacrificed time, energy, and funds in managing KGM. Then what is the motivation that has pushed volunteers to actively help KGM?

Humans have basic physiological needs such as protection and security, love and belonging, self-esteem, respect from others, and the need to grow (Goble, 1987). Humans in the need to grow need the nature of meaning, self-sufficiency, effortlessness, playfulness, richness, simplicity, order, justice, fullness, importance, perfection, individuality, life, beauty, goodness, and truth. When viewed from the age of the KGM volunteers, most of the KGM volunteers are still of school and university age. Volunteers have basic needs, respect, and a need to grow. KGM is a reading park that provides public space for the community. Volunteers who work at KGM have a second home as a place for community to express their feelings. In addition, volunteers have awards from KGM and the surrounding community as literacy activists. KGM is not only a place that provides library materials for the community, but a space for volunteers to continue to develop themselves.

Leadership Communication

For the past 20 years, Agus Munawar has been a literacy driver. He left a mark in the form of reading houses and communities in several places in Bandung Regency. Currently he is turning his attention to the literacy movement in his hometown, Ciamis, West Java.



Fig. 5. Agus Munawar initiated the Gada Reading Community in his hometown in Winduraja Village, Ciamis Regency, West Java

Agus migrated from Ciamis Regency to Bandung in the 1990s to study. After that, he worked and settled in Bandung. In addition to his work as a journalist, he has pioneered the literacy movement since 2000 in Arjasari Village, Bandung Regency (Napitupulu, 2020). Reading is a tradition and activity for people who want deeper knowledge, have a sense of optimism for success in education, business, government and social activities. Various literacy communities have their own uniqueness in spreading the spirit of literacy such as holding lapak or reading lesehan in the form of books, magazines, articles, and several collections of novels and comics for children, teenagers and adults. The paper focuses on how the activities of the community run and affect the community in increasing literacy. The study was conducted in the Yogyakarta Street Library literacy community that is a unity of its members who have a passion for spreading literacy and are united by the same vision.

This study discusses the survival strategy of the Kolong Ciputat TBM Community in terms of social capital and social networks. The aim of this community is to increase interest in reading and educate the community, especially children in the Ciputat area, South Tangerang. The purpose of this discussion is to analyze how the survival strategy applied by the Kolong Ciputat TBM Community serves its aim. In addition, it provides an overview of what obstacles were found when implementing the survival strategy by this community. Qualitative research is used in this study to provide an overview and in-depth analysis. The data collection techniques consisted of interviews, observations, and literature studies. Various data, information, and facts in the field will be collected through data collection techniques. Later, the various data will be analyzed which will then draw conclusions as the final result of the study. The theoretical framework for analyzing this research is social capital and social networks as the basis for this community's survival strategy. The results showed that the survival strategy of the Kolong Ciputat TBM Community was divided into internal and external. First, the strategy is to survive internally by building trust among members through consistency and commitment. Second, the strategy is to survive externally through the participation of the local community that helps community activities. Plus the participation of several other communities as a survival strategy, such as South Tangerang OI, MAGMA, UIN Jakarta Scouts, and others. The obstacles in implementing the survival strategy

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include the inconsistency of volunteers, funding problems, and the community environment (angkot, thugs, and punk children) which sometimes hinder activities (Wibisono, 2019).

Agus Munawar has a long journey to manage TBM and becomes a magnet for volunteers to join KGM. The KGM owner himself has basic communication skills, including understanding each other, communicating thoughts accepting and supporting, and resolving conflicts (Harapan, 2014). Agus Munawar understands the potential of the community in the area where KGM was established. He believes that through literacy, the people around Kawali Ciamis will increase their awareness of reading and be able to improve the economic and cultural aspects of their community. He also opened himself to receive complaints from the public and even made a direct invitation (*door to door*).

One of the keys to KGM growing is that Agus Munawar as the owner of KGM is willing to listen to information from various sources. He openly accepts directions from practitioners, reading garden forums, and the public and communicates clearly on the KGM program. Persuasive communication media contributed to designing an effective communication strategy (Novianti et al., 2021). He is able to understand his communication opponents, especially the policy makers. Local and central officials even inaugurated KGM as one of the TBMs in Ciamis and actively participated in Community Service (PKM) activities held by practitioners and students at KGM. Agus Munawar has been trusted by regional policy makers as a literacy figure in Kawali Ciamis.

Several village and sub-district government programs in Kawali even collaborate with KGM in informing the community of a policy. Some donors have even helped the needs of the Kawali Ciamis community in improving their community skills, for example digital literacy skills for elementary school age children. However, Agus Munawar limits the realm of KGM not to touch politics. He made KGM purely built to meet the information needs of the community, not as a media for political campaigns.

Agus Munawar's work in building and improving KGM has been an inspiration to everyone. One of them is that he has empowered the community through KGM. This is in accordance with the legal leadership of empowerment, namely a leader who gives strength to others. An outstanding leader is said to be someone who is able to empower his members. In other words, a person is said to be creative if he is able to make people creative. If someone is creative for himself, then it cannot be said that someone is creative (Maxwell, 2001). The owner of KGM consistently improves the literacy level of the people of Kawali Ciamis and its surroundings. The community can use the learning facilities at KGM, and participate in KGM activities to improve their skills (Suherman, 2022).

The hallmark of leadership that empowers people is to keep up with change. Someone who leads change has an important and difficult responsibility (Yukl, 2005). Agus Munawar is able to accept changes and apply them in the community, for example changes in the use of technology in community reading parks (Saepudin, Sukaesih, & Rusmana, 2017). The use of technology in local communities is still difficult compared to urban communities. However, Agus Munawar uses technology in marketing KGM activities to the wider community, organizing information and retrieving library materials, and other activity facilities. Funds are usually the difficulty of TBM in realizing technology-based TBM activities. However, Agus Munawar was able to collaborate with various parties in overcoming the lack of funds. From this point of view, funds are not the main thing in the change. Collaboration is key in driving change in society.

Conclusion

Leadership communication for community reader: case study at Komunitas Gada Baca, West Java, Indonesia is leadership that empowers people and leads change. Agus Munawar through KGM fosters a reading interest in the Kawali Ciamis community and makes this activity to help the educational, economic, and cultural aspects of the community. One of them is that Kawali Ciamis children and adolescents have expertise or skills in helping learning at school and applying their expertise or interests. Regional leaders from the village, sub-district and regent levels have collaborated with KGM in promoting literacy in the community. This is accomplished by Agus Munawar's role in implementing changes in the pattern of community reading gardens that do not just carry out social actions but remain committed to bringing reading closer to the community. The leadership of the KGM owner has inspired TBM managers and literacy activists in other areas. Future research could examine leadership communication in other regional TBMs in West Java Province.

REFERENCES

- Akbar, A. (2018). *Pengelolaan Taman Baca Masyarakat (TBM) Desa Lubuk Cuik dan Desa Lalang Kabupaten Batu-Bara* [Management of Community Reading Parks (TBM) in Lubuk Cuik Village and Lalang Village, Batu-Bara Regency] (Master's thesis). North Sumatra University, Indonesia. Retrieved from <https://repositori.usu.ac.id/handle/123456789/3368> (in Indonesian)
- Association of Information and Library Sciences in Indonesia. (2017, 18 October). *Lebih lanjut tentang literasi informasi* [More on information literacy]. Retrieved from <https://www.isipii.org/kolompakar/lanjut-dalam-literasi-information> (in Indonesian)
- Fibrianti, R. (2021, 1 October). *Gol A Gong Berbagi Tips Kerelawanan Kepada Komunitas Gada Membaca* [Gol A Gong shares volunteer tips with the Gada Reading Community]. Retrieved from <https://retizen.republika.co.id/posts/14673/gol-a-gong-berbagi-tips-kerelawanan-kepada-komunitas-gada-membaca> (in Indonesian)
- Goble, F. G. (1987). *Mazhab Ketiga: Psikologi Humanistik Abraham Maslow* [The third school of humanistic psychology is Abraham Maslow]. Yogyakarta: Kanisius (in Indonesian)
- Harapan, E., & Ahmad, S. (2014). *Komunikasi antarpribadi: perilaku insani dalam organisasi pendidikan* [Interpersonal communication: human behaviour in educational organisations]. Jakarta: PT. Raja Grafindo Persada. Retrieved from <https://opac.perpusnas.go.id/DetailOpac.aspx?id=912893> (in Indonesian)
- Lusiana, E., Yanto, A., Anwar, R. K., & Komala, L. (2019) Taman Bacaan Masyarakat (TBMs): a global literacy potential in Bandung Smart City. *IOP Conference Series Earth and Environmental Science*, 248(1), 012040. doi: <http://10.1088/1755-1315/248/1/012040> (in English)
- Maxwell, J. C. (2001). *The 21 Indispensable Qualities of a Leader: Becoming the Person Others Will Want to Follow*. Nashville, Tennessee: Harpercollins Leadership (in English)
- Napitupulu, E. L. (2020, 22 Oktober). Agus Munawar Magnet Gerakan Literasi [Agus Munawar Magnetises the Literacy Movement]. *Kompas*, p. 16. Retrieved from <https://www.kompas.id/baca/sosok/2020/10/22/agus-munawar-magnet-gerakan-literasi> (in Indonesian)
- Novianti, E., Endayana, C., Lusiana, E., Wulung, S. R. P., & Desiana, R. (2021). Persuasive communication: Disaster literacy in tourism areas. *Review of International Geographical Education Online*, 11(1), 1203-1210. doi: <https://doi.org/10.33403/rigeo.8006836> (in English)

LIBRARY SERVICES FOR SCIENCE AND EDUCATION SUPPORT

- Office of Archives and Libraries Bekasi Regency. (2016). *Taman Baca Masyarakat (TBM)* [Community Reading Park (TBM)]. Retrieved from <https://basipda.bekasikab.go.id/berita-taman-baca-masyarakat-tbm.html> (in Indonesian)
- Persepsi. (2022, Februari 20). Gubernur Ridwan Kamil: Bravo Komunitas Gada Membaca [Governor Ridwan Kamil: Bravo Community Gada Reading]. *Persepsi. Media Tanggap dan Akurat*. Retrieved from <https://persepsi.co.id/2022/02/20/gubernur-ridwan-kamil-bravo-komunitas-gada-membaca/> (in Indonesian)
- Qotrunada Salsabillah, Q. S., Dian alfia Purwandari, & Shahibah Yuliani. (2020). Motivasi dan strategi relawan dalam mengelola taman baca [Volunteer motivation and strategies in managing reading parks]. *Edukasi IPS*, 4(2), 1-8. Retrieved from <http://journal.unj.ac.id/unj/index.php/eips/article/view/16102> (in Indonesian)
- Rahayu, S. & Fakhruddin. (2019). Manajemen Taman Bacaan Masyarakat (TBM) sebagai upaya meningkatkan budaya literasi [Community reading park management as an effort to improve literacy culture]. *Jurnal Eksistensi Pendidikan Luar Sekolah (E-Plus)*, 4(2), 164-174. Retrieved from <https://jurnal.untirta.ac.id/index.php/E-Plus/article/view/7312> (in Indonesian)
- Saepudin, E., Sukaesih, & Rusmana, A. (2017). Peran Taman Bacaan Masyarakat (TBM) bagi anak-anak usia dini. *Jurnal Kajian Informasi & Perpustakaan*, 5(1), 1-12. doi: <https://doi.org/10.24198/jkip.v5i1.10821> (in Indonesian)
- Sudarsono, B., & Kismiyati, T. (Eds.). (2007). *Kumpulan Naskah Pemenang lomba Penulisan Karya Ilmiah Bagi Pustakawan tahun 2006-2007*. Jakarta, Indonesia: Perpunas. Lasa HS. (in Indonesian)
- Suherman, M. (2022). *Motivasi relawan* [Volunteer motivation]. West Java FTBM Literacy. (in Indonesian)
- Wibisono, G. (2019). *Strategi Bertahan Pengelola Taman Baca Masyarakat (Tbm) Kolong Dalam Mengembangkan Taman Baca Di Ciputat, Tangerang Selatan* [The survival strategy of the Kolong Community Reading Park (TBM) manager in developing a reading park in Ciputat, South Tangerang. Program studi sosiologi fakultas ilmu sosial dan ilmu politik. Jakarta, Syarif Hidayatullah State Islamic University. Retrieved from <http://repository.uinjkt.ac.id/dspace/handle/123456789/49180> (in Indonesian)
- Yanto, A., Rodiah, S., & Lusiana, E. (2016). Model aktivitas gerakan literasi berbasis komunitas di sudut baca Soreang. *Jurnal Kajian Informasi & Perpustakaan*, 2(1), 107-118. doi: <https://doi.org/10.24198/jkip.v4i1.11629> (in Indonesian)
- Yukl, G. (2005). *Leadership in organizations* (7th ed.). New Jersey: Prentice Hall. Retrieved from <https://handoutset.com/wp-content/uploads/2022/05/Leadership-in-Organizations-7th-Edition-Gary-A.-Yukl.pdf> (in English)

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Комунікаційне лідерство для читацької спільноти: приклад з практики Комунітас Gada Membaca, Західна Ява, Індонезія

Мета. Спільнота Гада Мембака – це територія для читання, ініційована активістом індонезійського руху за інформаційну грамотність. Мета цього дослідження – дізнатися, як здійснюється лідерська комунікація в читацькій спільноті в Гада Мембака, Західна Ява, Індонезія. **Методи.** У цьому дослідженні застосовано метод кейс-стаді з використанням якісного підходу. **Результати.** Результатом цього дослідження є аналіз лідерської комунікації на території читального саду Гада Мембака, побудованого за сприяння лідера-активіста з інформаційної грамотності, якому вдалося представити цю потребу, яка стала моделлю для інших читацьких парків в регіоні. Лідерська комунікація в управлінні читальним садом має стратегічну роль. Характер спільноти в Індонезії в цілому вимагає допомоги з боку особи, яка має характер лідера. На підйом і падіння існування спільноти парків для читання значною мірою впливає менеджер, який має сильний характер лідера. **Висновком** дослідження є модель лідерської комунікації, необхідна для управління парком читання.

Ключові слова: лідерська комунікація; спільноти читацьких парків; активісти; інформаційна грамотність; читацькі спільноти

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How's Our Library E-Service? Measuring User Satisfaction in the Virtual Environment

Objective. This study aims to determine the satisfaction with the virtual reference service of library users of Nazarbayev University Library during the Spring 2021 to Spring 2022 semesters. **Methods.** This study employed a descriptive approach to determine the satisfaction of users with the virtual service of Nazarbayev University Library during the Spring 2021 to Spring 2022 semesters. Using the data gathered from LibAnswers' Quality of Service (QoS), this study examines various metrics in answering the queries received both in synchronous (chat service) or asynchronous (email service) virtual service. Statistical data from were tabulated and analyzed and the feedback from patrons will be interpreted using Voyant Tools, a web-based data visualization software. **Results.** The study describe how patrons were satisfied with the virtual library service of NU Library as perceived through their feedback and their overall experience of the service. In addition, the study pointed out that the Library considers all virtual transactions urgent and put the satisfaction of their patrons on top priority based on the metrics. **Conclusions.** The study revealed that patrons were satisfied with the virtual service rendered by NU Library both in synchronous and asynchronous format. With the help of the metrics generated from LibAnswers Quality of Service (QoS) feature, the NU Library was able to provide an excellent service despite the limitations brought by the pandemic. The feedback from patrons was indeed a proof of their satisfaction. As service quality and user satisfaction will always go together, the library, as a service-oriented information arm of any institution, should always put their patrons as their top priority.

Keywords: user satisfaction; virtual library service; service quality; Quality of Service (QoS); Nazarbayev University; Kazakhstan

Introduction

Measuring user satisfaction even in the traditional or face-to-face setting is quite difficult. With the onset of COVID-19 pandemic, more and more libraries have been offering virtual library services to ensure continuous delivery of services and resources and gauging how satisfied our patrons are might even be more challenging. Although offering library service in a virtual environment has been done even before the pandemic (Vogus, 2020), determining if we satisfy our user's needs is still quite tricky. As the heart of the learning community (Kiran, 2010), university libraries have always been living its mandate to support informational, research, scholarly, and recreational needs of its users and is expected to deliver service whenever, wherever.

Libraries has proven itself relevant despite the changing demands of the time. From a mere repository of print materials to an information hub of various formats including online resources; from just a traditional reference desk to a virtual reference assistant, the library has indeed no doubt repositioned itself in the educational landscape. However, libraries continue to face some challenges as learners resort to get information from various options and competitive sources (Twum et al., 2022). In addition, as learners became even more online and distant, they tend to be self-sufficient (Oliveira & Greenidge, 2020, p. 21), that means that they prefer and resort to getting their own materials without any assistance (Yap & Manabat, 2021, p. 4). With the ever-increasing amount of information available online, libraries need to assert itself in the information landscape by assessing the quality of the service being rendered to their clients alongside improving user satisfaction (Kiran, 2010) as this will also ensure "increase in their user base and remain to be responsive on meeting their users' expectations" (Adeniran, 2011, p. 209).

Gauging user satisfaction has indeed imperative for any service-oriented institutions and organizations from the get-go and users or customers' voices always matter (Adeniran, 2011). Libraries as service-oriented informational arm of any organizations, should also seek ways on how to assess their service as perceived by the users and improve it based on their feedback. With majority of library services going virtual especially with the onset of pandemic, it became even more challenging and tricky for libraries to determine if they meet user expectations. To further help libraries on this, various models and tools were created and introduced to provide a deep dive on analyzing user satisfaction to improve service quality and to make informed decisions.

Service Quality in Libraries

Service quality is defined as 'the overall evaluation of a specific service firm that results from comparing that firm's performance with the customer's general expectations of how firms in that industry should perform' (Parasuraman et al., 1988, p. 15) and with the intensified competition, having a superb "service quality seems to be a prerequisite to success, if not survival" (p. 15). To provide a more structured approach in measuring the service quality, Zeithaml, Parasuraman, and Berry (1988) introduced SERVQUAL, a set of 22 pairs of statements used to measure user expectations in the marketing field. These statements focuses on five interrelated dimensions that customers most value when they assess the quality of service regardless of providers (Kiran, 2010; Nitecki & Hernon, 2000; Smith, 2010; Wang & Shieh, 2006):

- *Tangibles* (physical facilities, equipment, and the appearance of personnel);
- *Reliability* (ability to perform the promised service dependably and accurately);
- *Responsiveness* (willingness to help customers and provide prompt service);
- *Assurance* (knowledge and courtesy of employees and their ability to inspire trust and confidence); and
- *Empathy* (caring, individualized attention the firm provides its customers)

In the library context, service quality is "the overall excellence of library services that satisfy users' expectation" (Wang & Sheih, 2006, p. 195). Over the years, there were studies conducted focusing on service quality in libraries. With regards to library service quality, there are several determinants to look out for such as electronic resources, collections of printed publications, other library services, technical facilities, library environment, and human side of user service based on the study conducted by Martensen & Gronholdt (2003). The application of SERVQUAL model and its ability of monitor library service quality were highlighted in the studies conducted by Nitecki (1996), Nitecki & Hernon (2000), Kiran (2010), and Gathoni & Van der Walt (2019). Aside from SERVQUAL, the LIBQUAL model introduced by Association of Research Libraries in 1999 was also evident on the studies conducted by Cristobal (2018), Dahan et al. (2016), and Pedramnia (2012). It offers a standard measure of services dedicated to libraries which consists of 25 items that focuses on gauging user perception on service quality in the library setting aligned in these four dimensions and has further determined the relationship of service quality, user satisfaction, and loyalty in libraries (Twum et al., 2022; Cook et al., 2003):

1. *Service affect* – relates to the human side of libraries consisting of traits of empathy, personal competence, and accessibility.
2. *Library as place* – consisting of various issues from the users' perspective on the space of study and collaboration, a sanctuary for contemplation and reflection.

3. *Information access* – library users’ assessment of the adequacy of library collections, and their ability to have access to needed information conveniently or regardless of the medium of the resource in question.
4. *Personal control* – the extent to which library users are able to navigate and have control of the information provided by the library on the internet.

Customer Satisfaction

Law J. (2011) defined customer satisfaction as the degree to which customer expectations of a product or service are met or exceeded. In addition, it is also a “consumer’s fulfillment response, which act as an evaluation based on an emotion-based response to a product or service received” (Ahmad & Allan, 2014, p. 17). This further denotes that customer satisfaction is an evaluation of quality of products and services received that adheres to their needs and wants (p. 17). In the simplest sense, customer satisfaction stresses on perceptions, expectations, and evaluation (p. 17). Putting this on the context of libraries, customer satisfaction is defined as “the levels of service quality performances that meets users’ expectations” (Wang & Shieh, 2006, p. 197).

Organizations should understand the perceptions and expectations of customers towards a certain product or service (Ahmad & Allan, 2014). These comes from their experiences and feelings as well belief, opinion, and predictions about the products and services they received (p. 20). Therefore, to measure customer satisfaction, it is also essential to know your customers even in libraries.

Service Quality and Customer Satisfaction

Service quality and customer satisfaction are very much related concepts. Service quality should be treated as an antecedent of customer satisfaction (Twum et al., 2022; Wang & Shieh, 2006;). The measure of service quality differs from one person to another as people comes from various backgrounds, beliefs, experiences, perceptions, and expectations, thus, customers, given these factors, are the determinants of service quality (Ahmad & Allan (2014). Having said that, there is a need for the organization to know the customer’s perceptions and expectation before and after using the product or service. This is primarily the reason why some organizations conduct a user needs assessment as well as a user evaluations to manage both the user perceptions and expectations. As noted by Ahmad & Allan (2014), satisfaction is defined to be “the gap between the perception and expectation of the end-user”, thus, “customer satisfaction should be measured only by performance” (p. 20) as service “quality is also a pride of workmanship” (p. 45). This also applies in organization such as libraries which are primarily service-oriented and a quality service is also expected. Satisfaction of library users is result of their perception of the quality of library services, thus, service quality will give way to user satisfaction resulting to user loyalty and patronage in libraries (Twum et al., 2022).

SpringShare LibAnswers’ Quality of Service (QoS)

One of the tools used nowadays to measure user satisfaction with regards to library services is the LibAnswers’ Quality of Service (QoS) feature of SpringShare. Launched in January 2021, this new feature aims to gather statistics dedicated to assessing the quality of service libraries provided through LibAnswers’ chat and tickets (SpringShare, 2021). This also gathers user feedback and analyze metrics relevant to virtual reference and library assistance “to reduce dissatisfied tickets, enhance patron satisfaction, and capture staff output” (Breeding, 2021).

To measure the user satisfaction on library virtual services, the NU Library decided to introduce Quality of Service (QoS) feature in March 2021. This new feature of the SpringShare's LibAnswers is designed to collect patron feedback on their overall satisfaction with the library's virtual service. Metrics such as checking the turnaround time in answering tickets and chats and the number of interactions, replies, as well as ratings were also generated from this feature. To get the user feedback, the Library sends a customizable follow-up survey to at least 25% of the closed tickets everyday. With this new feature, the Library was able determine not just the patrons' feedback but also the promptness of the response or service. Given the metrics, the Library was also able to further improve the service rendered to the academic community.

Objectives

Given that gauging user satisfactions is quite challenging especially in a virtual library service, this study aims to determine the satisfaction of users with the virtual service of Nazarbayev University Library during the Spring 2021 to Spring 2022 semesters. Using the data gathered from LibAnswers' Quality of Service (QoS) from March 2021 to June 2022, this study examines various metrics such as the turnaround time and the number of interactions in answering the queries received both in synchronous (chat service) or asynchronous (email service) reference service. In addition, feedback from users were also explored and considered to determine the overall effectiveness virtual reference service as well as the areas that need to be improved.

Methodology

This study employed a descriptive approached to determine the satisfaction of users with the virtual service of Nazarbayev University Library during the Spring 2021 to Spring 2022 semesters. Using the data gathered from LibAnswers' Quality of Service (QoS) from March 2021 to June 2022, this study examines various metrics in answering the queries received both in synchronous (chat service) or asynchronous (email service) virtual service such as:

- the turnaround time;
- the number of interactions;
- the number of replies;
- the duration of each transaction; and
- the ratings.

In addition, feedback from users were also explored and considered to determine the overall effectiveness of the virtual library service as well as the areas that need to be improved. Statistical data from the LibAnswers' QoS were tabulated and analyzed and the feedback from patrons will be interpreted using Voyant Tools, a web-based data visualization software. For data visualization, the tools used were Cirrus, a word cloud that visualizes the top frequent words used; a Collocates Graph which represents keywords and terms that occur in proximity as a force directed network graph; and Bubbles, a playful visualization of term frequencies of a corpus (Sinclair & Rockwell, 2022), or in the context of this study, the feedback from the users gathered from QoS.

Results and Discussions

To measure the user satisfaction on library virtual services, the NU Library decided to introduce Quality of Service (QoS) feature in March 2021. This new feature of the SpringShare's LibAnswers is designed to collect patron feedback on their overall satisfaction with the library's

virtual reference service. This includes some metrics such as checking the turnaround time in answering tickets and chats and the number of interactions before closing the tickets. From March 2021 to June 2022, the NU Library received 3,534 tickets and 1,732 chat transactions.

Ticket Turnaround

One of the determinants of service quality is the *responsiveness* in providing the service. This includes the willingness to assist the clients and provide prompt service in no time. The QoS has the ability to analyze metrics with regards to how long it takes for the operator to reply to a patron's question and the time duration from the moment the question is asked up to the time the ticket has been closed.

For NU Library, all tickets were received through the dashboard. These tickets came from the official email address of the Library. From March 2021 to June 2022, out of 3,534 ticket transactions, 2,045 tickets or 58% were answered in less than an hour from the time the transaction was received as noted on the Table 1 below. This means that the operators assigned to monitor the tickets on the dashboard ensures that all tickets were handled as quick as possible. To ensure that all tickets were handled, dashboard monitoring and scheduling has been implemented for all responsible departments assigned. In addition, it was agreed among the operators that tickets should be handled at least within 10 minutes from the time it was received from the dashboard.

Table 1

Tickets Turnaround Time Before Getting Answered (1st Reply) from March 2021 to June 2022 (Source: Statistics: Quality of Service (QoS) | 2022, August 31)

Turnaround Time	Number of Ticket Transactions	Percentage
0-1 hour	2,045	58
1-2 hours	104	3
2-3 hours	55	2
3-4 hours	51	1
4-5 hours	26	1
5-7 hours	74	2
7-10 hours	130	4
10-15 hours	315	9
15-24 hours	311	9
24-36 hours	87	2
36-48 hours	153	4
48-72 hours	123	3
72+ hours	60	2
Total	3,534	100

When it comes to closing a ticket transaction, it has been noted that 1,513 tickets or 43% were closed in less than an hour as shown on Table 2. It was also noted that there were some tickets that took some time to answer. Possible reason for this was that answers to some questions were not as easy as it seems and would need some consultation or checking with other library staff or resources. To guide the operators in handling, answering, and closing a ticket, a set of guidelines

were created. On the guidelines, it was noted and agreed that a ticket should be closed as soon as possible or if operators will need some time to answer, the operator should provide an initial response and the ticket should be closed within the day or at least first thing in the morning of the next working day for rare cases.

Table 2

Tickets Turnaround Time Before Closing from March 2021 to June 2022
(Source: Statistics: Quality of Service (QoS) | 2022, August 31)

Turnaround Time	Number of Ticket Transactions	Percentage
0-1 hour	1,513	43
1-2 hours	135	4
2-3 hours	79	2
3-4 hours	63	2
4-5 hours	41	1
5-7 hours	76	2
7-10 hours	134	4
10-15 hours	332	9
15-24 hours	402	11
24-36 hours	129	4
36-48 hours	189	5
48-72 hours	180	5
72+ hours	261	7
Total	3,534	100

Through the QoS, the Library can also check how many interactions happened to close a transaction. Interactions means the number of times the operator interacted with the ticket before it was closed which includes responding to the patrons, leaving an internal note, transferring the ticket to another user, or changing the status without sending a reply to the patron. Table 3 shows that 2,065 transactions or 58% were closed in a single interaction from the operator. This further means that most of the transactions were handled and closed with a single interaction from the LibAnswer user.

Table 3

Number of Interactions Before Closing the Transactions from March 2021 to June 2022
(Source: Statistics: Quality of Service (QoS) | 2022, 31 August 31)

Number of Interactions to Close	Number of Ticket Transactions	Percentage
<=1	2,065	58
2	1,000	28
3	315	9
4	86	2
5	45	1
6	11	0

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7	6	0
8	4	0
9	1	0
10	0	0
11	1	0
>=12	0	0
Total	3,534	100

Another metric that is being analyzed through the QoS is the number of responses the operator sent to the patron. Table 4 below shows that there were 4,148 replies that were sent to the patrons from March 2021 to June 2022. Out of 3,534 tickets, 2,713 tickets or 77% were closed with just a single response from the operator. This further signifies that, in one way or another, those one-time responses seem to be sufficient to satisfy the patrons' query.

Table 4

Number of Replies Before Closing the Transactions from March 2021 to June 2022
(Source: Statistics: Quality of Service (QoS) | 2022, August 31)

Number of Replies to Close a Transaction	Number of Ticket Transactions	Percentage
<=1	2,713	77
2	595	17
3	162	5
4	38	1
5	18	1
6	5	0
7	1	0
8	1	0
9	1	0
10	0	0
11	0	0
>=12	0	0
Total Tickets	3,534	100
Total Replies	4,148	

Ticket Ratings

Aside from getting feedback, patrons were also asked to rate the library virtual service. Using the QoS, the Library can send an automated follow-up evaluation email to at least 25% of the tickets closed everyday. There were patrons who have generously provided their honest feedback to improve the service. In rating the service, the Library used an available template with a simple Likert scale from 1-5 as shown below:

- 5 Excellent**
- 4 Good**
- 3 Satisfactory**

2 Poor
1 Needs Improvement

From March 2021 – June 2022, QoS received 644 ticket ratings. Out of 644 tickets, 557 or 86% received an excellent rating from the patrons as shown in Figure 1. This denotes that the patrons were satisfied with the virtual responses and the overall service they received from the library.

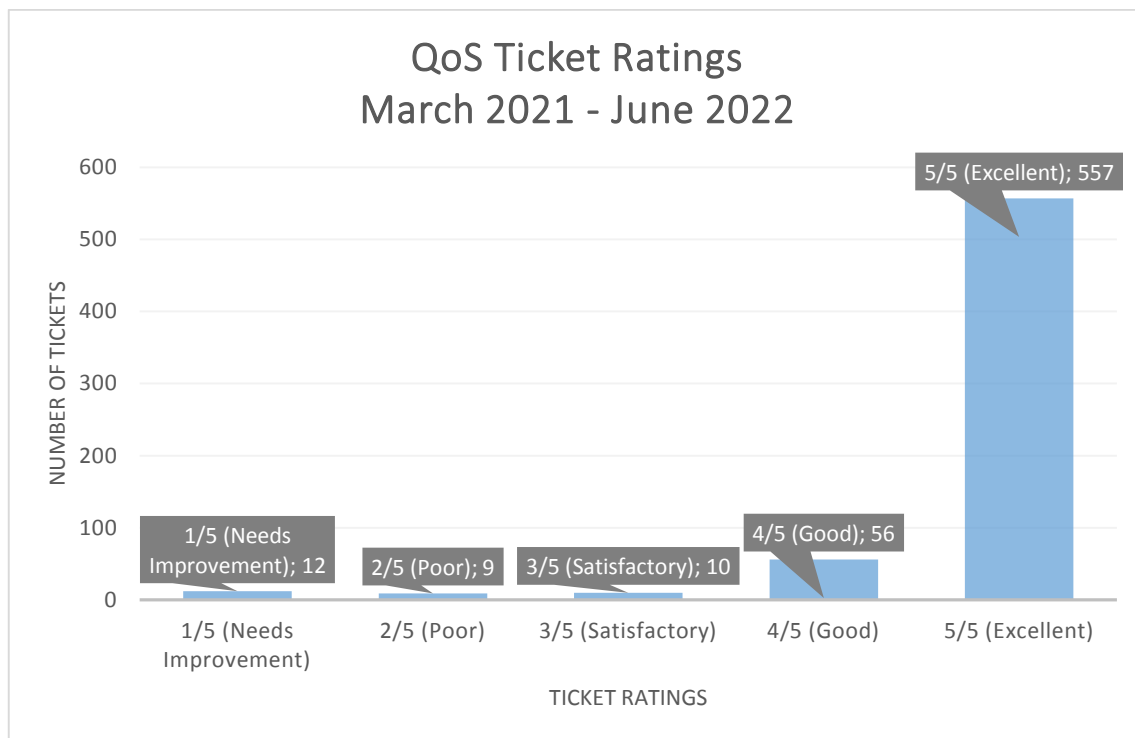


Fig. 1. QoS Ticket Ratings from March 2021 to June 2022
(Source: Statistics: Quality of Service (QoS) | 2022, August 31)

Chat Turnaround

Time is of the essence with regards to library chat service in a virtual environment. When handling the chat service, the library needs to make sure that operators are online within the working hours. There are times that multiple chat transactions were received, thus, it is highly encouraged to have at least 1-2 operators online to ensure that all chat transactions were handled as quick as possible. Since the operators are reference librarians who are also subject librarians, they have other things to attend to such as conducting library instructions, information literacy sessions, and even liaise with their respective schools. Thus, scheduling the chat duties of reference librarians has been practiced from the get-go.

Table 5 below revealed that out of 1,732 chat transactions, 1,629 or 94% were claimed by the operator within 15 seconds or less. This further signifies that operators treat each chat transactions urgent and ensure that the chat has been handled as quick as possible.

Table 5

Chat Turnaround Time Before Getting Claimed (1st Reply) from March 2021 to June 2022
(Source: Statistics: Quality of Service (QoS) | 2022, August 31)

Wait Time to Response	Number of Chat Transactions	Percentage
0-15 seconds	1,629	94
15-30 seconds	83	5
30-45 seconds	14	1
45-60 seconds	0	0
1-2 minutes	2	0
2-3 minutes	2	0
3-4 minutes	2	0
4-5 minutes	0	0
5+ minutes	0	0
Total	1,732	100

Chat duration is also being analyzed through the QoS. This is also fundamental in assessing the quality of service as well as the user satisfaction during the chat transaction as it determines the duration until the patron is satisfied with the response from the operator. There are times that the patron has other questions and concerns that he can ask during the chat. Given the nature of the chat as instant and more personalized since the operator is also conducting a reference interview in a virtual setting, chances are the patron will feel comfortable chatting to the operator, thus, asking more questions. Depending on how the chat went through, most of the chat transactions (540 or 31%) lasted for 5-10 minutes as shown in Table 6 below.

Table 6

Chat Duration from March 2021 to June 2022
(Source: Statistics: Quality of Service (QoS) | 2022, August 31)

Chat Duration	Number of Chat Transactions	Percentage
0-2 minutes	221	13
2-5 minutes	459	27
5-10 minutes	540	31
10-15 minutes	247	14
15-20 minutes	125	7
20-25 minutes	42	2
25-30 minutes	31	2
30-40 minutes	40	2
40-50 minutes	20	1
50-60 minutes	4	0
60+ minutes	3	0
Total	1,732	100

Chat Ratings

The same with ticket ratings, QoS also collects chat ratings to measure the synchronous service provided via instant messaging. Through chat, patrons can get quick on-the-spot answer to their questions. From March 2021 to June 2022, the library received 1,732 chat transactions. Despite more than half of the total transactions did not receive any ratings, 663 chats transaction or 38% rated the transactions excellent which further signifies that patrons were satisfied with the synchronous service given by the chat operators.

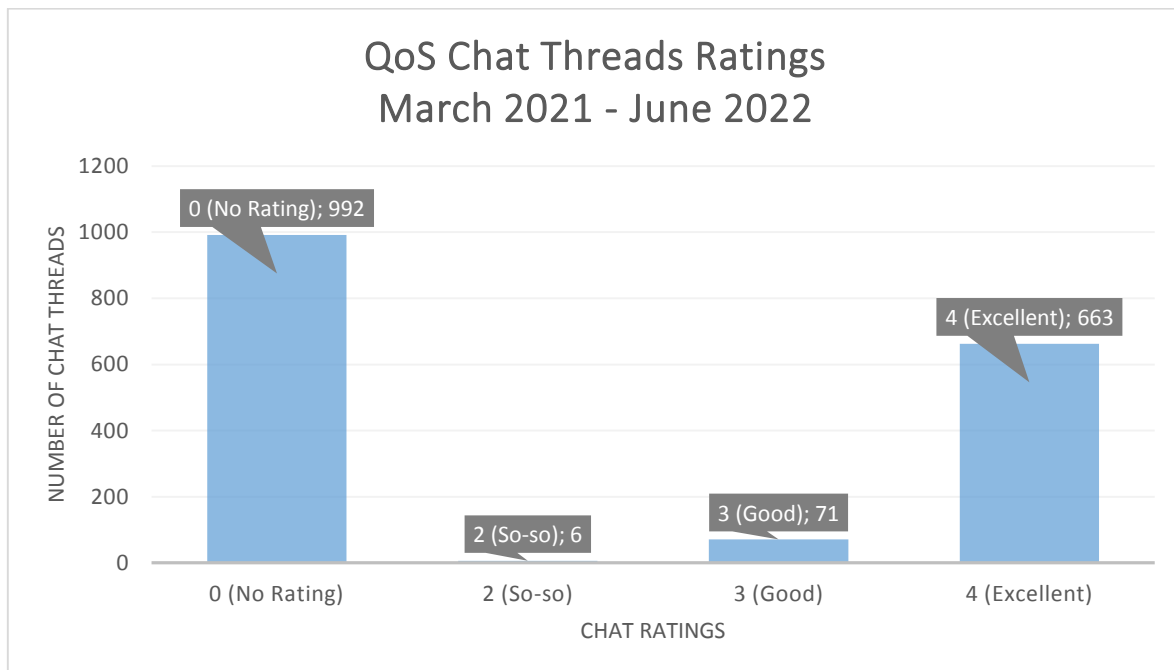


Fig. 2. QoS Chat Threads Ratings from March 2021 to June 2022

(Source: Statistics: Quality of Service (QoS) | 2022, August 31)

Given the metrics presented, it can be noted that patrons were generally satisfied with the virtual service rendered by NU Library. Moreover, creating a set of guidelines to ensure that all transactions were handled also plays an essential role in keeping all operators guided especially during the crisis.

User Feedback

Aside from the metrics from QoS, it is indeed interesting to know how satisfied the users based on their honest feedback. Through this feedback, the library can understand how the users perceived the service. Since the service rendered were virtual in nature, it is quite challenging and tricky to know if the patron is satisfied with the service he received as well as his overall experience.

Ticket and Chat Feedback

To provide a visual representation of the patrons' feedback on tickets handled by the NU Library, the researcher made use of the Voyant Tools, a web-based application used for text

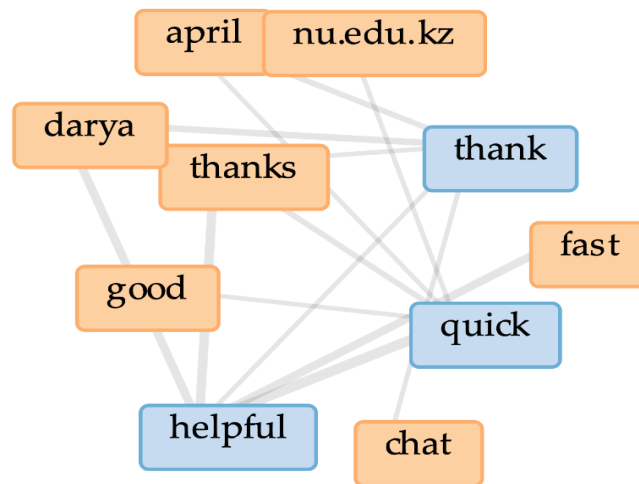


Fig. 6. Collocates Graph from Chat Feedback from March 2021 to June 2022 generated using Voyant Tools

Voyant Tool's Bubbles is a playful visualization of frequent terms in the feedback received. A bubble will be created in the canvas for each keyword in the feedback. As the same keyword is being read and repeated all throughout the document, the number of count for that keyword increases alongside with the size of the bubble. At the same time, high frequency terms in descending order were also found at the right side of the canvas. Figures 7 and 8 show the bubbles for ticket and chat feedback, respectively.



Fig. 7. Bubbles from Ticket Feedback from March 2021 to June 2022 generated using Voyant Tools

In all three data visualization tools used in the study, the same keywords were found to describe how patrons felt satisfied with the virtual library service whether in synchronous or asynchronous format. In a hindsight, the patrons seem to be satisfied with their overall experience with regards to virtual services provided by the NU Library.

Conclusions

With the emergence of technology and the changing demands of users, having a virtual library service is not really a new thing. However, the pandemic has made the world realized that libraries should remain flexible and innovative without compromising the quality of service they rendered to their clients. Having said that, this study revealed that patrons were satisfied with the virtual service rendered by NU Library both in synchronous and asynchronous format. With the help of the metrics generated from LibAnswers Quality of Service (QoS) feature, the NU Library was able to provide an excellent service despite the limitations brought by the pandemic. The feedback from patrons was indeed a proof of their satisfaction. As service quality and user satisfaction will always go together, the library, as a service-oriented information arm of any institution, should always put their patrons as their top priority.

REFERENCES

- Adeniran, P. (2011). User satisfaction with academic libraries services: Academic staff and students perspectives. *International Journal of Library and Information Science*, 3(10), 209-216. doi: <https://doi.org/10.5897/IJLIS11.045> (in English)
- Ahmad, H., & Allan, M. (2014). *Customer satisfaction*. Universiti Utara Malaysia. Retrieved from <https://ebookcentral-proquest-com.ezproxy.nu.edu.kz/lib/astana/detail.action?docID=6766392> (in English)
- Breeding, M. (2021, Jan. 27). Springshare: Measuring user satisfaction with LibAnswers. *Library Technology Guides*. Retrieved from <https://librarytechnology.org/pr/25868> (in English)
- Cook, C., Heath, F., Thompson, B., & Webster, D. (2003). LibQUAL+TM: Preliminary results from 2002. *Performance Measurement and Metrics*, 4(1), 38-47. doi: <https://doi.org/10.1108/14678040310471239> (in English)
- Customer satisfaction. (2011). In J. Law. *Business: the ultimate resource* (3rd ed.). United Kingdom: A&C Black (in English)
- Dahan, S. M., Taib, M. Y., Zainudin, N. M., & Ismail, F. (2016). Surveying users' perception of academic library services quality: A case study in university Malaysia Pahang (UMP) library. *The Journal of Academic Librarianship*, 42(1), 38-43. doi: <https://doi.org/10.1016/j.acalib.2015.10.006> (in English)
- Gathoni, N., & Van der Walt, T. (2019). Evaluating library service quality at the Aga Khan University library: Application of a total quality management approach. *Journal of Librarianship and Information Science*, 51(1), 123-136. doi: <https://doi.org/10.1177/0961000616679725> (in English)
- Kiran, K. (2010). Service quality and customer satisfaction in academic libraries: Perspectives from a Malaysian university. *Library Review*, 59(4), 261-273. doi: <https://doi.org/10.1108/00242531011038578> (in English)
- Martensen, A., & Grønholdt, L. (2003). Improving library users' perceived quality, satisfaction and loyalty: an integrated measurement and management system. *The Journal of Academic Librarianship*, 29(3), 140-147. doi: [https://doi.org/10.1016/S0099-1333\(03\)00020-X](https://doi.org/10.1016/S0099-1333(03)00020-X) (in English)

LIBRARY SERVICES FOR SCIENCE AND EDUCATION SUPPORT

- Nitecki, D. A. (1996). Changing the concept and measure of service quality in academic libraries. *The journal of academic librarianship*, 22(3), 181-190. Retrieved from https://www.academia.edu/7086644/Changing_the_concept_and_measure_of_service_quality_in_academic_libraries (in English)
- Nitecki, D. A., & Herson, P. (2000). Measuring service quality at Yale University's Libraries. *Journal of Academic Librarianship*, 26(4), 259-273. doi: [https://doi.org/10.1016/S0099-1333\(00\)00117-8](https://doi.org/10.1016/S0099-1333(00)00117-8) (in English)
- Oliveira, S. M., & Greenidge, N. (2020). Information seeking behavior of distance learners: What has changed in twenty years? *Journal of Library & Information Services in Distance Learning*, 14(1), 2-27. doi: <https://doi.org/10.1080/1533290X.2020.1791301> (in English)
- Parasuraman, A., Zeithaml, V. A., & Berry, L. L. (1988). SERVQUAL: A multiple-item Scale for measuring consumer perception of service quality. *Journal of Retailing*, 64(1), 12-40. Retrieved from https://www.researchgate.net/publication/225083802_SERVQUAL_A_multiple-Item_Scale_for_measuring_consumer_perceptions_of_service_quality (in English)
- Pedramnia, S., Modiramani, P., & Ghavami Ghanbarabadi, V. (2012). An analysis of service quality in academic libraries using LibQUAL scale: Application oriented approach, a case study in Mashhad University of Medical Sciences (MUMS) libraries. *Library Management*, 33(3), 159-167. doi: <https://doi.org/10.1108/01435121211217144> (in English)
- Cristobal, A. S. (2018). Expectations on library services, library quality (LibQual) dimension and library customer satisfaction: Relationship to customer loyalty. *Library Philosophy and Practice*. 1706. Retrieved from <https://digitalcommons.unl.edu/libphilprac/1706> (in English)
- Sinclair, S., & G. Rockwell. (2022). Bubbles. *Voyant Tools*. Retrieved September 1, 2022. Retrieved from <https://voyant-tools.org/?corpus=576d1f7bc248006ea2b35029a8389557&view=Bubbles> (in English)
- Sinclair, S., & G. Rockwell. (2022). Bubbles. *Voyant Tools*. Retrieved September 1, 2022. Retrieved from <https://voyant-tools.org/?corpus=70f20abe5258ae40da6ec34799aa0601&view=Bubbles> (in English)
- Sinclair, S., & G. Rockwell. (2022). Cirrus. *Voyant Tools*. Retrieved September 1, 2022. Retrieved from <https://voyant-tools.org/?visible=105&corpus=576d1f7bc248006ea2b35029a8389557&view=Cirrus> (in English)
- Sinclair, S., & G. Rockwell. (2022). Cirrus. *Voyant Tools*. Retrieved September 1, 2022. Retrieved from <https://voyant-tools.org/?visible=95&corpus=70f20abe5258ae40da6ec34799aa0601&view=Cirrus> (in English)
- Sinclair, S., & G. Rockwell. (2022). Links. *Voyant Tools*. Retrieved September 1, 2022. Retrieved from <https://voyant-tools.org/?query=helpful&query=thank&query=quick&mode=corpus&corpus=576d1f7bc248006ea2b35029a8389557&view=CollocatesGraph> (in English)
- Sinclair, S., & G. Rockwell. (2022). Links. *Voyant Tools*. Retrieved September 1, 2022. Retrieved from <https://voyant-tools.org/?query=thank&query=service&query=library&mode=corpus&corpus=70f20abe5258ae40da6ec34799aa0601&view=CollocatesGraph> (in English)
- Smith, A. M. (1995). Measuring Service Quality: is SERVQUAL now Redundant? *Journal of Marketing Management*, 11(1-3), 257-276. doi: <https://doi.org/10.1080/0267257X.1995.9964341> (in English)
- SpringShare. (2021). *LibAnswers statistics: Quality of Service statistics for tickets & chats* [web-site]. Retrieved from <https://ask.springshare.com/libanswers/faq/2856> (in English)

- Twum, K. K., Adams, M., Budu, S., & Budu, R. A. A. (2022). Achieving university libraries user loyalty through user satisfaction: the role of service quality. *Journal of Marketing for Higher Education*, 32(1), 54-72. doi: <https://doi.org/10.1080/08841241.2020.1825030> (in English)
- Vogus, B. (2020). Examining virtual reference services in academic libraries. *Public Services Quarterly*, 16(4), 249-253. doi: <https://doi.org/10.1080/15228959.2020.1818664> (in English)
- Wang, I.-M., & Shieh, C.-J. (2006). The relationship between service quality and customer satisfaction: the example of CJC library. *Journal of Information & Optimization Sciences*, 27(1), 193-209. doi: <https://doi.org/10.1080/02522667.2006.10699686> (in English)
- Yap, J. M., & Manabat, A. R. (2021). Are we in-sync? Students' virtual instructional experience and perceived information literacy skills in time of pandemic. *Internet Reference Services Quarterly*, 25(4), 169-184. doi: <https://doi.org/10.1080/10875301.2021.1988796> (in English)

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Як вам наші бібліотечні електронні сервіси? Вимірювання задоволеності користувачів у віртуальному середовищі

Мета. Дане дослідження має на меті визначити задоволеність користувачів бібліотеки віртуальним сервісом Бібліотеки Назарбаєв Університету протягом весняного семестру 2021 – весняного семестру 2022 року. **Методи.** У дослідженні використано описовий підхід для визначення задоволеності користувачів віртуальним сервісом Бібліотеки Назарбаєв Університету протягом весняного семестру 2021 – весняного семестру 2022 року. Використовуючи дані, зібрані в рамках дослідження якості обслуговування LibAnswers (QoS), були розглянуті різні метрики у відповідях на запити, отримані як у синхронному (чат-сервіс), так і в асинхронному (електронна пошта) віртуальному сервісі. Статистичні дані були зведені в таблиці та проаналізовані, а відгуки відвідувачів інтерпретовані за допомогою веб-програми візуалізації даних Voyant Tools. **Результати.** Дослідження описує, наскільки користувачі задоволені віртуальним бібліотечним сервісом Бібліотеки Назарбаєв Університету, згідно з їхніми відгуками та загальним досвідом роботи з сервісом. Крім того, дослідження показало, що бібліотека вважає всі віртуальні транзакції невідкладними і ставить задоволення своїх користувачів на перше місце на основі метрик. **Висновки.** Дослідження показало, що користувачі задоволені віртуальним сервісом, який надає Бібліотека Назарбаєв Університету як в синхронному, так і в асинхронному форматі. За допомогою метрик, згенерованих функцією LibAnswers' Quality of Service (QoS), бібліотека змогла забезпечити відмінний сервіс, незважаючи на обмеження, спричинені пандемією. Відгуки відвідувачів були справді доказом їхнього задоволення. Оскільки якість обслуговування та задоволеність користувачів завжди йтимуть разом, бібліотека, як сервіс-орієнтований інформаційний підрозділ будь-якої установи, завжди повинна ставити своїх користувачів на перше місце серед своїх пріоритетів.

Ключові слова: задоволеність користувачів; віртуальний бібліотечний сервіс; якість обслуговування; Quality of Service (QoS); Назарбаєв Університет; Казахстан

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Reorienting Library Space and Services of Book Depositories under the Conditions of Martial Law in Ukraine: The Case of the Largest Libraries of Zakarpattia

Objective. The research aims to explore the practical experience of the activity transformation of Ukrainian libraries during the military invasion of the Russian Federation on the territory of Ukraine. **Methods.** The analysis of world publications allowed: to attempt identifying the specific methods of library work during extreme events; to conduct an analysis of the services of educational and public libraries; to prove the effectiveness of psychological and moral library support to the population; and to identify its most effective forms. **Results.** The substantiation of the obtained results is based on the characteristics of the library of the Uzhhorod National University and the Transcarpathian Regional Universal Scientific Library named after F. Potushniak, aimed at supporting victims of war. The most active methods of library work during the first months of the war between Russia and Ukraine were revealed. Analysis of the provision of library services confirms the importance of book depositories as an important centre for uniting people for mutual support. The paper outlines practical recommendations regarding the active participation of libraries in the lives of people forced to flee from places of active hostilities. There is a burst of creative library changes associated with the reorientation of the library space and services according to the social challenge posed by Russia's military aggression. **Conclusions.** The ability of the largest library institutions in Zakarpattia to provide moral support to people affected by the war has been revealed. The role of library support as an important factor in practical assistance to people has been confirmed.

Keywords: libraries of Ukraine; library services during the war; library activities for temporarily displaced persons; library during hostilities; Scientific Library of Uzhhorod National University; Transcarpathian Regional Universal Scientific Library named after F. Potushniak

Introduction

Human consciousness is capable of rethinking extraordinary events and rapidly reacting to them with changes. Our generation has faced terrible trials due to the so-called "state of crisis" and these are the COVID-19 pandemic and the war started by Russia against Ukraine.

Since the Russian aggression against the Ukrainian people, the main priorities in the activities of people, organizations, and institutions, including libraries, have shifted.

The Russian-Ukrainian war, as a direct use of armed force by the Russian Federation against the sovereignty and territorial integrity of Ukraine, began on February 20, 2014, with the capture and temporary occupation of the Crimean Peninsula. This same year, starting from April, Russia's military aggression moved to the east of Ukraine (Donbas) resulting in the creation of the terrorist so-called Donetsk and Luhansk "people's republics" under the guise of popular actions by the Russian intelligence services. Russia's large-scale invasion of Ukraine took place on February 24, 2022 and began after a long military build-up and Russia's recognition of its puppet entities DPR and LPR as independent states.

Undoubtedly, this bloody war destroys everything in its path: human lives, buildings, infrastructure of cities and villages, kindergartens, schools, universities, theatres, libraries...

Humanity in general and the population of European countries in particular have already witnessed the most terrible destruction of libraries and archives during crisis situations – armed conflicts or natural disasters. But the threat to the further intellectual development of humanity is also posed by pandemics, which make physical contact between people impossible, for example,

when studying, conducting research, during self-improvement or recreation. That is, all the opportunities that the university library can provide.

Literature Review

The world knows the most dramatic story of August 1992 during the break-up of the former Yugoslavia and the Bosnian War. The National and University Library of Bosnia and Herzegovina, which was located in the historic Town Hall of Sarajevo, was virtually completely destroyed. Unique historical ancient documents were completely lost, including one of the world's most important collections of medieval Islamic manuscripts (Kossiakoff, 2004; Bakaršić, 2002).

An urgent issue is the need to preserve rare and valuable publications, for example, by creating special electronic collections (document digitization) and displaying metadata in web catalogues.

Libraries became very important during the difficult period of uncertainty faced by society during the viral spread around the world. The contribution of university libraries became particularly significant in combating fake news during crisis situations, such as the COVID-19 pandemic, when physical visits to libraries were impossible (Bangani, 2021).

Problems of improving the psychological state of the university community have become an important criterion for the work of libraries in educational institutions. Thus, in response to a marked increase in the prevalence and severity of mental health problems among students, faculty and service personnel, universities and their libraries are expanding their wellbeing initiatives and programmes (Bladek, 2021).

Ukrainian librarians (scientists and practitioners) were quick to respond to a situation that needed a change in library priorities, which became the active introduction of new areas of library activities in crisis conditions. After all, the library community needed methodological developments in resetting libraries, a clear definition and characteristics of the organization of remotely working teams of the libraries of higher education institutions (HEI) during the transition phase of library teams to remote work (Kolesnykova, 2020).

However, examples describing the response of university libraries to the challenges that arose during the full-scale Russian-Ukrainian war (fakes, substitution of notions, cyber-attacks, terror and intimidation of Ukrainian citizens, etc.) are still scarce.

Therefore, the **objective** of this study is to analyse the changes in the activities of the two largest libraries of Zakarpattia under the conditions of martial law in Ukraine.

Methods

The research presents actual data collected for the period from 24.02.2022 to 01.08.2022, based on the analysis of the work of two major libraries in Zakarpattia: the educational – Scientific Library of the Uzhhorod National University (hereinafter – UzhNU Library), and the public – Transcarpathian Regional Universal Scientific Library named after F. Potushniak (hereinafter – TRUSL).

The research focused on changes in the reorientation of library space and services, in accordance to the social challenge of society caused by Russia's military aggression against Ukraine. It also includes the analysis of the upsurge of creative library changes related to the specific location of the Transcarpathian region and to the sheltering of internally displaced people and refugees there.

The author collected relevant data for further analysis, preparation and planning of the work of the UzhNU library in case of natural disasters. And this remains an essential criterion in

operational and strategic planning for libraries in case of a crisis situation in Zakarpattia (pandemic, natural disaster, war).

Results and Discussion

Like many other libraries of Ukraine, the largest book depositories in Zakarpattia are united by a single decision - to help people in the difficult period of displacement in order to save their lives. According to official UN data, only in the first month of the war – 3.9 million Ukrainians became refugees, and another 6.5 million – temporarily displaced persons. During the first month of the war, about half a million people moved to the territory of Zakarpattia. As of August 2022, about 380,000 internally displaced people remain temporarily in Zakarpattia Oblast, according to mobile operators in Zakarpattia. What kind of help was waiting for people who fled from the war and left their homes? Already in the first days of the war, Uzhhorod volunteers organized appropriate help points for people at the city railway station, from which thousands of people were coordinated daily to the volunteer centre - the "Owl's Nest" Humanitarian Aid Centre, which, in cooperation with city council workers, redirected people to temporary accommodation.

Within a month, some 60,000 people had already moved into the small town of Uzhhorod, although the city has a population of only 110,000. First of all, people were accommodated in all student dormitories of the Uzhhorod National University, in 12 schools of the city of Uzhhorod and the largest sports complex "Yunist". Every day, twice a day, humanitarian aid started to be delivered from the "Owl's Nest" to almost 30 settlements where displaced persons temporarily lived. Having barely recovered from the horrors of the war, people slowly began to return to life, as Zakarpattia became their only safe haven.

Since the first days of the war, the two largest libraries of Zakarpattia have actively transformed their library services to meet the needs of those who left home, jobs and relatives. Despite the fact that each of the mentioned libraries differs in its user audience and purpose, it was their prerogative to help those affected both financially and psychologically. Librarians immediately joined the volunteer movement in support of the Armed Forces of Ukraine (AFU) and war-weary people. Fundraising for the AFU, helping to resettle people, distributing humanitarian aid, and providing psychological support became the priority steps of assistance. These steps, while not purely librarian in nature, were a manifestation of humanity and mutual assistance.

Scientific Library of Uzhhorod National University

Just hours from the declaration of war with Russia, Uzhhorod University extends a helping hand to anyone in need. Uzhhorod National University is the largest educational institution in Zakarpattia. More than 16,000 students, including 1,200 foreign students studying at the medical faculty, receive their education at 22 faculties. From the first days of the hostile attack on Ukraine, the university's leadership has directed its policy towards supporting those affected by the war. UzhNU has become a refuge for three thousand internally displaced persons, a third of whom are children. Already after a month of martial law in the country, the university begins to accept internally displaced students under the academic mobility programme. In addition to education, the university offers library services to every displaced student, from textbooks to electronic databases.

Since March 2022, the UzhNU library has transformed its largest reading room of 430 m² into a special workspace for faculty and library colleagues from other Ukrainian HEIs who had to move from Kiev, Kharkiv, Mykolaiv, Sloviansk, Dnipro, Kropyvnytskyi, Odesa, and other

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locations. All of them continued to support distance learning for students and the provision of online library services to their university communities. Escaping from the war, most teachers and scholars did not have their own laptops, internet access, teaching guides or lecture notes. The university library cheerfully offered the displaced teachers a location with high-speed internet, provided them with access to workplaces, set up facilities for online lectures, and opened all of its two million book collections, including 800,000 pieces of scholarly literature. Even aware of the migrant parents' concerns for their children, the library created a separate children's area, keeping an eye on the children during the lectures given by their parents.

A separate electronic reader database was created for the migrant teachers, through which the library targeted these scholars with information about new professional periodicals with scanned content pages, in order to introduce them to new scientific publications. The Library's Centre for Scientometrics and Information Support for Education and Science offered the researchers who moved to Uzhhorod free access to use influential global scientometric databases, such as Scopus and Web of Science. Scientists who received the status of internally displaced persons received a number of other free services in the university library, such as:

- UDC indexing and author cutter number;
- In-depth thematic selection of literature;
- Editing of the bibliographic description by: DSTU / international standards;
- Checking texts for borrowing;
- Consultation on the acquisition of informational competencies;
- Preparation of factual references;
- Preparation of thematic references;
- Electronic document ordering, etc.

The university library offered informational assistance to its new users, because the library's website provides free access to all digitized library collections, the electronic catalogue, the university repository, and offers online services. The scientific library has intensified support for people through social media. Its Facebook page has constantly featured advice on coping with panic attacks, first aid for wound and life protection. It presents a number of in-house developed information products created by the library staff. These include virtual exhibits such as "First Aid Instruction", "Online Guides", how to protect yourself from chemical and nuclear attacks and many other useful information offered by the library online.

The library staff joined a volunteer gathering to provide humanitarian aid (clothes, medicines, hygiene products, etc.) for the territorial defence of our capital, which at the time was under the enemy's greatest attack. Almost all of the library's workers donated the funds received from the state, due to the covid disease, to the military needs of the AFU.

The university library widely promoted the involvement of its users in a First Aid workshop by the Red Cross Society, organised by the university association "UzhNU Volunteerism".

The library, when needed, directed its internally displaced users to the office of the Centre for Legal Support of Persons Affected by the Military Invasion, which operates successfully under the auspices of the National Academy of Sciences of Ukraine and UzhNU and is housed at the university's Faculty of Law. This Centre is the base for organisational and advisory support to persons affected by the military invasion of the Russian Federation. The Centre assists in:

- Providing organisational and advisory support to persons who intend to or have already obtained refugee status outside Ukraine;
- Providing legal assistance to internally displaced persons;
- Collecting and documenting the facts of human rights violations as a result of the military invasion;

- Creating favourable and effective conditions for the realisation and restoration of violated human rights, especially those of the socially vulnerable strata of population (elderly people, women and children);

- Providing legal advice to representatives of relocated businesses.

Over 400 internally displaced persons benefited from this legal assistance during their six-month stay in the city of Uzhhorod.

The Scientific Library informed the refugees at UzhNU about the free dental services they could receive at the university dental clinic.

The book depository engaged its new users in a training session of the Office of the High Commissioner for Refugees, which took place on 4 May 2022 within the walls of UzhNU.

The university library involved its users in regular trainings with psychologists, which were performed by the best scientists of UzhNU, and even offered its own photo-relaxation called "Sakurotherapy in the Library Courtyard".

From the early days of the war, all employees of UzhNU, including the considerable staff of the Scientific Library, participated in the weaving of camouflage nets on a daily basis. In one of the library premises, a training point for weaving techniques and collecting fabrics for masking was created. The motto, under which all those willing to help the AFU worked conscientiously, was "A camouflage net a day for the military". For example, only the last weekend of February was spent in active work. Over a hundred people of all ages and occupations, including many university librarians, in 20 hours of coordinated work produced 80 meters of protective netting for the military, such a pace of work was the beginning of important support and assistance to the defenders of Ukraine.

The UzhNU library hospitably invited temporary displaced people to take advantage of its many thousands of fiction books for all tastes, from historical subjects to the most popular Ukrainian prose. Library desks were available in all university dormitories where internally displaced people lived.

The Uzhhorod University library team hospitably invited guests of the city to "Backstage Library Tours". The guests were delighted to look at the old books, marvelled at the miniature books, and were impressed by the scale of the library's book storages, which store its million strong collections.

Possessing a unique fund of manuscripts, old prints and rare publications, the Scientific Library of the Uzhhorod National University is creating their online catalogue. It has developed and is implementing a strategy of digitizing rare editions, as this collection of remarkable manuscripts and printed objects of the 15th–19th centuries is represented by valuable editions and individual unique examples of both domestic and foreign book printing and manuscripts. The total collection of rare books is more than 20,000 items, among which more than 10,000 are old prints in 18 languages of the world, and over 500 manuscript books. The collection of rare books of the University library can be considered as a unique source of information about the world, European and national history, history of culture, linguistics, history and art of book. The unique collection of incunabula of the UzhNU Scientific Library includes 32 items in 25 storage units of the Library's collection. The martial law situation in the state did not stop the library research and the creation of the electronic thematic catalogue "Incunabula and Paleotypes from the Collection of the Uzhhorod University Library".

Transcarpathian Regional Universal Scientific Library named after F. Potushniak

The work of the largest public library in Zakarpattia - TRUSL named after F. Potushniak - was no less creative in its solutions. It launched a new project "TATOHUB", whose main mission

was to support families during the war in Ukraine. It has become the best art centre in the city for displaced children.

The regional public library stepped up activities that offered the temporarily displaced people useful employment tips and CV writing skills. The library offered them several ongoing conversation clubs, with the Ukrainian and English language clubs being particularly popular. Classes were held three times a week, according to age and level of proficiency. It is an encouraging fact that the free conversation club "Ukrainian for Life" was run by Sofia Kitseliuk, a Ukrainian language teacher who also moved to Uzhhorod from Zaporizhzhia.

Library support brings together those in dire need of moral support, and these are such library events as the women's meeting "Proud of the AFU". Wives, mothers, sisters, daughters, granddaughters, nieces, friends, fiancées, with the aim of supporting each other and the defenders of the Armed Forces of Ukraine, rallied through stories, discussions, experiences and moral support. The meeting-discussion "How to live on?" was special for internally displaced people, at which they talked about overcoming the psychological consequences of the war with Yevhen Kyrbaba, a practical psychologist, psychosomatics specialist from Kharkiv. To maintain mental balance and improve emotional well-being, morning yoga was offered by volunteers of the "Tsinnist" Reset Space at the library.

The users met with interest the information event "Information Wars: How to Counteract Disinformation" covering the discussion on popular Russian narratives, creation of collective information immunity of Ukrainians, manipulation of public opinion, spread of fakes, fact-checking and other important aspects during the information war.

The Public Library organised the premedical aid training adapted to the present and delivered by professional trainers engaged in military training (the training is presented on YouTube).

Three times a week, TRUSL n. a. F. Potusniak hosts educational classes for children who found themselves in Uzhhorod, fleeing the war with their parents. It was at the regional public library that NGO Ecosphere launched a new project for displaced children called Green Vacation. The programme included trainings, workshops, quests, research, watching informative films, and holding discussions, games, quests or research in the city park.

A fun biblioquest and bubble flash mob were organised for 20 children from Kyiv, Zhytomyr, Kharkiv and Uzhhorod in the Potusniak library on Children's Day. The children performed various tasks, and at the end drew pictures for the defenders of Ukraine and sculpted patriotic compositions. The event was held with the support of the VilnoHub project, implemented as part of the "Dream and Act" programme. Within the framework of the same programme, on Vyshyvanka Day, the library conducted a master class on embroidering amulets in national colours for about 30 participants from Kramatorsk, Kharkiv, Kyiv, Dnipro, Bakhmuth, Chernigiv, Zaporizhzhia and Uzhhorod. Adults and children embroidered the national symbols of Ukraine, angel talismans and the famous dog Patron.

The library successfully held a charity exhibition and sale of photographs in support of the Ukrainian Armed Forces. The funds raised during the photo exhibition and sale were donated to the volunteer organization Movement to Support the Transcarpathian Military.

The art therapy by the local theatre for children "Bavka Puppet Theater" and the event supported by the Department of Culture, Nationalities and Religions of Zakarpattia Regional Military Administration "BOGRACH-party", which provided a free family excursion to learn about the history of Uzhhorod, were undoubtedly successful. The most famous researcher of the regional city, Tetiana Literati, talked about new aspects of Uzhhorod's history.

The work of the libraries mentioned by us also has common ideas and initiatives. Among creative library activities, there are some common ones that each library successfully implements,

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choosing the same main topic. This is the case of the "Take a book you like" action. Caring residents of the city bring publications to the library, and the library uses them to fill the bookshelves, where one may take a book without making a note in the form. Librarians encourage users to borrow books without returning them.

Both the university library and the public library offer temporary displaced people screenings of the best Ukrainian films by famous Ukrainian filmmakers. They are: the film directed by Sergei Paradzhanov "Shadows of Forgotten Ancestors", Vladimir Denisenko's "Dream", Boris Ivchenko's "The Lost Letter", etc.

Each of the libraries at its location is constantly collecting Ukrainian-language children's books for children who are forced to stay abroad. Books have gone to Hungary, the Czech Republic, Slovakia, Poland and the Baltics.

A vivid example of Transcarpathian hospitality was the "Easter Basket" campaign, through which the collected, traditional Transcarpathian Easter products were distributed to temporary residents of the city's hostels so that they could enjoy the traditional Transcarpathian Easter dishes.

It is impossible not to mention the trainings on the provision of premedical aid, organized in each of the libraries. Such trainings, adapted to the present, were conducted by professional military trainers.

Conclusions

Thus, the analysis of changes in the activities of the two largest libraries of Zakarpattia under the conditions of martial law in Ukraine proves that the beginning of the Russian aggression was the beginning of trials both for the entire Ukrainian people as well as for librarians in relatively dangerous regions of Ukraine. The ordeal that befell people had an impact on their psychological state, moral endurance and ability to overcome life's problems.

With their significant informational potential, library workers have become a stronghold of support for all segments of the population. Of particular importance are their creative ways of introducing new library services and reorienting the library space as an important location of unity to solve both educational and socio-humanitarian problems for war-affected people.

The two largest libraries in Zakarpattia, the Scientific Library of Uzhhorod National University and the Transcarpathian Regional Universal Scientific Library named after F. Potushniak, have become cultural and spiritual shelter for people in need of support and help. The libraries directed all their efforts to the needs of those who remained with Ukraine in its most difficult time.

Ukraine is bravely marching towards victory. Its people demonstrate endurance and strength, drawn from support and trust. Libraries are the centers that bring people together to help each other and to believe in a peaceful future. The libraries of Zakarpattia are coping with these tasks with dignity.

REFERENCES

- Bakaršić, K. (2002). Back where we started: Bosnia's digital archives. *Slavic & East European Information Resources*, 3(2-3), 55-79. doi: https://doi.org/10.1300/J167v03n02_07 (in English)
- Bangani, S. (2021, Sept.). The fake news wave: Academic libraries' battle against misinformation during COVID-19. *The Journal of Academic Librarianship*, 47(5), 102390. doi: <https://doi.org/10.1016/j.acalib.2021.102390> (in English)

- Bladek, M. (2021, May). Student well-being matters: Academic library support for the whole student. *The Journal of Academic Librarianship*, 47(3), 102349. doi: <https://doi.org/10.1016/j.acalib.2021.102349> (in English)
- Kolesnykova, T. (2020). Higher education libraries under uncertainty: the specific of the staff remote work organizing. *Ukrainian Journal on Library and Information Science*, 6, 40-61. doi: <https://doi.org/10.31866/2616-7654.6.2020.218608> (in Ukrainian)
- Kossiakoff, M. (2004). The art of war: the protection of cultural property during the “siege” of Sarajevo (1992–95). *DePaul Journal of Art, Technology & Intellectual Property Law*, 14(1), 161-163. Retrieved from <https://via.library.depaul.edu/jatip/vol14/iss1/5> (in English)

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Переорієнтування бібліотечного простору та послуг книгозбірень в умовах воєнного стану в Україні: на прикладі найбільших бібліотек Закарпаття

Мета. Дослідження спрямоване на вивчення практичного досвіду трансформації діяльності українських бібліотек в період військового вторгнення російської федерації на територію України. **Методика.** За допомогою світових публікацій здійснена спроба виявити профільні методики бібліотечної роботи під час екстремальних подій, проведено аналіз послуг освітньої та публічної бібліотек, доведено ефективність психологічної, моральної бібліотечної підтримки населенню, виявлені найефективніші їх форми. **Результати.** Обґрунтування отриманих результатів базується на характеристиці роботи бібліотеки Ужгородського національного університету та Закарпатської обласної універсальної наукової бібліотеки ім. Ф. Потушняка, спрямованої на підтримку постраждалим від воєнних дій. Виявлено найактивніші методи роботи бібліотек за період перших місяців війни росії проти України. Аналіз надання бібліотечних послуг підтверджує значення книгозбірень, як важливого осередку об'єднання людей заради взаємної підтримки. Винесені практичні рекомендації щодо активної участі книгозбірень в житті людей, які вимушені втікати з місць активних бойових дій. Характеризується сплеск креативних бібліотечних змін, пов'язаних із переорієнтуванням простору бібліотек та послуг відповідно соціальному виклику суспільства, спричинених військовою агресією росії. **Висновки.** Виявлена здатність найбільших бібліотечних установ Закарпаття надавати моральну підтримку постраждалим від війни людям. Підтверджено роль бібліотечної підтримки як важливого чинника практичної допомоги людям.

Ключові слова: бібліотеки України; бібліотечні послуги під час війни; бібліотечні заходи для тимчасово переміщених осіб; бібліотека під час воєнних дій; Наукова бібліотека Ужгородського національного університету; Закарпатська обласна універсальна наукова бібліотека ім. Ф. Потушняка

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Artificial Intelligence and Machine Learning Algorithms for Assessing the Authenticity of a Scientific Article in Scopus: Translator's Experience

Objective. This paper examines ways to solve the problem of cross-language plagiarism in scientific works written in Ukrainian, which are to be translated and published in English. Considering that Ukrainian university libraries are directly involved in the practices of improving the level of awareness of lecturers and scientists, as well as their support of a large number of new digital tools, we draw attention to the emergence of new opportunities in the practices of supporting academic integrity. **Methods.** Big Data mining techniques and analysis of algorithms underlying machine translation software were employed to identify the cases of cross-language plagiarism in scientific articles originally written in the Ukrainian language. **Results.** Based on the analysis of 4000 translated manuscripts, it was established that the standard Microsoft Word 2022 software, typically used to write an article, identifies with a very high accuracy those parts of the text that had been earlier published and stored in a digital format. **Conclusions.** With the advent of Microsoft Office 365 software (released in 2022), it becomes possible to check any article originally written in Ukrainian or Russian, while being translated into English, for similarities with previously published academic papers. This allows for an instantaneous correction check that may prove useful in preventing the intended or unintended occurrence of cross-language plagiarism in scientific papers. It is advisable to more actively involve librarians of Ukrainian universities in using the powerful potential of digital support for the research activities of their users, including writing papers and checking them for signs of plagiarism.

Keywords: cross-language plagiarism; university libraries; academic paper in the Ukrainian language; Scopus; Microsoft Office 365 software; translation from Ukrainian into English

Introduction

Scientific libraries of universities of Ukraine, as well as other countries, are directly involved in the practices of improving the level of awareness of lecturers and scientists, as well as their support of a large number of new digital tools that appear in new forms of conducting scientific research and disseminating their results. Practices for evaluating the level of publishing activity and maintaining academic integrity are also in the focus of attention of libraries.

Pressed by state-initiated requirements, a University lecturer's career in Ukraine strongly depends on the number of scientific papers published annually in prestigious international journals. The content of such papers (even peer-reviewed) is typically not discussed publicly, which leaves some aspects related to writing a manuscript immune to thorough analysis in terms of the dubious practice of borrowing a sentence/paragraph from foreign literary sources without including the author in the reference list.

Given the mandatory checks for plagiarism at any higher educational establishment, manuscripts in Ukrainian are subject to such testing and are presumably devoid of cases of academic integrity violations. However, once a paper is to be submitted to an international journal and is to be translated from Russian/Ukrainian into English, a simple trick of borrowing a paragraph in English from any source and translating it into Russian/Ukrainian to innocently insert it into a manuscript for a peer review (by Russian/Ukrainian reviewers) and then, after it is

accepted, back to English, may work miracles in terms of compiling a text of any length required by a publisher. All that the "author" should do is change some words to cheat specialized software designed to identify an exact match or similarity.

Literature analysis

The adoption of the Law of Ukraine "On Education" in 2017 formally introduced the concept of "academic integrity" (Verkhovna Rada of Ukraine, 2017). According to Clause 4 of Article 42 of this Law, a violation of academic integrity includes academic plagiarism; self-plagiarism; fabrication; falsification; cheating; deception; bribery; biased assessment.

Since then, the endless theorizing about academic integrity has not, unfortunately, yielded any real examples of identified violations, which can create the impression of absolute transparency in Ukrainian science. A rudimentary Google search for the keywords "example of academic integrity", "violation of academic integrity", and "academic dishonesty" does not give a single local example.

In the IT industry, the specified issue is referred to as external duplicate content. As noted by Horst (2022), external duplicate content implies that the same text is found on multiple domains. The Google search engine has a dedicated resource to tackle this issue with developers by introducing the concept of a canonical website locator (Google Developers, 2022), which essentially traces the primary source of information.

As regards scientific papers, there is the concept of cross-language plagiarism, which, according to Ouriginal (2021), refers to the kind of plagiarism or cheating where the source content is in one language while the plagiarized content is in another. In other words, the authors argue, it is plagiarism by translation. There is a growing body of research on the topic, specifically, when detecting cross-language English-Arabic plagiarism (Hattab, 2015; Alaa, Tiun, & Abdulameer, 2016), or when identifying duplicate publication (Rohrich & Sullivan, 2009). There is also a very detailed study reported by Pryimak (2019) about plagiarism in English-, French-, and Italian–Ukrainian dictionaries.

IEEE defines plagiarism as the reuse of someone else's prior processes, results, or words without explicitly acknowledging the original author and source (IEEE, 2022). According to this definition "plagiarism in any form is unacceptable and is considered a serious violation of professional behavior with ethical and legal consequences".

Another aspect of this shameful phenomenon, as noted in *Plagiarism in Research* (2020), is cross-lingual plagiarism, where the original content is in a language different from the language of the plagiarized text. In scholarly publishing, this is a growing concern, the authors claim, since auto-translation tools make it easy to copy ideas/text from an already published paper and translate it into a different language.

Aims

We assume that the corporate ethics of Ukrainian science encourages unscrupulous practice, particularly in scientific publications. It is this aspect of scientific activity that is addressed in the current paper.

The hypothesis under consideration is as follows: when writing a paper using Internet search engines, it is tempting to include, for example, in a literature review not just a primary source but a phrase (sentence, paragraph) of another author while passing it off as your own. The situation is extremely simplified if the original manuscript is written in Russian or Ukrainian and

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the article is translated into English, or vice versa. Indirectly, this is confirmed when the author's usual style of presentation suddenly changes to exquisite academic English.

Therefore, this study aims to identify ways to detect cases of cross-language plagiarism when a paper originally written in Ukrainian/Russian is translated into English.

Methods

The above hypothesis is based on our personal practical experience of translating 4,000 peer-reviewed articles by Ukrainian, Kazakh, and Azerbaijani scientists into English for confirmed publications in journals indexed by Scopus in the period from 2016 to 2022.

Given the specificity of this activity, we have read all the papers from beginning to end, including abstracts, references, and assurances of the full reliability of the results.

Taking into account the conditions for prolonging lecturers' full-time employment contracts at Ukrainian universities, academic staff are forced to report annually on the number of papers they publish in internationally acclaimed scientific journals. Note that the current study excludes articles written "for a report on science" (endless repetitions, scientific clichés, a precisely adjusted number of pages) and commissioned articles (lengthy fiction about concepts that often simply do not exist). This is a promising area for further research into revealing dishonest practices given that such papers, in our rough estimation, account for at least 5 % of manuscripts submitted.

Results and Discussion

Until August 2022, we did not have the opportunity to confirm the above hypothesis, even after repeatedly contacting the relevant services at Microsoft Translator and Google Translate for clarification. Our concern is absolutely similar to the view expressed in *Plagiarism in Research* (2020) that "some plagiarism detectors do offer cross-lingual plagiarism checks while it is unclear if they are as effective at detecting this form of plagiarism as they are at detecting plagiarism across articles in the same language". This is because of the complexity, the authors note, involved in detecting similarity across articles that may be written in languages whose grammatical structures are very different (exactly what our experience confirms).

The newest Ukrainian version of the Microsoft Office 365 cloud application package working on the Microsoft Windows 11 operating system (released in 2022) (Microsoft, 2022) includes, as far as we know for the first time ever, a multilingual text authentication in the standard Microsoft Word text editor.

Now one can test our assumptions on real examples of those papers that we have translated recently (September–October 2022). The new standard function "Correction" demonstrates, in parallel with translation, how many sources in the text coincide with papers found on the Internet and provides a direct active link to the journal, article, and/or original page.

The artificial intelligence algorithm underlying this new feature operates seamlessly with texts in the Ukrainian, Russian, and English languages. This significantly facilitates anti-plagiarism checks in real time. An additional benefit is that the software proposes adding a link in the manuscript to the source detected.

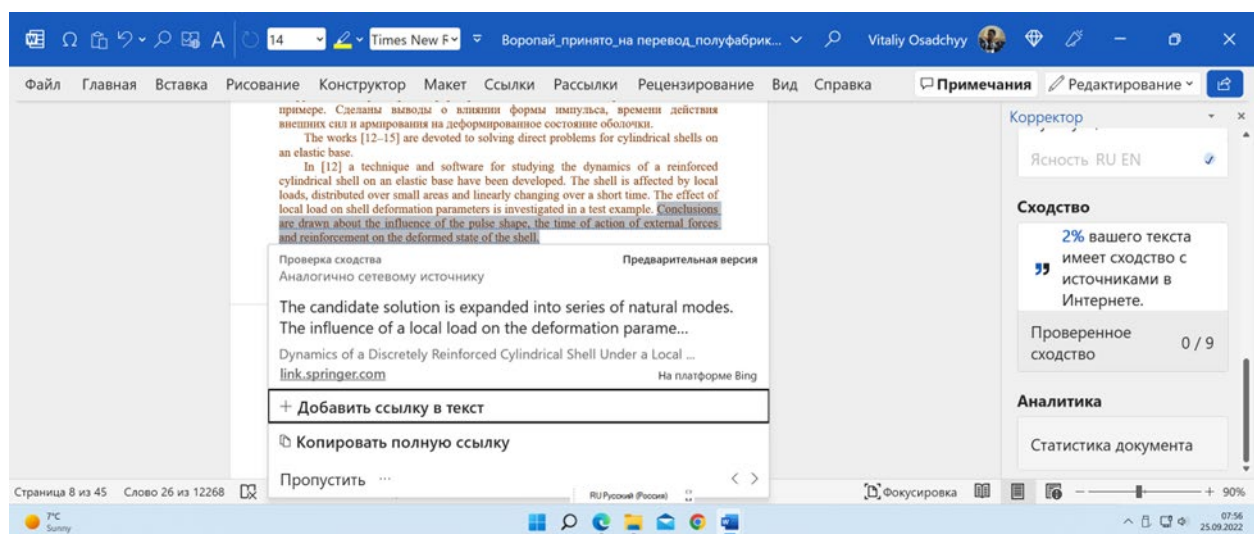


Fig. 1. Example of the Microsoft Word page showing a Correction summary (specifically, 9 sentences in the original manuscript fully coincide with Internet sources)

So, from now on an author cannot blame the lack of specialized software or costly applications for not knowing where a sentence or a paragraph was borrowed from. The caveats worth mentioning are the newest Microsoft Office package, available commercially but not common at local Universities, and the technical aspect of anti-plagiarism checks remaining to be clarified: who exactly is responsible for identifying the malpractice? In the primary triangle author–reviewer–translator, common sense suggests that the latter is most likely to reveal such cases. This assumption leaves many legal and ethical questions open for the time being.

Conclusions

1. On the one hand, the public results of anti-plagiarism checks can adversely affect the reputation of the author, on the other hand, hypothetically, Scopus specialists will now be able to check the Russian and Ukrainian versions of the paper, making appropriate conclusions about the author, reviewer, journal, educational institution, and this country as a whole.

2. In our view, the first step that must be initiated by University administrations is public discussion of a cross-language plagiarism issue, which is, unfortunately, common but rarely considered. There is no doubt that such a proposal will meet strong opposition and even rejection as it may reveal some negative aspects related to writing academic papers.

3. It is advisable to more actively involve librarians of Ukrainian universities in using the powerful potential of digital support for the research activities of their users, including writing papers and checking them for signs of plagiarism.

4. Academic integrity must be endorsed at all levels so that Ukrainian scientists cannot be reprimanded for any dishonest practices and activities.

REFERENCES

- Alaa, Z., Tiun, S., & Abdulameer, M. (2016). Cross-language plagiarism of Arabic-English documents using linear logistic regression. *Journal of Theoretical and Applied Information Technology*, 83(1), 20-33. Retrieved from <http://www.jatit.org/volumes/eightythree1.php> (in English)

- Google Developers. (2022). *Help Google choose the right canonical URL for your duplicate pages*. Google Search Central. Retrieved from https://developers.google.com/search/docs/crawling-indexing/consolidate-duplicate-urls?hl=en&visit_id=638031636483722597-103696988&rd=1 (in English)
- Hattab, E. (2015, December). Cross-language plagiarism detection method: Arabic vs. English. *Proceedings of 2015 International Conference on Developments of E-Systems Engineering (DeSE)* (pp. 141-144). Dubai, United Arab Emirates. doi: <https://doi.org/10.1109/DeSE.2015.25> (in English)
- Horster, J. (2022). *Why is it important to prevent duplicate content?* Retrieved from <https://www.seo-reviewtools.com/duplicate-content-checker/#:~:text=As%20mentioned%20above,and%20search%20results> (in English)
- IEEE [web-site]. (2022). Retrieved from <https://www.ieee.org/publications/rights/plagiarism/plagiarism.html> (in English)
- Microsoft [web-site]. (2022). Retrieved from <https://www.microsoft.com/uk-ua/>
- Ouriginal. (2021). *What is cross-language plagiarism?* Retrieved from <https://www.ouriginal.com/cross-language-plagiarism-and-challenges/> (in English)
- Plagiarism in Research [web-site]. (2020). Retrieved from <https://www.editage.com/insights/does-a-plagiarism-checker-work-for-plagiarism-between-different-languages> (in English)
- Pryimak, D. M. (2019). Vtorynnist i plahiat yak peredumovy nyzkoi yakosti inshomovno-ukrainskykh slovnykiv (na materialy anhliisko-, frantsuzko- ta italiisko-ukrainskykh vydan) [Lack of originality and plagiarism as preconditions of Ukrainian bilingual dictionaries' inferior quality (a study of English-, French-, and Italian-Ukrainian dictionaries)]. *Visnyk Kyivskoho natsionalnoho linhvistychnoho universytetu. Seriya Filolohiia*, 22(1), 123-152. doi: <https://doi.org/10.32589/2311-0821.1.2019.170210> (in Ukrainian)
- Rohrich, R. J., & Sullivan, D. (2009). Plagiarism and dual publication: review of the issues and policy statement. *Plastic and Reconstructive Surgery*, 124(4), 1333-1339. doi: <https://doi.org/10.1097/prs.0b013e3181b59d42> (in English)
- Verkhovna Rada of Ukraine. (2017). *On education: Law of Ukraine*. № 2145-VIII. Retrieved from <https://zakon.rada.gov.ua/laws/show/en/2145-19#Text> (in English)

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Алгоритми штучного інтелекту та машинного навчання для оцінки автентичності наукової статті в Scopus: досвід перекладача

Мета. У статті розглядаються шляхи вирішення проблеми міжмовного плагіату в наукових роботах, написаних українською мовою, які підлягають перекладу та публікації англійською мовою. Зважаючи на те, що українські університетські бібліотеки беруть безпосередню участь у практиках підвищення рівня обізнаності викладачів та науковців, а також їхньою підтримкою великої кількості нових цифрових інструментів, звертаємо увагу на появу нових можливостей у практиках підтримки академічної доброчесності. **Методика.** Для виявлення випадків міжмовного плагіату в наукових статтях, написаних

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українською мовою, було використано методи опрацювання великих даних та аналіз алгоритмів програмного забезпечення машинного перекладу. **Результати.** На основі аналізу 4000 перекладених рукописів встановлено, що стандартне програмне забезпечення Microsoft Word 2022, яке зазвичай використовується для написання статті, з дуже високою точністю визначає ті частини тексту, які раніше були опубліковані та збережені в цифровому форматі. **Висновки.** З появою програмного забезпечення Microsoft Office 365 (випущеного у 2022 році) з'явилася можливість перевірити будь-яку статтю, оригінально написану українською чи російською мовою, з одночасним перекладом на англійську, на схожість із раніше опублікованими науковими статтями. Це дозволяє миттєво перевірити наукову працю, що може виявитися корисним для запобігання навмисному чи ненавмисному виникненню міжмовного плагіату в наукових статтях. Доцільно активніше залучати бібліотекарів українських університетів до використання потужного потенціалу цифрової підтримки науково-дослідницької діяльності своїх користувачів, у т.ч. написання робіт та перевірки їх на ознаки плагіату.

Ключові слова: міжмовний плагіат; університетські бібліотеки; наукова робота українською мовою; Scopus; програмне забезпечення Microsoft Office 365; переклад з української мови на англійську

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Student Academic Achievement with the Ability to Read a Collection of Textbooks from the Library Collection

Objective. The students' academic achievement is related to their intelligence (IQ). Studies on factors that affect student academic achievement are still relatively limited and few. Purpose of this research is to consider student academic achievement with the ability to read a collection of textbooks from the library collection. **Methods.** The research method used is quantitative research. While the method of observation is experiment. **Results.** First hypothesis is academic achievement has a significant relationship with the good reading method. The hypothesis is accepted because academic achievement has a significant relationship with reading habits. Both the experimental group and the control group showed that academic achievement has a significant relationship with students reading methods, or it can be said that the good reading method is equivalent to students' reading habits. Second hypothesis, academic achievement has a significant relationship with students' reading ability is accepted. The calculated Chi-square count is greater than the Chi-square table. Third hypothesis, academic achievement has a non-significant relationship with access to information sources, meaning that the hypothesis is rejected. **Conclusions.** Student's academic achievement had a significant relationship with the good reading method and a non-significant relationship with reading ability. Student's academic achievement had a non-significant relationship with access to information sources.

Keywords: student academic achievement; collection; textbooks; library collection

Introduction

The view of students' academic achievement is related to their intelligence (IQ). This point of view is so strongly attached to the general public, that efforts to boost student academic achievement seem to be a dead end. On the one hand, studies on factors that affect student academic achievement are still relatively limited and few. Here, several studies offer the factors that influence student academic achievement, related to the reading dimension, a perspective that is quite interesting and needs to be developed. For example, Moyle (1973) in Prijana and Yanto (2020) created a formula regarding the reading dimension, Good Reading. So that it is increasingly clear that reading requires skill, a kind of skill. Moyle's idea led to the idea of conducting an experimental study on the reading dimension. That reading the right textbook begins with a sense of pleasure (enjoy reading) before doing reading activities. Then the first step, which is to read faster, then read again (read more), and read again for the purpose of understanding the text (understanding better).

Prijana and Rohman (2016b) in an experimental study found that students have different reading skills. A finding that is quite meaningful to be developed. Furthermore, it was found that those with higher academic achievement had faster reading times, compared to those with lower grades. This finding is important to open the veil that has not been widely known. They also have different reading speeds (read faster). Those who have higher academic achievement have different reading habits than those who have lower ones. Those who have higher academic achievement often engage in reading activities. While those who have lower academic

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achievement, do less reading activities. Here the intensity of reading is defined as training. So it can be said that the more trained to read, the faster the reading time.

Prijana and Rohman (2016a) in an experimental study examined the relationship between reading knowledge texts through the good reading method and academic achievement scores, with population $N = 34$, and if $\alpha = 0.25$, then student's academic achievement scores have a significant relationship with reading skills through good reading method. If $\alpha = 0.10$ then the student's academic achievement score has a non-significant relationship with reading ability. Here it is important to continue to develop studies on the reading dimension.

After that, Prijana and Rohman (2016a) in an experimental study examined the relationship between students reading ability through the good reading method and the ability to answer multiple-choice questions, with population $N = 34$, and if $\alpha = 0.10$, then the ability to answer multiple-choice questions has a significant relationship with the good reading method. Here the ability to answer multiple choice questions has a significant relationship with the good reading method.

Furthermore, Prijana and Yanto (2020) in an experimental study, conducted the correlation test on academic achievement with the student reading method, with a population $N = 34$, and if $\alpha = 0.01$ then student academic achievement has a significant relationship with the good reading method. Here, student's academic achievement has a significant relationship with the good reading method.

Methods

The research method used is quantitative research, namely modern positivist or post positivist. The post-positivist method is causal, which means that cause-and-effect relationship bends to space and time. The post-positivist method is based on data and the verification method, namely hypothesis testing. While the method of observation is experiment. Here the observation method used is experiment. Krathwohl (1993) says that the experimental method is a method for testing hypotheses, namely testing the relationship between the independent variable and the dependent variable. The independent variable is the manipulation variable. While the dependent variable is constant. The results of the manipulation of independent variables on the dependent variable can be measured and tested (measurable).

Results and Discussion

We will discuss the 3rd experiment results regarding the reading dimension. The first experiment with a post-test covered only non-equivalent group, with the hypothesis: academic achievement has a significant relationship with the good reading method. In the experimental group the following results were obtained (Table 1).

It is known that Chi-squarecount = 5.70. If $\alpha 0.10$ then it is known that Chi-squaretable = 4.61; it means that the Chi-squarecount is greater than the Chi-squaretable. If the Chi-squarecount is greater than the Chi-squaretable, then academic achievement has a significant relationship with the use of the good reading method, meaning that the hypothesis is accepted. Furthermore, the control group obtained the following results (Table 2).

Table 1

Academic achievement and good reading method in the experimental group

Chi-Square Tests

	Value	df	Asymp. Sig. (2-sided)
Pearson Chi-Square	5.700 ^a	2	.058
Likelihood Ratio	6.666	2	.036
Linear-by-Linear Association	3.844	1	.050
N of Valid Cases	34		

a. 2 cells (33.3%) have expected count less than 5. The minimum expected count is 1.15.

$\lambda^2=5.70$

Table 2

Academic achievement and reading habits in control group

Chi-Square Tests

	Value	df	Asymp. Sig. (2-sided)
Pearson Chi-Square	8.349 ^a	3	.039
Likelihood Ratio	9.926	3	.019
Linear-by-Linear Association	6.769	1	.009
N of Valid Cases	40		

a. 5 cells (62.5%) have expected count less than 5. The minimum expected count is 1.13.

$\lambda^2=8.34$

It is known that Chi-squarecount = 8.34. If α 0.10 then Chi-squaretable = 6.25; it means that the Chi-squarecount is greater than the Chi-squaretable. If the Chi-squarecount is greater than the Chi-squaretable, academic achievement has a significant relationship with reading habits, meaning that the hypothesis is accepted.

If you look closely, the results of the first experiment show that there is no difference between the experimental group and the control group, meaning that academic achievement has a significant relationship with students reading methods, or it can be said that the good reading method is equivalent to students' reading habits.

The second post-test experiment covered only non-equivalent group, with the hypothesis: academic achievement has a significant relationship with students' reading ability. In the experimental group, the following results are known:

Table 3

Academic achievement and reading ability in the experimental group

Chi-Square Tests

	Value	df	Asymp. Sig. (2-sided)	Exact Sig. (2-sided)	Exact Sig. (1-sided)
Pearson Chi-Square	4.190 ^b	1	.041		
Continuity Correction ^a	2.712	1	.100		
Likelihood Ratio	4.129	1	.042		
Fisher's Exact Test				.057	.051
Linear-by-Linear Association	4.066	1	.044		
N of Valid Cases	34				

a. Computed only for a 2x2 table

b. 1 cells (25.0%) have expected count less than 5. The minimum expected count is 3.44.

$$\chi^2 = 4.19$$

It is known that Chi-squarecount = 4.19. If we determine $\alpha = 0.10$ then Chi-squaretable = 4.61 (table result); meaning that the Chi-squarecount is smaller than the Chi-squaretable. If the Chi-squarecount is smaller than the Chi-squaretable, the relationship between academic achievement and students reading ability is non-significant, which means that the hypothesis is rejected. Furthermore, the control group obtained the following results:

Table 4

Academic achievement and reading ability in control group

Chi-Square Tests

	Value	df	Asymp. Sig. (2-sided)
Pearson Chi-Square	10.234 ^a	2	.006
Likelihood Ratio	10.059	2	.007
Linear-by-Linear Association	9.989	1	.002
N of Valid Cases	44		

a. 3 cells (50.0%) have expected count less than 5. The minimum expected count is .27.

$$\chi^2 = 10.23$$

It is known that Chi-squarecount = 10.23 (calculated result). If $\alpha 0.10$ then Chi-squaretable = 4.61; it means that the calculated Chi-squarecount is greater than the Chi-squaretable. If the Chi-squarecount is greater than the Chi-squaretable, then the relationship between academic achievement and students reading ability is significant, meaning that the hypothesis is accepted.

The third experiment with a single group used the interrupted time-series design, namely the relationship between academic achievement and access to information sources. Here in the experimental group the following results are obtained:

Table 5

Academic achievement and access to information resources**Chi-Square Tests**

	Value	df	Asymp. Sig. (2-sided)
Pearson Chi-Square	8.966 ^a	8	.345
Likelihood Ratio	10.426	8	.236
Linear-by-Linear Association	3.323	1	.068
N of Valid Cases	37		

a. 13 cells (86.7%) have expected count less than 5. The minimum expected count is .24.

$$\lambda^2 = 8.96$$

It is known that Chi-squarecount = 8.96. If α 0.10 then Chi-squaretable = 13.40; meaning that the Chi-squarecount is smaller than the Chi-squaretable; If the Chi-squarecount is smaller than the Chi-squaretable, then academic achievement has a non-significant relationship with access to information sources, meaning that the hypothesis is rejected.

Conclusion

In the first experiment, it was found that students' academic achievement had a significant relationship with the good reading method, meaning that the good reading method led students to improve their academic achievement. However, students reading habits that have been carried out so far also have a significant relationship with their academic achievement. Both reading methods have the power to boost academic achievement. Both reading methods can be used to support academic achievement. In the second experiment, it was found that students academic achievement had a non-significant relationship with reading ability. However, in the control group, student academic achievement had a significant relationship with reading ability. It is assumed that the population characteristics between the experimental group and the control group are different. The characteristic difference in question is the number of male and female sexes in the experimental group that differs from the number of male and female sexes in the control group. Perhaps this is a correction to the second experiment. In the third experiment, it was found that student academic achievement had a non-significant relationship with access to information sources. In this third experiment, there is a weakness in the single group with interrupted time-series design model. The third experiment was performed only once, yet it should have been done several times.

REFERENCES

- Krathwohl, D. R. (1993). *Methods of educational and social science research: An integrated approach*. White Plains, NY: Longman Publishing Group.
- Prijana, P., & Rohman, A. S. (2016a). Studi eksperimen mengenai metode baca good reading. *Lentera Pustaka: Jurnal Kajian Ilmu Perpustakaan, Informasi Dan Kearsipan*, 2(2), 71-81. doi: <https://doi.org/10.14710/lenpust.v2i2.13464> (in Indonesian)
- Prijana, & Rohman, A. S. (2016b). Kemampuan baca mahasiswa pada buku teks. *Sosiohumaniora*, 18(3), 255-260. doi: <https://doi.org/10.24198/sosiohumaniora.v18i3.10324> (in Indonesian)

Prijana, & Yanto, A. (2020). *Metode penelitian perpustakaan dan sains informasi*. Bandung: Simbiosis Rekatama Media.

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Зв'язок академічної успішності студентів і можливістю читання підручників із бібліотечного фонду

Мета. Академічна успішність студентів пов'язана з їхнім інтелектом (IQ). Дослідження факторів, які впливають на академічні досягнення студентів, все ще відносно обмежені та нечисленні. Метою даного дослідження є врахування навчальних досягнень студентів з навичкою читання підручників із фонду бібліотеки. **Методика.** Використаний метод дослідження – кількісне дослідження. Тоді як метод спостереження – експеримент. **Результати.** Перша гіпотеза полягає в тому, що академічні досягнення мають значний зв'язок із хорошим методом читання. Гіпотезу прийнято, оскільки академічні досягнення мають значний зв'язок зі звичками читання. Як експериментальна, так і контрольна групи показали, що академічні досягнення мають значний зв'язок із методами читання студентів, або можна сказати, що хороший метод читання еквівалентний читацьким звичкам студентів. Другу гіпотезу, що навчальні досягнення мають значний зв'язок з навичкою студентів читати, прийнято. Розраховане число x^2 більше, ніж таблиця x^2 . Третя гіпотеза: академічні досягнення не мають значущого зв'язку з доступом до джерел інформації, що означає, що гіпотезу відхилено. **Висновки.** Академічна успішність студента мала значний зв'язок із хорошим методом читання та незначний зв'язок із навичкою читати. Академічна успішність студентів мала незначний зв'язок із доступом до джерел інформації.

Ключові слова: академічна успішність студентів; фонд; підручники; бібліотечний фонд

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Formation and Use of Open Access Resources in University Libraries during the Pandemic and Martial Law in Ukraine

Objective. The research is aimed at revealing the repository as an important tool for storing and promoting open access resources and open educational resources (OER) as a component of open access resources, and the role of the library in these processes. **Methods.** To achieve the purpose of the research, a complex of scientific methods was applied, including analysis and synthesis, comparison, statistical method and direct study of practical experience through the analysis of library reports. **Results.** During the research it was summarized the information about open access resources, in particular OER; examples of the national policy of forming repositories were considered; the experience of the formation and use of institutional repositories in the technical universities of Kharkiv and Mykolaiv was studied; the foreign experience of creating and functioning of repositories of the information-library profile was considered. **Conclusions.** The further direction of the university library in the promotion of the OER initiative is substantiated, namely, convergence of library activities with educational activities in the aspect of creating, planning, and organizing access to open educational electronic resources.

Keywords: open access resources; open educational resources (OER); university library; national repository; institutional repository; LIS repository; COVID-19; martial law in Ukraine

Introduction

Modern unexpected challenges related to the pandemic and martial law in Ukraine have intensified the development of distance learning. In turn, distance educational practice has led to the development and distribution of high-quality open access resources, in particular, open educational resources (OER) based on modern technologies.

In the organization of access to open access digital resources, in particular OER, and their dissemination, the importance of the university library is growing. Creation of quality content for online education and science is becoming one of the most important tasks of library activity. University libraries promptly adapted the library environment for the distance educational process, they support open access resources, ensure their use in distance education.

One of the important places in the system of open access resources is given to national, institutional, and disciplinary repositories, which combine a complex of various scientific and educational resources. In the current crisis period, the problems of improving the quality of the information and educational environment based on the use of open access resources and OER, as well as repositories and the place of the library as a kind of platform for storing, checking, adapting, and using digital educational resources are discussed (Katz, 2020; Mičunović, Rako, & Feldvari, 2021; Kolesnykova, 2021a; Kolesnykova, 2021b).

In connection with the above, the use of repositories as a kind of archive of open access resources and open educational resources and as an important tool in distance education is a relevant and urgent task today.

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Ukrainian and foreign scientists raise a wide range of issues of open educational resources, libraries as places of their storage, and access platforms (Katz, 2020; Kolesnykova & Matveieva, 2021; Lingdan, 2021; Markin, 2021; Mičunović, Rako, & Feldvari, 2021; Moreiraa et al., 2017; Tammara, 2020; Zhou, 2021).

The **purpose** of the publication is to highlight the development of repositories in the context of open access resources and, in particular, open educational resources: national, institutional, informational, and library profile (as an example of thematic ones) and the role of the library in their creation and distribution.

Methods

During the organization and conduct of the research, the methods of analysis and synthesis, comparison, study of practical experience of library activities in relation to digital open educational resources and open access resources, in particular repositories, statistical methods were used. At the same time, we discussed the topic of OER development in the world and the experience in this direction of the Scientific Library of the Ukrainian State University of Science and Technologies (Dnipro).

Results and Discussion

The philosophy and practices of openness in the context of the repositories' development since the beginning of this millennium have a huge reflection in world literature. For example, 1,710,000 references (for all time) were found in Google Scholar for the keyword "institutional repository," including 42,300 references in the chronological framework of 2021-2022. For the keyword "institutional repositories in Ukraine" 21,700 (for all time) were found, including 7,340 in the chronological framework of 2021-2022. In the library context, this is also a popular topic, 5,250 during 2021-2022.

At the same time, for the library community of Ukraine, the topic of open educational resources (OER) is almost "terra incognita." For example, today we have found real practices of creating Open textbooks (OT) in partnership with teacher-authors and integrating OT into global OER systems only in the Scientific Library of the Ukrainian State University of Science and Technologies, Dnipro, Ukraine (Kolesnykova, 2019; Kolesnykova, 2021a; Kolesnykova, 2021b; Scientific Library, n.d.).

We also found three of the planned ten open video lectures (as non-textual OERs) created by Tetiana Kolesnykova and Tetiana Shcherbatiuk, researchers from the Scientific Library of the Ukrainian State University of Science and Technologies (Kolesnykova & Shcherbatiuk, 2022) in the framework of improving the awareness of the academic communities in Ukraine (teachers, librarians, students, etc.).

So, let us focus on the topic of OER. For the first time, the issue of open educational resources was raised in 2002 at the UNESCO forum. In recent years, several documents related to OER have been prepared. In the recommendations of UNESCO and scientific publications, such resources include various types of digital text, multimedia, software, and other educational materials that are part of the public domain or are distributed under an open license with the possibility of their adaptation to the educational process. These are educational, methodical, scientific materials, as well as freely available software tools, used to support learning and can be changed or modified by the user in order to solve scientific and educational tasks (Markin, 2021; Mičunović, Rako, & Feldvari, 2021).

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The international OER movement is aimed at systemic changes in the educational process based on the involvement of teachers and students in joint creativity.

OER policy allows teachers to:

- distribute their own scientific and educational developments;
- study new teaching experience;
- include open educational resources in their own disciplines, curricula;
- develop professional communications;
- implement joint projects;
- improve their own and develop new educational and methodological materials based on existing open resources, taking into account copyright.

For students, OER facilitate:

- obtaining additional information and deepening knowledge of relevant disciplines;
- preparation for seminar and independent tasks;
- performance of qualification works;
- participation in the development of educational materials;
- development of cooperation with teachers and other students.

In the context of OER, the importance of such a resource as a repository is increasing. The formation of *national repositories* focused on the development and implementation of OER is being developed (Markin, 2021; Mičunović, Rako, & Feldvari, 2021; Lingdan, 2021; Moreiraa et al., 2017).

National solutions differ in both resources and approaches to their creation and use:

- in France, the main emphasis is on research results;
- in Japan, a repository is being formed as an aggregator combining about 90 institutional repositories;
- in Spain, the repository functions as an aggregator and search portal of scientific and educational information;
- in Portugal, a network of scientific repositories with integration into the research management information ecosystem is being developed.

The formation experience of national repository in China is of interest (Lingdan, 2021). It aggregates resources according to two levels of educational disciplines. The first level displays 114 subjects, the second – 404. This approach helps to find the necessary materials in certain disciplines more quickly.

The formation of national repository of academic texts in Ukraine has been initiated. The regulation of its work was approved by the order of the Ministry of Education of Ukraine dated July 4, 2018. It is assumed that the creation of the national repository will become an innovative platform for the development of science and education. However, so far, the authors of this study have not found, for example, the reflection of open textbooks in the repositories of text OER.

In the Ukrainian scientific and educational space, the most common are *institutional repositories*, which store the results of scientific research, educational materials and other forms of intellectual production of employees of a scientific or educational institution. The variety of content in digital institutional repositories provides various opportunities for its use in the process of training a future specialist. The experience of their implementation is sufficiently and multifacetedly covered in professional publications. However, the use of repositories by teachers and students in the crisis period, in the period of distance education, has not been sufficiently investigated.

In the course of our research, we paid attention to the use of resources of the institutional repository in two technical universities in Kharkiv and one in Mykolaiv, which are in the zone of

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active hostilities during the martial law in Ukraine. The library staff performs the formation and support of institutional repositories in the universities under study. The repositories of the Kharkiv National University of Radio Electronics (NURE) and the Admiral Makarov National Shipbuilding University (NUS) are open, and access to the institutional repository of the National Aerospace University named after M. Ye. Zhukovsky “KhAI” is organized in the local network. Students of all courses and faculties actively use the resources of the KhAI repository. This is evidenced by a survey of 1,611 students regarding the quality of distance learning and, in particular, the use of digital educational materials. Most of them (82.2%) consider the provision of digital educational materials to be sufficient, while 13.7% of students expressed dissatisfaction with the organization of distance learning in general.

The use of open repositories of NURE and NUS during 2019-2022 by teachers and students is increasing. This is evidenced by the data in the Table 1.

Table 1

Dynamics of Appeals of Teachers and Students to Open Repositories of the NURE and NUS during 2019-2021

Year	University			
	NURE		NUS	
	Number of documents	Appeals	Number of documents	Appeals
2019	9738	18582	900	1875
2020	12912	25929	3700	2561
2021	17241	36836	3982	4636
2022	19366-	-	4973	8058

It is worth noting that Mykolaiv and Kharkiv have been in the zone of active hostilities since the first days of Russian aggression. The educational process in the universities under study in the last six months has been organized solely in online form. And it is during this period that users' access to the repository resources becomes more active. In particular, there has been a significant increase in replenishment and use of open access resources stored in the institutional repository of the NUS <http://eir.nuos.edu.ua/xmlui/> (Table 2).

Table 2

Growth dynamics of OER placement and use in the NUS during the pandemic and martial law in Ukraine

Year	Number of documents	Use	Educational and methodological works and/or scientific works	Qualifying works of students
2019	900	1875	879	21
2020	2300(+1400)	2561	1290	110
2021	3141(+841)	4636	593	248
1st half of 2022	4057(+916)	8058	841	75

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Analyzing the usage statistics of NUS institutional repository during the pandemic and martial law in Ukraine, the increase in the number of visits can be clearly observed. This is caused by the current circumstances, namely the fact that the majority of scientists, teachers, and students were forced to work remotely.

From the first days and throughout the year, there were interruptions in the work of the NUS website and its Scientific Library, the Electronic Catalog of the National Academy of Sciences did not work, students passed the session and defended their qualification works online, while access to the repository practically did not stop. Thus, students and scientists were able to obtain the necessary open access resources in the institutional repository of the NUS (Table 3).

Table 3

Use analysis of the NUS repository

Year	Students	Teachers
2019	275	1600
2020	661	1900
2021	1886	2750
2022	4058	4000

It is worth noting that repositories generally have a multidisciplinary or thematic aspect. Repositories of information and library issues are of particular importance among *thematic* ones. Libraries, in particular university libraries, demonstrate commitment to openness, support the formation of institutional repositories, actively implement modern technologies and services.

The international repository E-LIS is widely known. In total, there are 120 repositories of information and library direction. The largest number is in the USA (17) and the leading European countries: Great Britain (12), Germany (9), France (6). Considerable attention is paid to the creation of LIS repositories in India (5), Brazil (4), Italy (3).

The status of the use of open educational resources and the creation of new ones by teachers of European universities, in which specialists are trained according to information and library programs, was determined within the DECriS international project (Mičunović, Rako, & Feldvari, 2021). The project is being implemented by the joint efforts of experts from the Faculty of Humanities and Social Sciences, University of Osijek, Croatia, Stiftung Universität Hildesheim (Germany), Universitat de Barcelona (Spain), Universitet po biblioteknoznanie i informacionni tehnologii (Bulgaria), University Computing Centre, University of Zagreb (Croatia). An important stage in the project implementation was the survey of specialists from 23 European countries by means of a questionnaire. Respondents from 56 universities took part in filling out the questionnaire, including the teachers from 3 Ukrainian higher education institutions, which train specialists in specialty 029 “Information, Library and Archival Affair”.

According to the results of the DECriS international project during 2019-2020, 52% of European LIS universities/departments used digital OER. The researchers found that Teachers and trainers at LIS schools/departments find OERs mostly in OERs repositories (29%) or directory sites (23%). Some of them (16%) find OER through specialized OER search engines (Mičunović, Rako, & Feldvari, 2021, p. 43).

Teachers not only used ready-made products, but also formed them:

- 38% □ by their own;

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- 16% □ in cooperation with the library;
- 9% □ involved students in the development of educational materials;
- 7 % □ based on partnership within joint international projects;
- 7 % □ together with teachers of other departments.

These figures show that the process of promoting OER requires development.

In LIS universities in Italy, digital educational documents, which are placed in the Moodle system, are often used as OER. In addition, teachers use educational materials developed by other authors and offered at the national or international levels (Tammaro, 2020).

The research results of Chinese authors show that despite the constant increase in the number of teachers (63.2%) and students (75%) who refer to library resources during distance learning, 28.9% of teachers and 26.6% consider the library as a platform for online courses (Zhou, 2021). At the same time, other authors note that digital OERs are becoming an important activity of the university library not only as information and library resources, but also as the main elements for the development of new academic disciplines, educational programs and innovations (Markin, 2021; Kolesnykova, 2019). The important role of university libraries in the promotion of online courses is emphasized (Tammaro, 2020). Indeed, one can agree with researchers that libraries mostly provide access to educational documents, and the involvement of library professionals in the OER creation is only becoming more widespread. This is what demonstrates the growing role of the library in the society of knowledge.

Conclusions

The development of distance education has caused a burst of attention to open access digital resources and open educational resources. One of the places of their storage and use are repositories of various levels: international, national, local. At the local level, institutional repositories are being developed. Both multidisciplinary and thematic repositories are being formed at all levels. Among the thematic ones, repositories of the information and library profile are of great importance, as they are aimed at training future specialists and improving the qualifications of library workers. In the processes of storage, systematization and formation of open access and open educational resources, the role of the library is growing. The library is becoming one of the most important online learning platforms. The priority perspective of the university library at the current stage is the convergence of library activity with educational activity, not only in the aspect of organizing access to open educational electronic resources, but also their creation and planning. An in-depth study of the cooperation of library specialists with teachers and students in the direction of creating open educational resources is urgent.

REFERENCES

- Katz, S. (2020). The Case for OER in LIS Education. *Library Trends*, 69(2), 419-434. doi: <https://doi.org/10.1353/lib.2020.0040> (in English)
- Kolesnykova, T. O. (2019). The Role of Libraries as Publishers in the Open Education Landscape: Reflecting Modern World Practice of Open Textbooks. *University Library at a New Stage of Social Communications Development. Conference Proceedings*, 4, 88-99. doi: https://doi.org/10.15802/unilib/2019_187423 (in English)
- Kolesnykova, T. (2021a). Resursy otkrytogo dostupa kak klyuch k global'nomu izmeneniyu v obrazovanii: rol' universitetskikh bibliotek [Open access resources as a key to global change in education: The role of university libraries]. *Biblijatechny vesnik*, 13, 43-53. Retrieved from <http://eadnurt.diit.edu.ua/jspui/handle/123456789/14279> (in Russian)

LIBRARY SERVICES FOR SCIENCE AND EDUCATION SUPPORT

- Kolesnykova, T. O. (2021b). Vidkryti Osvitni Resursy (OER): rol universytetskykh bibliotek [Open Educational Resources (OER): The role of university libraries]. [Presentation]. *Anti-school of university librarians: Session 4*. Ukrainian Library Association. Retrieved from <http://eadnurt.diit.edu.ua/jspui/handle/123456789/14148> (in Ukrainian)
- Kolesnykova, T. O., & Matveieva, O. V. (2021). First steps before the jump: Ukrainian university librarians survey about OER. *University Library at a New Stage of Social Communications Development. Conference Proceedings*, 6, 96-107. doi: https://doi.org/10.15802/unilib/2021_248379 (in English)
- Kolesnykova, T. O., & Shcherbatiuk, T. G. (2022). *Vidkryta osvita i vidkryti osvitni resursy* [Open education and open educational resources]. [Video]. YouTube. Retrieved from <https://www.youtube.com/playlist?list=PL5JyULTHzcTTIgWcJh6Um-TIDeTbpG34d> (in Ukrainian)
- Lingdan, S. (2021, July). The rise of creative class in library: A Chinese perspective. *2021 IATUL Proceedings*. Purdue University. Retrieved from <https://docs.lib.purdue.edu/iatul/2021/wednesday/3> (in English)
- Markin, P. B. (2021). Open educational resources in the context of open access. *University Library at a New Stage of Social Communications Development. Conference Proceedings*, 6, 76-82. doi: https://doi.org/10.15802/unilib/2021_249625 (in English)
- Mičunović, M., Rako, S., & Feldvari, K. (2021). *State-of-the-play of the use of OERs at European higher education institutions in the field of Library and Information Science during the COVID-19 pandemic*. DECriS. Retrieved from <https://decris.ffos.hr/intellectual-outputs/o1> (in English)
- Moreiraa, J. M., Laranjeiraa, C., Carvalhob, J., Ribeiroa, F., Lopesa, P., & Graçaa, P. (2017). Integrating a national network of institutional repositories into the national/international research management ecosystem. *Procedia Computer Science* 106, 146-152. doi: <https://doi.org/10.1016/j.procs.2017.03.010> (in English)
- Scientific Library of Ukrainian State University of Science and Technologies. (n.d.). *What are open educational resources?* Open Educational Resources. Retrieved from <https://library.diit.edu.ua/en/page/OER> (in English)
- Tammaro, A. M. (2020). COVID-19 and libraries in Italy. *International Information & Library Review*, 52(3), 216-220. doi: <https://doi.org/10.1080/10572317.2020.1785172> (in English)
- Zhou, J. (2021). The role of libraries in distance learning during COVID-19. *Information Development*, 38(2), 227-238. doi: <https://doi.org/10.1177/02666669211001502> (in English)

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Формування та використання ресурсів відкритого доступу в університетських бібліотеках в період пандемії та воєнного стану в Україні

Мета дослідження. Дослідження спрямовано на розкриття репозитарію як важливого інструменту зберігання та просування ресурсів відкритого доступу й відкритих освітніх ресурсів (OER) як складової

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частини ресурсів відкритого доступу та ролі бібліотеки в цих процесах. **Методика.** Для досягнення мети дослідження було застосовано комплекс наукових методів, зокрема аналізу і синтезу, порівняння, статистичного методу та безпосереднього вивчення практичного досвіду шляхом аналізу бібліотечних звітів. **Результати.** В процесі дослідження було: узагальнено інформацію стосовно ресурсів відкритого доступу зокрема OER; розглянуто приклади національної політики формування репозитаріїв; вивчено досвід формування та використання інституційних репозитаріїв в технічних університетах м. Харкова та Миколаєва; розглянуто зарубіжний досвід створення та функціонування репозитаріїв інформаційно-бібліотечного профілю. **Висновки.** Обґрунтовано подальший напрям університетської бібліотеки в просуванні ініціативи OER, а саме: зближення бібліотечної діяльності з освітньою в аспекті створення, планування та організації доступу до відкритих освітніх електронних ресурсів.

Ключові слова: ресурси відкритого доступу; відкриті освітні ресурси (OER); університетська бібліотека; національний репозитарій; інституційний репозитарій; LIS репозитарій; COVID-19; воєнний стан в Україні

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e-mail: doroshenko_s_m@ukr.net, ORCID 0000-0002-6535-4788**Formation of Image Communications of the Library in the Modern Information Space**

Objective. As part of the study, the analysis of the main components of the library's communication and image policy and the determination of methods for optimizing the activities of libraries in social media are expected. **Methods.** To achieve the set objective and solve the specified tasks, a complex use of various research methods was carried out: analysis and synthesis; generalization; systematization; system and component analysis. **Results.** During the research, a theoretical generalization was made and a new solution to the problem of the library image communications formation in the modern information space was proposed, which was embodied in the theoretical justification of the conditions that ensure the effectiveness of new Internet technologies introduction in the work of library institutions. In the process of scientific research, recommendations were made for the popularization of library activities, as well as the modernization of the library image in the Internet environment. The collected and systematized material can be used to create relevant library content in social networks. **Conclusions.** The formation of image communications of the library in the modern information space is a complex and multi-level process associated with the organization of special studies, with the development of the program and plan of the image campaign, and activities system aimed at image elements formation in social media resources. The main direction of libraries development is the systematic implementation of modern information technologies with the aim of popularizing library services for potential readers. Timely adaptation and implementation of information and communication technologies in the activities of libraries will allow them to retain their priority in the future regarding socially significant information realization and preserve themselves as a social institution.

Keywords: image communications of the library; information space; library and information services; Internet technologies; social networks; social media content

Introduction

The rapid development of digital technologies and the global network, which is the Internet, significantly affects the library image, and also provides an opportunity to outline the boundaries of the modern library space. The traditional book collection is already ceasing to be popular because there is a rapid global exclusion of the audience from the book and a gradual fascination with visual and auditory media content.

A serious transformation of the library's image is taking place under the influence of various factors: the global spread of Internet technologies, information space digitalization and gamification, and changes in the need of information consumers, who are taking a direct part in the process of creating content more frequently. So, library workers must actively adapt to changes in the information environment, which means actively learning new approaches to their work.

The basis of a modern library activity should currently be a website, a portal, as well as social media, e-mail, and a virtual environment based on immersive technologies. Such tools should ensure the development of library communications and opinion formation in the most

active part of the target audience. Therefore, nowadays the main task of the library is to effectively organize reading activities in the online mode and fill the Internet environment with socially valuable and relevant content that will help users navigate the information flow and establish interaction with them in the real library space.

Consequently, such a total transformation of the library space creates the need for a radical renewal of libraries' image in accordance with modern trends. Its significant change in the information space is a necessary and relevant process, during which considerable attention should be paid to the search for new approaches that enable the combination of traditional and virtual methods of communication. Active involvement of virtual users, the creation of an attractive and investment IT environment, and the popularization of librarianship among young professionals ensure the creation of a favorable image of the library.

All these factors actualize research in the field of image communications of the modern library. However, currently, there is a lack of scientific works that would reveal the basics of building a virtual library environment; the issues of building the libraries' image communications by maintaining pages in social networks that are popular among young people remain insufficiently covered.

Methods

The theoretical and methodological foundations of research are an organic set of basic approaches, principles, and methods of research on which modern science is based. Among the scientific approaches, synthetic and systemic were used. The main principles of research are objectivity, comprehensiveness, determinism, and continuity.

In order to achieve the set goal and solve the specified tasks, complex use of various methods was carried out: analysis and synthesis (to study the image components, and establish the connection between them in order to obtain a holistic view of the image communications of libraries); generalization (to formulate conclusions, substantiate practical recommendations regarding the possibilities of radical libraries image updating in accordance with modern trends); systematization (to determine the results of using social networks in order to build the library image in the virtual space); system-component analysis (to determine the main components of the library's image in social networks).

The source knowledge base of the research consists of scientific articles and separate educational and methodological works, which are devoted to aspects of the theory and practice of creating the library's image with the help of social media, theoretical and methodological foundations of the library's style formation, construction of the library's image in social networks, as well as development of its multi-vector activity.

Chronological framework of the researched publications – 2012-2022.

Analysis of recent research. The issue of the representation of library institutions in the network space has been reflected in numerous scientific studies. Thus, in the publications by O. Mar'ina (2013), the issue of social and communication technologies was considered, and the feasibility of their introduction as a means of managing the library and information sphere was substantiated. The researcher T. Hbranchak (2016) presented the results of the various social network use analysis by world and Ukraine national libraries in the process of improving library services, revealing the features of individual networks as platforms for the presentation of library products and services. A. Vitushko (2013) analyzed possible ways to solve the problem of safe social network use in the work of library institutions, and M. Samsonov (2012) characterized the peculiarities of libraries' adaptation to the conditions of distribution and use of original content, in particular in the YouTube social network.

Joseph M. Yap (2020) explores what social media supports academic libraries in Kazakhstan during the global pandemic and how they can improve their social media engagement to stay in touch with their users.

The target audience can be informed about the library, its support of users, or other events taking place in the library space, including with the help of social media, A. Miamlina (2020) believes.

R. Palumbo (2022) is looking for the specifics of running virtual reading groups, online laboratories, and social networks that improve the image of a modern library and actively attract users to it during the Covid-19 pandemic.

Despite the fact that the representation of libraries in social networks is being researched quite actively, this phenomenon is so dynamic and multifaceted that some problems deserving detailed coverage remain outside the attention of scientists. Such issues should include the impact of mass media technologies on the formation of the library's image in the information environment, the analysis of the library's presence in the interactive space of social networks, and the search for advertising strategies to build image communications of libraries in the electronic space.

That is exactly why, the purpose of the study is to analyze the main components of the image of a modern library institution, to review new forms of library service related to the use of social media; to define the main types and formats of library content in social media; description of the basic principles of management of official representative offices of book collections in a virtual environment; identifying the main directions and ways of improving image communications of libraries with the help of modern media services.

Results and discussion

The creation of a positive image, as well as the formation of a reliable reputation among the general public, becomes the basis of a modern library institution and the priority direction of its activity. By the image of a modern library, we mean its visible image, which responds to the smallest changes occurring externally – in the social and cultural life of society, and internally – in the library itself. A positive image is formed by the quality of services and the level of library users' service and advertising activities.

The main components for the library's image forming are:

- professional ethics of librarians;
- the website of the library and its representation in popular social networks;
- public relations and advertising of the institution's services;
- design of the library premises.

Creating the image of a modern library institution is a process of two-way interaction, in which the subject of the image which is the image of the library, and the object that perceives this image which is the public, play an active role. The effectiveness of the library's image policy depends on the activities of the team, and the library's management, which together systematically shape the image based on available resources and communication channels.

The concept of "image communications" is understood as a developing system of social interaction, where the image characteristics of libraries are interconnected, which dynamically changes under the influence of various factors.

Image communication is communication during which a set of cognitive, motivational, and expressive components is created and broadcast, ensuring the purposeful formation of a complete image. So, it is all about a special system of social interaction, in which a cognitive and emotional attitude toward the object is purposefully or spontaneously formed on the basis of the

communicative process. The main goal of image communication in library activities is to achieve an accurate understanding of the image created by users of library services.

The modern library as a source of knowledge is currently in the conditions of fierce competition with the Internet, however, the thing that reduces the number of real library visitors can be useful for increasing the "virtual" ones. Multidirectional trends have been observed in society: a certain part loses interest in science due to the deceptive simplicity of obtaining information on the Internet, and the other part is open to any way of obtaining new impressions, skills, and experience.

All this encourages libraries to independently search for ways to spread and popularize scientific knowledge, to create their own niche among various digital sources of information for the user and is implemented through the introduction of new forms of library service related to the use of social networks, blogs, forums, and virtual communities.

Recently, libraries have started to promote their presence on social media. This is a fairly unobtrusive way to attract the attention of readers and encourage them to participate in the life of the library, receive news, and interact with it on social media, and also a successful way to combine the physical space of the library with the digital one – an online page or group. Social media, which are used to promote libraries, have acquired the status of not only a virtual space for acquaintances, communication, etc., but also a convenient means of information exchange, and sometimes they also perform the functions of mass media.

A notable feature of building image communications of libraries in social media is that they are often carried out not for the purpose of attracting a certain number of users, but for the sake of popularizing the site, library, and services, initiating discussion, and spontaneous dissemination of information. For successful promotion in social networks, an important point is that, in addition to the organization's content, it is necessary to create original content specifically for your news feed.

Among the positive functional characteristics that increase the popularity of media services, the following are mentioned: accessibility, openness, practical orientation; mass audience and multi-level interaction; efficiency and interactivity; convenience and variety of forms of communication and tools for a content generation; mobility and integration with other resources (Pavlenko, 2017).

For modern libraries, social media is the main advertising platform, therefore the dissemination of library events and library activities in general with the help of social media is becoming very relevant. Media activity helps to study the target audience, and demand for library services, get feedback, increase attendance at events, and increase activity on the official website. Such communication takes various social forms: users can express their opinion, share experiences and knowledge in comments, establish contacts, and also share news, information, videos, photos, music, recommendations, and other content.

Social media in general include:

1. Social networks. The social network is a combination of electronic technologies as a means of communication and, accordingly, connections between individuals and communities united by related interests, and a promising means for building effective image communications of the library and popularizing library activities, library services, and library institutions.

Key factors of using social networks for libraries are:

- types of applications where the user can create their own record;
- notification technologies related to news distribution;
- a culture of openness that makes content available for distribution and reuse;
- a culture of trust that supports the distribution of content, discussion, and comments;
- social collaboration services that help share images, stories, and comments.

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Social network tools help convey information to users in a very convenient way, as well as create the image of the library in the virtual space. The presentation of the library on social networks provides an opportunity to quickly inform a large audience about the new editions' arrival, and planned events and to spread this information further.

2. Blog. Nowadays, the library blogosphere reflects both the current problems of the libraries functioning in modern society, and opinions about the problems of the library community.

A blog is also a new marketing tool that allows you to find a new potential user. Many libraries successfully advertise their resources and services, so it is not surprising that librarians begin to fill the virtual world with their blogs, because a blog is a real opportunity to build image communications of libraries and their services.

3. Forums. A forum is a place of "virtual meeting" of leaders and leading specialists of libraries, scientists, teachers of higher education institutions, publishers, authors, readers, information service providers, members and partners of the Ukrainian Library Association in a remote format. Each forum is devoted to current problems of library affairs.

3. Wiki-technologies. Libraries can use wiki technologies in their activities for joint projects, collective work, creation of directories, knowledge bases, documentation development, etc.

Libraries use social media to announce important events, library promotions, and events. Working in social media allows libraries to conduct "branding" activities with maximum effect. As a result of the implementation of creative ideas, there is an interest in network users, and a desire to share information with each other.

Libraries, having realized the advantages of integration into social media, which make it possible to build an optimal selection of services necessary to meet the information needs of an individual on one platform, are gradually expanding their interaction with these services. At the same time, the library receives an additional channel for the implementation of its strategies, the popularization of its own services, especially remote ones, a tool for the dissemination of information on library science, development of library and information technologies (Tereshchenko, 2016).

Libraries need to pay attention to branding and the choice of content formats. Among the trends this year, marketers note a decline in video and instant articles, and a peak in the popularity of messengers, real-time posts, and instant updates. It makes sense for libraries to implement some important functions and trends of social marketing in order to promote their own content more successfully.

Content is the entire informational resource: texts, images, and videos. It plays a significant role in the functioning of the page because it directly affects conversion, ranking in search systems, and audience attraction.

In our opinion, the main criteria for evaluating the quality of a page's content in social media are:

1. Relevance. It is necessary to constantly update information, which is carried out by replacing outdated information with a modern one.

2. Usefulness. The text, as well as the graphic content, must fully correspond to the users' requests.

3. Compliance with legislation. The information posted on social networks must fully comply with the current legislation of Ukraine.

4. Credibility. The materials must not contain "fakes" or deliberate distortions.

5. Variety and good presentation. Optimal combination of different types of content: a combination of text with video, photo, or graphic materials.

6. Literacy. Pages in social networks are filled in accordance with the lexical, stylistic, and orthographic norms of the Ukrainian literary language.

The main types of content in social media are:

1) informative: how-to articles; reviews; answers to frequently asked questions; master classes; check lists; experiments; useful resources, etc.;

2) entertaining content: comics, quotes, riddles and puzzles, anecdotes, photo memes, interesting facts, provocative articles;

3) viral: memes, videos, tests, selected articles, e-books;

4) news;

5) reputable;

6) interactive: articles on hot topics; opinion articles; interactive content test, quizzes, surveys, online calculators, animated infographics; publications about current events.

Content formats in social media are:

1. Text. It is the main one for many resources. These are articles, notes, news, descriptions, press releases, reviews, etc.

Among social networks, which mostly present the textual context of the library, the social network "Facebook" has gained the most popularity.

The library page on Facebook is a channel from which Internet users can get information that interests them. There it is possible to comment, evaluate, receive information, focus your attention on marketing activities, in particular on highlighting the socio-cultural work of the library, library news, and announcements of events.

An important supporting tool for the distribution of textual content is "cloud technology". One of the best options for such technologies is Google Drive. The community administrator has a mailbox on the gmail.com domain, which allows the use of cloud resources. By creating a folder for each event, adding documents there, and providing public access to it, the administrator provides an opportunity for everyone interested to familiarize themselves with the materials (Barannik, 2017).

2. Graphic. Such content is often a supplement to the text, sometimes the main one. Images must meet the following criteria: to have a high resolution; to be unique or such that does not violate the terms of public distribution; to be optimized for the page on the network; to match the design of the page.

Images facilitate the process of perceiving textual content, and also significantly influence users' behavior, and can be an additional source of traffic if they rank well in search systems.

Flickr and Instagram services are the most popular ones among social networks for graphic content.

Flickr.com is a website for posting, viewing, discussing, evaluating, and archiving photo and video materials. It is popular due to the convenient and simple system of uploading and searching for photos, which also enables communication and the creation of thematic groups and social networks. Consequently, it provides opportunities for the library to profitably present its funds, replenish the information base and provide the user with convenient access to documents (Tereshchenko, 2016).

Instagram is a social network based on photo-sharing that allows users to take photos, apply filters to them, and share them through its service and a number of other social networks. Users can upload photos and short videos, follow other users' feeds, and geotag images with place names.

Based on the peculiarities of Instagram, the use of the network by libraries can be effective in the case of prompt posting of information about those events that have just taken place in the institution, or those that will take place soon, for the purpose of their visual advertising, popularization of the library's activities, promotion of its services and products.

3. Video. Video content can be main or additional. It allows you to significantly increase the time the user stays on the page, which has a positive effect on popularity.

With the help of videos, it is possible to diversify the content, demonstrate the services and activities of the library as clearly as possible. The complexity of the forgery and the pervasive impact make such content an effective marketing tool.

The YouTube video service is widely used in the library environment, which is a popular video hosting platform that provides video hosting services. Users can add, view, and comment on certain videos. Due to its simplicity and ease of use, YouTube has become one of the most popular places to host videos. The service contains both professional and amateur videos, including video blogs.

Libraries actively use such video hosting. For example, they create a channel on YouTube and post video materials there, primarily educational videos on working with the electronic catalog, electronic information resources, recordings of television programs and interviews with library professionals, etc. The YouTube video service allows you to view, download and share videos. The site features music videos, films and cartoons, commercials, book trailers, and amateur videos submitted by people from around the world.

4. Audio. Audio information (music, podcasts, interviews, audiobooks) is appropriate on resources of different orientations. In commercial projects, audio feedback from customers is most often used.

Libraries can issue digital audiobooks through OneClickdigital app by Recorded Books publishing, which allows users to download audiobooks to their devices for listening for a certain period of time. This service is an important addition to the services of libraries that strive to include as many digital options as possible for their users.

So, in our time – the time of an incredible amount of data in the information space, it is sometimes difficult for potentially interested visitors to find what they need, therefore, a high-quality representation of library activities using social media becomes especially relevant (Barannik, 2017; Yap, 2020). Such social media can and should be used for the implementation of library tasks and effective communication in both virtual and real environments.

Interesting announcements, aesthetically attractive graphic design, timely updating of information – all these things play a big role in forming a positive image of the library. Multimedia technologies are a field that develops constantly and rapidly, and more and more opportunities arise for the diversification of library activities. Social media dominates among other information resources, such as television and paper media (newspapers and magazines), especially among young people, so the representation of library activities in this way is a very relevant issue precisely in terms of image communications.

Conclusions

During the study, new approaches to the formation of the library's image were analyzed thanks to the activation of social network involvement in order to create an updated image. Some vectors of the developmental effect of social media in the context of library professionals' image communication were also considered.

Therefore, at the present stage, representation in the virtual space of library institutions as modern information centers, which is one of the basic elements of an information society formation, is of particular importance. Representation of libraries in the virtual space is carried out through specialized Internet sites, which are a characteristic feature of the transformation of the existing library service system; their functioning creates conditions for the compliance of library activities with new social needs.

The creation of a modern, promising library's image will be facilitated by the institution's development of an image strategy and a systematic approach to the formation and presentation in an interactive space of the library's image as an institution, the librarian as a specialist, the fund as an object of library activity.

So, the library can position its image:

- 1) as a place for creative work and study;
- 2) as a personal brand of an employee, if the individual is considered as a carrier of knowledge, professional skills, and talent;
- 3) through services to improve information literacy, conducting activities related to the provision of information products and services provided as a result of the library's information research;
- 4) through the collection of the library fund;
- 5) using the website, pages in social networks, and media content produced by the library.

Today, libraries are actively studying the prospects of using social media, services, and the main trends in the use of modern technologies. This provides new opportunities for the presentation of library collections, information products, and services and wide access to them.

The need to use social media to build image communications of modern libraries is determined by a number of factors:

- 1) most tools for building an image in the online environment are free;
- 2) social media covers a large number of virtual users;
- 3) social networks are one of the main means of public communication, which influences the formation of public opinion.

During the research, it was established that social media would not be able to become a universal image component capable of independently bringing the library brand to the desired level, but today it is a rather powerful tool that should not be ignored.

REFERENCES

- Barannik, S. (2017, October). Vykorystannia sotsialnykh media ta multymediinykh tekhnolohii dlia reprezentatsii literaturnoho klubu biblioteky VNZ [Use of social media and multimedia technologies for representation of the literary club of the university library]. In *Sotsialni media dlia bibliotek: seredovyshche, resurs, servis. Materialy kruhloho stolu* (pp. 9-15), Scientific Library of Kharkiv National Medical University, Kharkiv, Ukraine. Retrieved from <https://repo.knmu.edu.ua/handle/123456789/19059> (in Ukrainian)
- Hranchak, T. (2016). Vykorystannia natsionalnymy bibliotekamy sotsmerezh dlia predstavlenia biblioteknykh produktiv i posluh [Usage social networks among national libraries for presentation of library products and services]. *Biblioteknyi visnyk*, 1(231), 18-29. Retrieved from http://nbuv.gov.ua/UJRN/bv_2016_1_5 (in Ukrainian)
- Mar'ina, O. (2013). Sotsialno-komunikatsiini tekhnolohii yak zasib upralinnia bibliotekno-informatsiinoiu sferoiu diialnosti. *Visnyk knyzhkovoï palaty*, 3, 26-28. Retrieved from http://nbuv.gov.ua/UJRN/vkp_2013_3_10 (in Ukrainian)
- Miamlina, A. V. (2020). Marketing communications: reading promotion programs in academic libraries. *University Library at a New Stage of Social Communications Development. Conference Proceedings*, 5, 20-24. doi: https://doi.org/10.15802/unilib/2020_220650 (in English)
- Palumbo, R. (2022). Thriving in the post-Covid-19 era: a new normality for libraries' service offering. *Library Management*, 43(8-9), 536-562. doi: <https://doi.org/10.1108/LM-05-2022-0051> (in English)

- Pavlenko, T. (2017, October). Sotsialni media u profesiinomu rozvytku bibliotechnoho fakhivtsia [Social media in professional development of the library specialist]. In *Sotsialni media dlia bibliotek: seredovyshe, resurs, servis. Materialy kruhloho stolu* (pp. 68-73), Scientific Library of Kharkiv National Medical University. Kharkiv, Ukraine. Retrieved from <https://repo.knmu.edu.ua/handle/123456789/19059> (in Ukrainian)
- Samsonov, M. (2012). Reklama bibliotek v onlainovykh sotsialnykh merezhakh. *Naukovi pratsi Natsionalnoi biblioteky Ukrainy im. V. I. Vernadskoho*, 33, 532-542. Retrieved from http://nbuv.gov.ua/UJRN/npnbuimviv_2012_33_49 (in Ukrainian)
- Tereshchenko, I. (2016, October). Vizualnyi bibliotechnyi kontent u sotsialnykh media. In *Biblioteka. Nauka. Komunikatsiia: formuvannia natsionalnoho informatsiinoho prostoru. Materialy mizhnar. nauk. konf.* (pp. 296-298), Vernadsky National Library of Ukraine. Kyiv, Ukraine. Retrieved from <http://www.irbis-nbuv.gov.ua/everlib/item/er-0003707> (in Ukrainian)
- Vitushko, A. (2013). Problema vykorystannia v bibliotechnomu informatsiinomu vyrobnytstvi sotsialnykh merezh z tochky zoru informatsiinoi bezpeky. *Naukovi pratsi Natsionalnoi biblioteky Ukrainy im. V. I. Vernadskoho*, 36, 181-191. Retrieved from http://nbuv.gov.ua/UJRN/npnbuimviv_2013_36_19 (in Ukrainian)
- Yap, J. M. (2020). Library promotion and user engagement in pandemic times: the case of Kazakhstan. *University Library at a New Stage of Social Communications Development. Conference Proceedings*, 5, 39-46. doi: https://doi.org/10.15802/unilib/2020_220692 (in English)

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Формування іміджевих комунікацій бібліотеки в сучасному інформаційному просторі

Мета. У рамках дослідження передбачається аналіз основних складників комунікаційно-іміджевої політики бібліотеки та визначення методів оптимізації діяльності бібліотек у соціальних медіа. **Методика.** Для досягнення поставленої мети й розв'язання зазначених завдань здійснено комплексне використання різноманітних дослідницьких методів: аналізу і синтезу; узагальнення; систематизації; системно-компонентного аналізу. **Результати.** Під час дослідження здійснено теоретичне узагальнення й запропоновано нове вирішення проблеми стосовно формування іміджевих комунікацій бібліотеки в сучасному інформаційному просторі, що знайшло втілення в теоретичному обґрунтуванні умов, які забезпечують ефективність впровадження нових інтернет-технологій в роботу бібліотечних установ. У процесі наукового пошуку складено рекомендації щодо популяризації діяльності бібліотек, а також модернізації бібліотечного іміджу в інтернет-середовищі. Зібраний і систематизований матеріал можна застосовувати для створення актуального контенту бібліотеки в соціальних мережах. **Висновки.** Формування іміджевих комунікацій бібліотеки в сучасному інформаційному просторі – це складний та багаторівневий процес, пов'язаний з організацією спеціальних досліджень, з розробкою програми та плану іміджевої кампанії, системи заходів, орієнтованих на формування елементів іміджу в соціальних медіаресурсах. Основним напрямом розвитку бібліотек є системне впровадження сучасних інформаційних технологій з метою популяризації бібліотечних послуг потенційним читачам. Своєчасна адаптація й впровадження

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інформаційно-комунікаційних технологій у діяльність бібліотек дозволить їм у перспективі зберегти пріоритет щодо реалізації соціально значущої інформації та зберегти себе як соціальний інститут.

Ключові слова: іміджеві комунікації бібліотеки; інформаційний простір; бібліотечно-інформаційні послуги; інтернет-технології; соціальні мережі; контент соціальних медіа

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Determining Implementation Approaches of Effective Digital Competencies Training

Objective. To analyse approaches to the organization of user training that can be applied in distance learning of digital competencies. Mastering digital competencies by users is known to be one of the important tasks not only for higher education but also for the whole society. Therefore, we consider it important not only to provide quality training, but also to encourage more users. **Methods.** Empirical methods are applied. The article examines the "user roadmap" - the steps from user identification of necessary competences to quality mastery of competences. At every step, the user needs help. **Results.** Based on the analysis done, recommendations have been developed for organizing work in university libraries in this direction. The expected result is an increase in the number of persons trained and an increase in the effectiveness of user training in digital competencies. **Conclusions.** We believe that in order to obtain a high-quality result, it is necessary to provide comprehensive user support. Specialists in information departments in institutions, including university libraries, have the opportunity to do this successfully due to the following advantages: the possession of relevant knowledge and its constant improvement, communication with users who are motivated for successful learning.

Keywords: digital competencies; distance learning; mentor; accessibility; user roadmap

Introduction

At the current stage of the development of society, digitalization is present in all spheres of human life. Digitalization has had a significant impact on the information, educational, and scientific spheres. In addition, hardware and software tools used when working with information are constantly developing and changing. Mastering digital competencies (DC) by users is known to be one of the important tasks of society. Two relevant issues can be highlighted in this direction: organisation of effective learning; updating knowledge and skills in line with technological developments.

The organization of safe training and opportunities for self-development is a priority task in the conditions of the pandemic and martial law in Ukraine (Kvasnyk, Zemliakova, & Balabai, 2022). That is, the main form of learning and self-development is remote, and its main means are remote communication and joint work in the virtual information space. Therefore, safe learning should be ensured when training users in digital competences.

It is important that the distance learning of digital competencies be dominated by the independent work of users, which should be supported by self-motivation regarding their learning, as well as a high level of self-organization.

Digital competencies are a separate group of knowledge and skills that enable information consumers (students, scientists) to solve their own educational and scientific tasks effectively and efficiently, as well as skilfully use the information for the cultural development of the individual. At the Scientific and Technical Library (STL) of NTU "KhPI", we adopt The Digital Competence Framework presented on the EU Science Hub portal (European Commission, n.d.) as the basic digital competences.

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An important point before starting training is the user's motivation and understanding of the need to master the DC system. To this end, university libraries conduct a significant number of activities to popularize the DC and media literacy among representatives of the academic community. Thus, STL of NTU "KhPI" took part in 6 global scientific events: All Digital Week 2021, International Academic Integrity Day 2021, Open Access Week 2021, Global Media and Information Literacy Week 2021, World Science Day for Peace and Development 2021; International Girls in ICT Day 2022 (Scientific and Technical Library of NTU "KhPI", n.d.).

The next stage is the user's search and selection of courses for training. To ensure the visibility of distance courses for users, it is advisable to carry out the following work:

- Provision of course indexing by search engines;
- Integration of courses into external portals and participation in projects to create distance course platforms;
- Use of current terminology to ensure an effective search for the desired topic.

Thus, taking into account the peculiarities of the organization of self-education and distance learning, we can highlight the main directions for ensuring independent remote mastering of digital competencies:

1. Formation of a communication environment for any type of communication;
2. Formation of information resources;
3. Creation of target distance courses.

There are many tools to implement the direction of communication environment formation. These are not only services implementing one specific function (e-mail, chat, calendar, video conference), but also large complex integrated systems of services. In NTU "KhPI" the corporate communication environment is formed on the basis of Microsoft Office 365 services for higher education institutions (Shokurov, 2021). Microsoft Office 365 is a high-tech enterprise-level service with powerful security features, broad and flexible functionality, and the ability to work from any device and any location on the planet, while using software products familiar to users.

The libraries of higher educational institutions work professionally on the implementation of information resource formation (Chaika, 2020; Brui, Kulyk, & Serbin, 2020). In general, universities' own information resources (open and/or authorized access) are created, which take into account the needs and features of educational programs and areas of scientific activity, and access to external global academic resources is also provided. Among the universities' own information resources, institutional repositories are the most accessible and well-known. According to statistics from the Directory of Open Access Repositories (OpenDOAR), 108 institutional repositories are registered in Ukraine (OpenDOAR, n.d.), whose work is constantly supported by universities.

To create online courses, institutions use learning management systems (LMS), which implement the basic functions necessary for conducting the learning process. Almost all universities have this experience, including NTU "KhPI" (Adashevska, & Kraievska, 2020).

Based on the above, we believe that it is important not only to organize training but also to involve a larger number of users in training. Because in order to obtain a high-quality result, it is necessary to provide comprehensive user support. Each user goes through the following steps according to the "user roadmap" (from identifying the necessary skills to mastering the DC):

1. Understanding the need to master certain skills;
2. Motivation;
3. Availability of training
4. Comfortable learning;
5. Assistance in the learning process;
6. Successful completion of the course;

7. Qualitative application of skills.

The work on step 1 and step 2 of the "user roadmap" can be considered the traditional work of libraries, which is carried out regularly. This article deals with quality support of the online learning process by engaging an assistant and enhancing the ability to find the required distance learning course on one's own.

That is, the goal is to analyse the approaches to organizing work with users that will help:

- Increase the number of those who have correctly identified the necessary digital competencies and are motivated to master them;
- Provide support and accompaniment to the user during training for successful mastery of skills;
- Provide an opportunity to learn independently and safely using remote technologies;
- Determine the tasks of university library specialists to provide comprehensive support at each step of the "user roadmap".

Methods

The study applied empirical methods, namely the collection and analysis of empirical information. Based on this, it should be recognised that the topic of digital competencies is not simple. At each step of the "user roadmap" from understanding the need to master digital competencies to mastering them and applying them, certain difficulties arise. These difficulties are very individual. This confirms communication with users of the Scientific and Technical Library during consultations.

Users who wish to complete distance learning need help and support, as the distance learning process itself is digitally based.

Results and Discussion

A general scheme of the "user roadmap" is presented in Figure 1. Digital and information technologies are developing rapidly, so the steps of the roadmap can be cyclical.

Distance course availability

After the implementation of the distance course, it is important to ensure its accessibility for users. By accessibility, we understand the possibility of finding a course in a virtual information environment and free access to the course content.

The ability to get information about a distance learning course on the internet in any convenient way can be considered visibility. The Google search system is used to monitor the level of visibility of distance courses on the Internet. More than 5,000 results were obtained, namely information about distance learning course portals (search for the exact phrase "portal of distance and mixed learning", "e-learning portal"), which are located on the websites of academic institutions. Each university maintains its own portal of distance courses, the content of which corresponds to its educational and scientific directions. Not all courses are freely available. To search for a specific course, you should work with the search engine on a specific distance courses portal. Regarding courses on the topic of digital competencies, the following distance courses (educational materials) are relevant in universities: informational or academic culture, academic writing, etc. Libraries are actively involved in preparing and conducting these courses. The above courses are used to ensure the principles of academic integrity in the academic environment and provide basic information skills.

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There are well-known projects on the formation of platforms for distance learning in the world (Coursera, UdeMy). Therefore, in addition to the portals of academic institutions, users can access the capabilities of the largest online education platform in Ukraine - Prometheus (Prometheus, n.d.). In partnership with the best lecturers, as well as leading companies and international organizations, Prometheus creates online courses on the most popular topics. Examples of courses in the direction of digital competence from those presented on the portal:

Media literacy: practical skills - The course is devoted to media literacy and the main challenges of the modern world - disinformation and fakes.

Scientific communication in the digital age - the course is intended for anyone who wants to learn more about science communication, its main components, the latest trends and technologies, the secrets of effective work with information, management of research data, and acquire relevant skills.

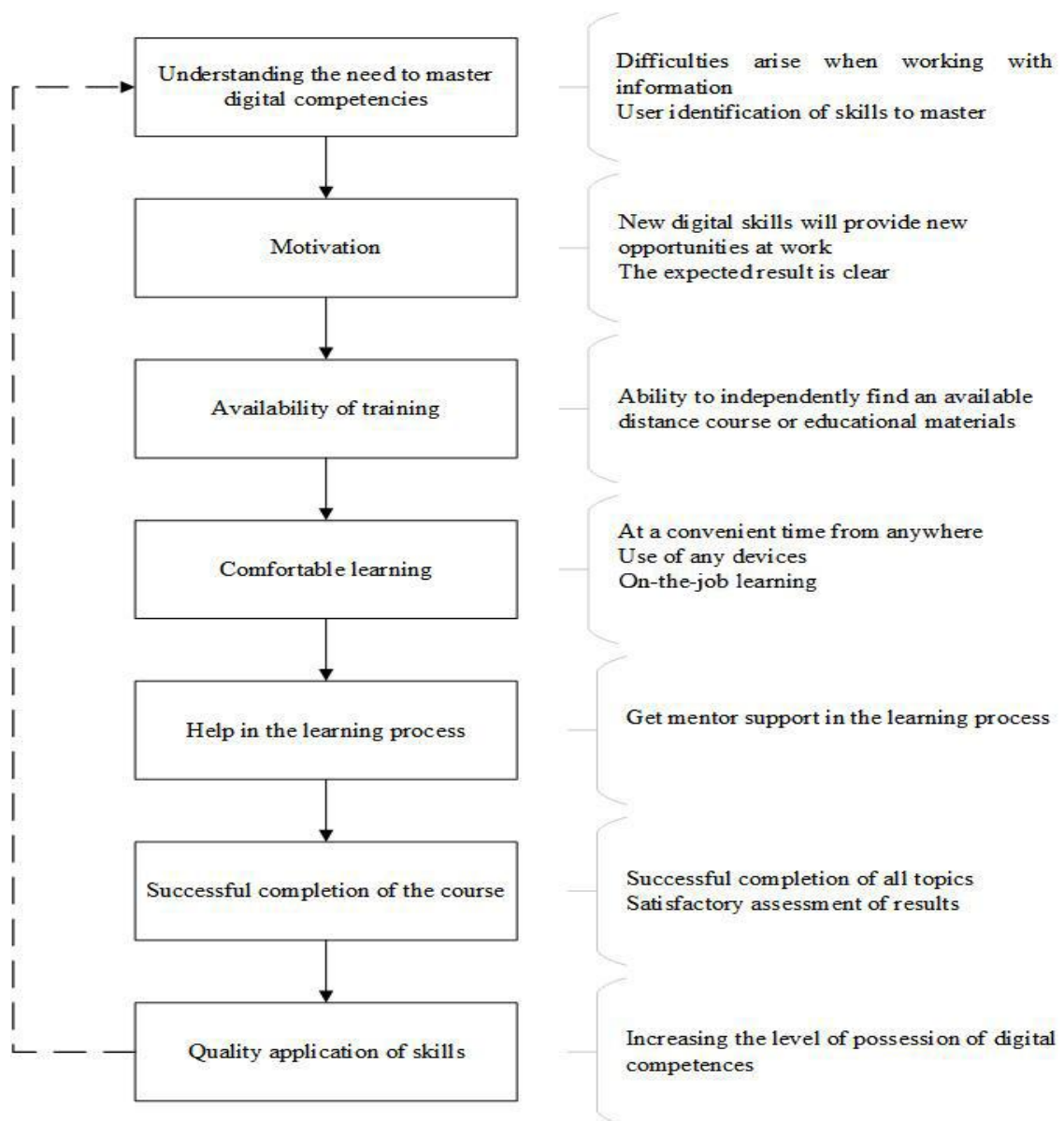


Fig. 1. User roadmap

Attention should be paid to the significant work of the national online platform for the development of digital literacy "Diia. Digital Education" of the Ministry of Digital Transformation of Ukraine (Diia. Tsyfrova Osvita, n.d.). The purpose of the courses is to help everyone effectively and safely use modern digital technologies in work and education, in professional and personal development.

Based on the monitoring, it can be noted that a systematic presentation of courses on digital competencies is not determined in the Ukrainian-language information segment. Identifying the necessary competencies and finding the appropriate courses causes difficulties in practice.

Therefore, we believe that the following should be followed when creating courses:

- Systematic approach to creating courses (digital competencies are considered as a holistic multitude of elements in a set of relationships and connections between them);
- Competency-based approach, which first of all gives a paradigm of understanding the facts (Dolskaia, Holozubov, & Horodyskaia, 2016);
- Practical-oriented approach (the extent to which the content corresponds to consumers' expectations and their actual need);
- Training of mentors and involvement of mentoring support for users;
- Prompt updating of educational content to ensure its relevance;
- Increasing the level of visibility and accessibility of DC due to the use of available opportunities.

In addition to creating one's own courses, it is advisable to recommend freely available courses from leading experts that have already been tested and are available online, and to promote the use of open educational resources.

Since 2016, the "BiblioSynergy" project has been implemented in Ukraine (*Bibliosynerhiia*, n.d.). "BiblioSynergy" is a partnership project of university libraries aimed at creating a professional environment for the communication of like-minded people and the implementation of new practices in the direction of supporting scientific research. The portal is well-known and enjoys the attention of library specialists. In our opinion, it is possible to use the authority and capabilities of the project to promote and ensure the availability of distance courses (any educational materials) in the direction of digital competencies.

Support in training

Support in learning can be provided by a mentor. O. Breslavskiy, the author of the article, has practical experience in mentoring self-created courses "Web Testing Automation on Java" and "Web Testing", presented on the ITVDN (IT Video Developers Network) project portal, which is an online educational resource for IT specialists. Using the capabilities of the ITVDN project makes courses more accessible to users. According to the experience of practical work, mentor involvement contributes to the success of training and increases the percentage of trainees who fully complete the online course. However, there is little reliable information in scholarly articles about the impact of mentoring on the mentor (Leavitt, Nelson, & Cutucache, 2022).

Mentors are a link between a student and a teacher. The methods and approaches of mentors that they use in their work in different institutions may differ (Frecknall, 2019). Mentoring in the electronic environment during higher education has its own characteristics (Tinoco-Giraldo, Torrecilla Sanchez, & García-Peñalvo, 2020).

Many people mistakenly believe that online learning does not have the benefits of traditional face-to-face learning. The mentor provides communication with the students of distance courses. They work with them every day, support them and build trusting relationships. Many trainees look to their mentors as teachers, regardless of the mentor's educational background. The

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general responsibilities of the mentor include assisting with technological issues of course work; monitoring training results and providing recommendations; encouraging successful study and independent work; interpreting assessment results by the teacher; ensuring communication between the course teacher and the student (Dovzhenko, Nebytova, & Shyshenko, 2021). It should be noted that mentoring is one of the most effective methods of self-development (Malysheva, 2021), that is, both parties benefit from cooperation.

Special attention should be paid to the training of mentors. Since mentoring skills and actions significantly affect the success of those who study, their preparation, especially in scientific communication, is important for effective mentoring (Anderson, Chang, Lee, & Baldwin, 2022).

Mentors must be well versed in the procedures supporting the courses, aware of the technological needs of the trainees. They also help trainees manage their online learning. The general support strategy includes:

- Learning the technology of working with a distance course (demonstration and familiarization with the functionality to be used);
- Mentor should be aware of the success and progress of the training, to help when needed;
- Being in contact with other mentors to form a professional learning community, share good practices and successes, and get ideas for alternative strategies.
- Being available when needed, and establishing rules of communication with students at the beginning of the course;
- Maintaining psychological balance and promoting motivation for successful learning.

Effective mentors make students' learning and progress visible, empowering them to make informed decisions and understand the impact of their choices. By setting initial expectations and modelling the process, trainees gain the ability to meet or exceed goals and set high standards of their own.

Mentors play an important role in helping students learn deeply and meaningfully. The presence of a mentor encourages even the shyest to learn.

In addition, learning in an online course can take place anytime, anywhere, so instructors must be able to use technology and connectivity tools, and work synchronously and asynchronously with trainees to respond promptly to questions. This helps students feel a personal connection to their learning.

Perhaps the greatest benefit that mentors provide to students is an intimate knowledge of their interests, motivations, and strengths. This relationship can guide students in selecting future online courses and learning pathways to help make enrolment decisions at this granular level.

Conclusions

Based on the analysis of approaches to organising user training, the areas of work are determined that not only influence the success of training, but also increase the number of users willing to master digital competencies. The concept of a "user roadmap" is proposed, which includes the user's steps from understanding the need for training to successfully applying the skills.

Mastering digital competences is a pressing task, so finding approaches to effective training for them is also relevant. Specialists in information departments of any institution, including employees of university libraries, have the opportunity to successfully implement the recommendations presented in the article.

The library of the institution of higher education is involved in educational, scientific and cultural, and educational processes at the university. Library employees are well aware of the

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information needs of their users and try to satisfy them. Thus, they have the opportunity to implement a practically-oriented approach to the definition of topics and meaningful content of distance courses.

For distance courses on digital competence, formed by library staff, a mentor is a new element in the learning process. It is an important factor in successful learning. We consider the planning of mentor training to be a strategic task of the STL of NTU "KhPI". After all, library professionals have the basic knowledge to do so, as they:

- Are information experts;
- Have technological issues and relevant knowledge related to working with information resources;
- Constantly improve and update digital competencies;
- Communicate with users (research and teaching staff, students, and graduate students) who are motivated to study successfully.

Also, each user will have the opportunity to form an individual educational trajectory not only at the level of mastering the disciplines of the educational program but also at the level of mastering digital competencies that are useful in all areas. Thus, the above recommendations will contribute not only to increasing the effectiveness of user learning in digital competencies, but also to improving the overall level of education in other disciplines at the university.

REFERENCES

- Adashevskaya, I. Yu., & Kraievskaya, O. O. (2020). Vprovadzhennia dystantsiinoho navchannia na kafedri heometrychnoho modeliuвання ta kompiuternoi hrafiky NTU " KhPI" pid chas karantynu. Kharkiv, Ukraine: KP " Miska drukarnia". Retrieved from http://repository.kpi.kharkov.ua/bitstream/KhPI-Press/56585/1/Adashevskaya_Vprovadzhennia_dystantsiinoho_2020.pdf (in Ukrainian)
- Anderson, C. B., Chang, S., Lee, H. Y., & Baldwin, C. D. (2022). Identifying effective mentors in scientific communication: A latent profile analysis of mentor beliefs. *Journal of Career Development*, 49(2), 251-268. doi: <https://doi.org/10.1177/0894845320924127> (in English)
- Bibliosynerhiia: pidtrymka naukovykh doslidzen*. (n.d.). Retrieved from <https://bibliosynergy.ula.org.ua/> (in Ukrainian)
- Brui, O. M., Kulyk, Ye. V., & Serbin, O. O. (2020). *Protses yakisnoi informatsiinoi pidtrymky osvity ta doslidzen u bibliotetsi universytetu: rekomendatsii dlia vprovadzhennia modeli*. Kyiv, Ukraine: UBA. Retrieved from <https://ula.org.ua/259-publikaciyi/vidannya/4505-protses-iakisnoi-informatsiinoi-pidtrymky-osvity-ta-doslidzen-u-bibliotetsi-universytetu-rekomendatsii-dlia-vprovadzhennia-modeli> (in Ukrainian)
- Chaika, I. A. (2020, May). Informatsiini resursy naukovoї biblioteky v zabezpechenni dystantsiinoi formy navchannia studentiv. In *Profesiina kompetentnist uchytelia Novoi ukrainskoi shkoly: formuvannia, rozvytok ta udoskonalennia. Materials of the International Scientific and Practical Internet Conference*. Ternopil, Ukraine. (in Ukrainian)
- Diia. Tsyfrova Osvita. (n.d.). Retrieved from <https://osvita.diia.gov.ua/> (in Ukrainian)
- Dolskaia, O. A., Holozubov, A. V., & Horodyskaia, O. N. (2016). *Chelovek v sovremennom myre: na puty k novoi paradyhme obrazovaniia*. Kharkiv, Ukraine: NTU «KhPI». Retrieved from <https://core.ac.uk/download/pdf/162467513.pdf> (in Ukrainian)
- Dovzhenko, T., Nebytova, I., & Shyshenko, V. (2021). Rol mentorstva u profesiinii pidhotovtsi maibutnikh uchyteliv pochatkovoї shkoly. *Teorija ta metodika navchannja ta vihovannja*, 51, 77-87. doi: <https://doi.org/10.34142/23128046.2021.51.08> (in Ukrainian)

CHANGING ROLES: FROM INFORMATION PROVIDERS TO EDUCATORS

- European Commission. (n.d.). *The Digital Competence Framework*. Retrieved from <https://ec.europa.eu/jrc/en/digcomp/digital-competence-framework> (in English)
- Frecknall, P. (2019). How mentorship happens: Evolving procedures and practices. In *Mentorship in the primary school: Mentorship in action* (pp. 47-61). Retrieved from <https://books.google.com.ua/books?id=RwPFDwAAQBAJ&printsec=frontcover&hl=ru#v=onepage&q&f=false> (in English)
- Kvasnyk, O., Zemliakova, O., & Balabai, A. (2022). The peculiarities of the educational process organization in the conditions of quarantine restrictions in the context of studying the quality of the interaction between its participants. *Theory and Practice of Social Systems management, 1*, 30-47. Retrieved from <http://tipus.khpi.edu.ua/article/view/254302> (in Ukrainian)
- Leavitt, A. S., Nelson, K. L., & Cutucache, C. E. (2022, January 31). The effect of mentoring on undergraduate mentors: A systematic review of the literature. *Frontiers in Education*. doi: <https://doi.org/10.3389/educ.2021.731657> (in English)
- Malysheva, A. A. (2021, March). Mentorstvo yak metod samorozvytku osobystosti u systemi osvity: tradytsii ta novatsii. In *Problemy samorozvytku osobystosti v suchasnomu suspilstvi. Materials of the II International Scientific and Practical Conference*. Yaroslav Mudryi National Law University. Kharkiv, Ukraine. (in Ukrainian)
- OpenDOAR. (n.d.). *OpenDOAR Statistics*. Retrieved from https://v2.sherpa.ac.uk/view/repository_visualisations/1.html (in English)
- Prometheus. (n.d.). *Pro nas*. Retrieved from <https://prometheus.org.ua/about-us/> (in Ukrainian)
- Scientific and Technical Library of NTU "KhPI". (n.d.). *Konferentsii, seminary* [Website]. Retrieved from <http://library.kpi.kharkov.ua/uk/conference> (in Ukrainian)
- Shokurov, O. V. (2021, February). Vykorystannia servisiv Microsoft Office 365 u protsesi navchannia. In *Novitni pedahohichni tekhnolohii u vykladanni mov inozemnym studentam. Materials of the International Scientific and Methodological Seminar, February 25, 2021, Kharkiv, Ukraine*. (in Ukrainian)
- Tinoco-Giraldo, H., Torrecilla Sanchez, E. M., & García-Peñalvo, F. J. (2020). E-mentoring in higher education: A structured literature review and implications for future research. *Sustainability, 12*(11), 4344. doi: <https://doi.org/10.3390/su12114344> (in English)

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Визначення підходів до реалізації ефективного навчання цифровим компетентностям

Мета. Проаналізувати підходи до організації навчання користувачів, які можуть бути застосовані в дистанційному навчанні цифровим компетентностям. Опановування користувачами цифрових компетентностей, як відомо, є одним із важливих завдань не лише закладів вищої освіти, а й усього суспільства. Тому ми вважаємо важливим не лише якісно організувати навчання, а й сприяти залученню до навчання більшої кількості користувачів. Для цього необхідно забезпечити комплексний супровід користувача. **Методика.** Застосовано емпіричні методи. В статті розглядається «дорожня карта користувача»

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– від ідентифікації користувачем необхідних компетентностей до якісного оволодіння ними. На кожному кроці користувач потребує допомоги. **Результат.** На основі виконаного аналізу розроблено рекомендації для організації роботи в бібліотеках університетів у цьому напрямі. Очікуваний результат – збільшення кількості осіб, що пройшли навчання та підвищення ефективності навчання користувачів цифровим компетентностям. **Висновки.** Вважаємо, що для отримання якісного результату необхідно забезпечити комплексний супровід користувача. Фахівці інформаційних підрозділів установ, у тому числі бібліотек університетів, мають можливість успішно реалізувати ці рекомендації завдяки наступним перевагам: володіння актуальними знаннями та постійне їх вдосконалення, наявність комунікацій з користувачами, які мотивовані на успішне навчання.

Keywords: цифрові компетентності; дистанційне навчання; «дорожня карта користувача»; ментор; доступність

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Safety as One of the Most Important Components of the Digital Competence System in Wartime Conditions

Objective. To determine the place of safety skills in the system of digital competences and the role of the university library in their formation among users. The acquisition of safety skills in working with information will allow users to level out and control the negative impact of external information factors. Among the factors that negatively affect a person, there is a colossal amount of information, consisting of actual, relevant, and useful information, as well as garbled, fake, manipulative, and destructive ones. **Methods.** Empirical methods have been used in the investigation. The practical experience and recommendations of international and national experts in the direction of the formation of safety skills in working with information have been analyzed. The level of their implementation by the library at this stage has been monitored. **Result.** It has been determined that for the qualitative and integral formation of users' safety skills in working with information, it is necessary to expand the list of activities and topics in the direction of their popularization and training. The acquisition of safety basics of working with information will allow users to restore and maintain control over physical and psychological health. **Conclusions.** So, the ability to safely interact with information is one of the most important components of the digital competence system of users, which is especially important in wartime conditions. Teaching such competences will help users to realize, control, and level out the negative impact of external information factors, and that's why it can be considered an urgent task for libraries as institutions that are competent to work with information.

Keywords: digital competences; safety; media literacy; information hygiene; psychological health

Introduction*Target audience*

General digitalization contributes to the closeness of society and computing (information and communication technologies) in such a way that people have the opportunity to use computers and the Internet not only to complete tasks at work or at home, but even for relaxation and entertainment (Allmann & Blank, 2021).

Information and digital technologies at the current stage of society's development are rapidly improving and contribute to the generation of a significant amount of information of various types, formats, and content. Anyone and any organization have the ability to generate and publish information on the Internet. At the same time, the purpose of publications on the Internet can be different and have negative consequences both for an individual user and for certain users' communities. That's why a mastery of digital competences allows everyone to use efficiently and profitably information resources and is a mandatory skill for any information consumer.

Tinmaz, Lee, Fanea-Ivanovici and Baber (2022) present the results of a literature review (WoS/Clarivate Analytics, Proquest Central, Emerald Management Journals, Jstor Business College Collections and Scopus/Elsevier). It is determined that since 2013 there has been an

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increase in the number of articles about digital literacy. Based on a qualitative analysis of the content in the investigated publications, four main topics were identified: digital literacy, digital competences, digital skills, and digital thinking.

The article examines the place of safety skills in the system of digital competences and the role of the university library in their formation among users. The safety skills in working with any information help to level out and control the negative impact of external information factors on a person. Such factors include a colossal amount of information, consisting of actual, relevant and useful, as well as garbled, fake, manipulative, and destructive ones. In modern society, it is extremely difficult to avoid information flows. They affect the mental and psychological state of a person. People who are brought out of a state of psychological suffering from lack of an active creative position, low adaptability to the environment, lack of strength to overcome stressful situations, chronic fatigue, pessimism, negativism, irritability, etc. These facts have a negative impact not only on a person's life but also on the performance of professional duties at the workplace or during studies.

While determining the basic digital competences that users should master, the specifics of the academic environment and target groups should be taken into account. We can figuratively divide the users of the library of the higher educational institution into the following target groups:

- scientific-pedagogical and research staff;
- applicants for education at all levels;
- university employees (support staff);
- external users.

A similarity between all groups is what aim the information is used for: education, science, and self-development. The main directions of information use are presented in Figure 1.

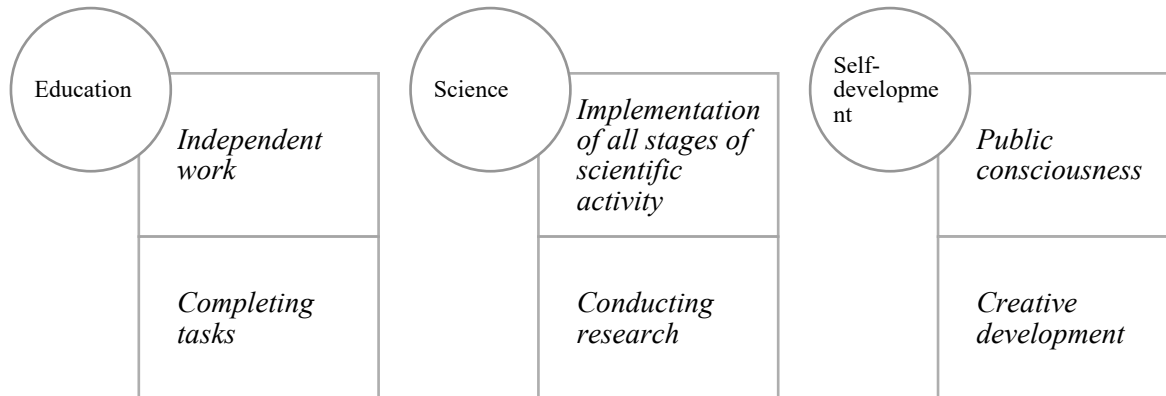


Fig. 1. The Main Directions of Information Use

Distinctive for the target groups is the priority direction in which the largest amount of information is processed. The priority direction for the applicant for education is the educational direction, and for the scientist is the scientific direction. But all groups use the information for self-development. Analyzing this information requires users' critical perception.

Objective

So, safety skills in working with information that users consume independently are critically needed. These skills will allow them to level out and control the negative impact of external informational factors, especially those that are not related to education or science. Among the factors that negatively affect a person is a colossal amount of information, which consists of

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actual, relevant, and useful, as well as garbled, fake, manipulative, and destructive ones. The article aims at analyzing the current situation of teaching digital competences at the university and identifying actions that contribute to developing users' safety skills:

- identifying digital competences related to safety;
- determination of their place in the general system of digital competences;
- analyzing the possibilities of effective implementation of the role of library staff as experts in working with information, for acquiring by users of safety skills in working with information.

Methods

When conducting a study, empirical method was applied. The university librarians should analyze their users' information needs. Well-established communication with users contributes to this. For example, according to the Scientific and Technical Library of NTU «KhPI» reports, only 64 833 individual consultations and references were carried out during 2019-2021. Active communication provides an opportunity to better understand users' information needs and take this information into account while planning the library work.

Digital Competence in the Academic Environment

The Law of Ukraine «On Education» sets out information and communication competence as one of the key competences necessary for every modern person for a successful life. Qualitative information and communication skills ensure not only educational activities but also conducting of scientific research, including international cooperation (Verkhovna Rada of Ukraine, 2022).

The concept of «digital competence» has many definitions. **The concept of the development of digital competences** (approved by the Decree of the Cabinet of Ministers of Ukraine dated March 3, 2021, No. 167-r) defines digital competence as a dynamic combination of knowledge, abilities, skills, ways of thinking, views, and other personal qualities in the field of information, communication and digital technologies, which determines a person's ability to successful socialization and conducting professional or further educational activities using such technologies (Verkhovna Rada of Ukraine, 2021).

The library traditionally develops the users' skills in working with information. That's why it is very important to do this work systematically and comprehensively, taking into account legal documents that explain the general strategy of the state.

Information specialists have developed a significant number of methodological recommendations on digital competences and information skills adapted to a certain target audience. Van Laar, van Deursen, van Dijk and de Haan (2019) confirmed the importance of 21st-century digital skills for professionals in creative industries. These are the seven basic skills supported by the use of information and communication technologies: technical skills, information management, communication, collaboration, creativity, critical thinking, and problem-solving.

The recommendations of international and national experts in the general direction of digital competences have been analyzed to form a basic understanding of the safety skills of working with information.

Firstly, it's the digital competence system **The Digital Competence Framework** is presented on the EU Science Hub portal (*The Digital Competence Framework*, n.d.; Hlavcheva, 2021). The system of digital competences consists of components at five levels (Figure 2).

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The structure of the Digital Competence Framework defines the main components of digital competence at five levels. One of them is the «Security» component, which is considered a key component of the digital competence system.

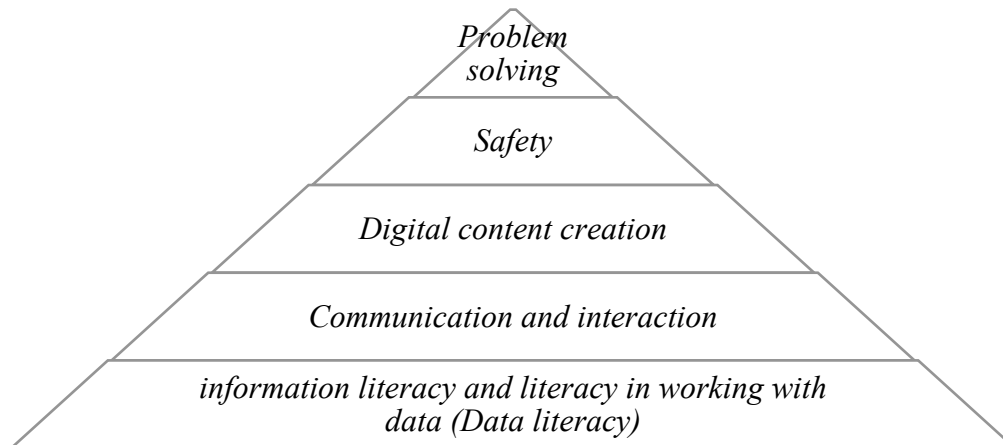


Fig. 2. Components of The Digital Competence Framework

Secondly, it is the Digital Competence Framework for citizens of Ukraine. The «**Description of the Digital Competence Framework for Citizens of Ukraine**» notes that the term «digital competence» includes confident, critical and responsible use and interaction with digital technologies for education, employment, work, leisure, and participation in public life. It includes such concepts as information and media literacy, communication and collaboration, digital content creation (including programming), safety (including protection of personal data in the digital environments (digital privacy and cybersecurity), as well as problem-solving and lifelong learning. In the structure of the digital competence framework for citizens of Ukraine, the sphere «Safety in the digital environments» is highlighted, which includes the following competences (Ministerstvo tsyfrovoi transformatsii Ukrainy, 2021).

- Protection of devices and secure connection to the Internet (*To protect devices and digital content, and to understand risks and threats in digital environments. To know about safety and security measures, and to have due regard to reliability and privacy*).
- Protection of personal data and privacy (*To protect personal data and privacy in digital environments. To understand how to use and share personally identifiable information while being able to protect oneself and others from damage. To understand that digital services use a «Privacy Policy» to inform about how personal data is used.*).
- Protection of the consumer's personal rights against fraud and abuse (*To be aware of the most important legal provisions regarding the protection of the online consumer, the ability to identify dubious online stores, compare prices, and apply measures to protect consumer rights*).
- Protection of health and well-being (*To be able to avoid health risks and threats to physical and psychological well-being while using digital technologies. To be able to protect oneself and others from possible dangers in digital environments. To be aware of digital technologies for social well-being and social inclusion*).
- Environmental protection (*To be aware of the environmental impact of digital technologies and their use*).

It should be noted that the safety digital competences from The Digital Competence Framework for citizens of Ukraine and The Digital Competence Framework completely coincide.

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We consider that these competences should be used as basic ones when planning work with readers.

In addition to training, the issue of skill level assessment to prevent digital divides and more clearly describing the elements of skills are actively negotiated in the publications (van Deursen, Helsper, & Eynon, 2016). Li and Hu (2022) propose to develop a reliable and valid scale of digital skills for school-aged children, which will allow assessing the level of these skills mastering: operational skills (basic operations, information management, information navigation), mobile skills, social skills (social interaction), creative skills (content creation, content integration) and safety skills (privacy protection, risk prevention).

As for the organization of the work, it should be considered that among the areas of this Framework use it is noted: «...the creation of training programs, pieces of training, educational resources aimed at increasing the level of digital competence» (Ministerstvo tsyfrovoyi transformatsii Ukrainy, 2021).

It is desirable to use instructional strategies that promote the development of basic digital literacy when planning the content and plan of activities (Kasperski, Blau, & Ben-Yehudah, 2022). The library of a higher educational institution has all the opportunities to actively participate in this work: professional information specialists; continuous professional development: information and communication proficiency; awareness of the target user groups' information needs.

The authors of the article have monitored the work of the Scientific and Technical Library of the National Technical University «Kharkiv Politechnic Institute» over the last 3 years in the direction of teaching digital and information competences. Some activities are presented in Table 1.

Table 1

Digital Competence Training Activities

	Title	2021	2020	2019	Total
1.	Reports at scientific and practical seminars and conferences	21	8	17	46
2.	Publications	13	10	13	36
3.	Excursions (familiarization with resources and services)	149	102	203	371
4.	Lectures on Academic Culture (including information working skills), hours	54 (distance learning with video recording)	100	120	274

According to the results of the library's work monitoring, we can conclude that during the research the main attention was focused on the library's new users' adaptation; information support of education and science; the development of skills in working with academic information. That's why it's necessary to expand this work in the direction of digital competences development,

considering the training of the competences «Safety in the Digital Environments», specified in the Digital Competence Framework for citizens of Ukraine.

Results and Discussion

Information hygiene

The list of topics for creating training programs and conducting seminars should be expanded in order to form users' complete set of digital skills that will allow them to work safely with any information and communicate in an information environment.

In our opinion, during military operations, the protection of health and social well-being is of particular importance. It's well known that information and communication technologies can affect human health and at the present stage the intensity of their use has increased significantly. The following formula works: the received information causes a certain mental reaction that affects the physical state of a person (Khalamendyk, 2008). It means that both positive and negative information has an impact on the physical and psychological state of a person. A significant volume of influence of accumulated negative information can be critical for psychological health.

Currently, it's important for every individual to master and observe the rules of information hygiene, save one's own time, and be able to analyze, filter, and extract from the stream of received information necessary to perform certain tasks (Shynkaruk, Imas, Denysova, & Kostykevich, 2018). That's why it can be noted that, first of all, information hygiene solves the issue of the prevention and preservation of human health (Khalamendyk, 2008).

Nowadays, due to the growth of traditional information-dependent diseases among the population, new pathologies are also appearing: computer syndrome; addictions – pathological dependence on television or social networks; phobias – nomophobia, fear of being left without means of communication; manias – sensory, related to the Internet, ludomania – addiction to computer games. Depression, suicide risk, and other psychosocial consequences caused by online social network sites addiction take place. The necessity of implementation of methods and adherence to information hygiene for the prevention of info-epidemic, panic, and mass psychoses became extremely obvious even under the conditions of the SARS-CoV-2 coronavirus pandemic and is extremely relevant at the present time (Humeniuk & Kostin, 2021).

Koval (2017) singles out the following basic rules for compliance with information hygiene:

- criticize strangers on social networks;
- do not immediately trust any, especially sensational, information on social networks, especially if it causes strong negative emotions;
- pay attention to errors and inaccuracies in the texts;
- check information in at least three additional sources, give preference to official ones;
- think about who exactly benefits from the dissemination of this information;
- do not rush to spread any information;
- learn to master negative emotions, and move on to other things;
- reduce the information load;
- remember that there're no absolutely reliable sites, social networks, mail servers that cannot be hacked.

These rules are basic, there are a number of techniques to help identify false or manipulative information.

People's Psychological Health during Military Situation

During the military situation, thousands of people feel anxiety, fear, stress, and despair. News sources cover war events from real life — this is cruel and disturbing information about the war. Being in this information field is very difficult for a person. There's a violation of psychological balance. Anxiety during the war is a normal response to danger. This is an emotional state with a constant expectation of negative events.

In particular, excessive online news consumption by users causes anxiety, irritability, and addictive behavior. Library employees, as information workers, can and should teach users «healthy» rationing of news consumption. For example, follow simple rules — limit the time you watch the news and set yourself clear measurable intervals: once every 3 hours; up to 30 minutes in the morning and evening.

The complete list of recommendations for maintaining psychological balance is presented on the Scientific and Technical Library website, in the section of the information and resource center «Without barriers» (Scientific and Technical Library NTU "KhPI", 2021a). The information on creating a comfortable inclusive environment is also presented on the pages of the «Without Barriers» center. The center staff helps not only to work with information but also personally, as part of volunteering, providing psychological assistance to children who were hiding in the subway in Kharkiv during the bombing (Scientific and Technical Library NTU "KhPI", 2021b).

The Work of the Library to Teach Users Safety Fundamentals of Working with Information

The Scientific and Technical Library of NTU «KhPI» has started updating the content in the direction of teaching digital competences since April 2022. It has been supplemented with digital competences that form safety skills in working with information.

As a result, during April-September, the following methodological recommendations have been developed:

- on methods of recognizing fake information in conditions of hybrid war;
- on the safety of using social networks, the Internet, and television;
- on regarding recognition of information manipulation.

These methodological recommendations are currently being reviewed, after which they will be distributed among users and used in conducting events.

The course «Academic culture» for the 1st year of all specialties is planned to be supplemented with a corresponding section.

It is planned to systematize freely available online courses on media literacy and information hygiene and offer users a selection of the best of them. For example: Action. Digital education (educational series: «Media literacy in times of pandemic», «Psychological support for yourself and close people for civilians», «Working with emotional exhaustion»); Prometheus (course «Information hygiene. How to recognize lies in social networks, on the Internet, and on television»); EdEra (Very Verified: Media Literacy Course), etc.

The Scientific and Technical Library of NTU «KhPI» has a proposal to provide users with psychological support. The employee of the information and resource center «Without Barriers» is a practicing psychologist, so she has the opportunity to provide psychological assistance.

At this stage, the main activity of the Scientific and Technical Library of NTU «KhPI» is carried out remotely. All events are covered on the library's official website. The corporate communication system is used, which is implemented on the basis of Microsoft Office 365 services for higher educational institutions. The library generates full-text educational and

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methodological resources. All these measures allow library employees to be in touch with the user 24/7.

In spite of the considerable work, there remains a number of digital competencies that should also be paid attention to. That's why we plan to elaborate and use other components of the above-mentioned Frameworks in the future.

Conclusions

The «Safety» component in the digital competence system is one of the key competences. In modern society, it is extremely difficult to avoid information flows. They affect the psychological, and then often the mental state of a person. People who are brought out of a state of psychological balance suffer from a lack of an active creative position, low adaptability to the environment, lack of strength to overcome stressful situations, chronic fatigue, pessimism, negativism, irritability, etc.

The libraries of higher educational institutions are always involved in ensuring the information tasks execution of their institution. According to the results of the monitoring of NTU «KhPI» library work, it was determined that the main attention during the activities was focused on the adaptation of new users of the library: education and science information support; development of working with academic information skills. Insufficient attention was paid to the safety skills in working with information. Library employees, as experts in working with information, have the necessary knowledge and experience to expand the content of topics for teaching digital competences, especially the safety skills in working with information.

This work has already begun, as it will help users to acquire the necessary skills of critical perception of information, which will reduce the emotional stress on their physical and psychological well-being. The ability to safely interact with information is one of the most important components of the digital competence system of users, which is especially important in wartime conditions. Psychological well-being makes a person self-sufficient and promotes effective work and learning. After all, the fruitful and effective work of each of us at our workplace supports and strengthens our state.

REFERENCES

- Allmann, K., & Blank, G. (2021). Rethinking digital skills in the era of compulsory computing: Methods, measurement, policy and theory. *Information, Communication & Society*, 24(5), 633-648. doi: <https://doi.org/10.1080/1369118X.2021.1874475> (in English)
- Deursen van, A. J. A. M., Helsper, E. J., & Eynon, R. (2016). Development and validation of the internet skills scale (ISS). *Information Communication and Society*, 19(6), 804-823. doi: <https://doi.org/10.1080/1369118X.2015.1078834> (in English)
- European Commission. (n.d.) *The digital competence framework*. EU Science Hub. Retrieved from <https://ec.europa.eu/jrc/en/digcomp/digital-competence-framework> (in English)
- Hlavcheva, Yu. M. (2021, October). Systema tsyfrovyykh kompetentnostei: prykladnyi akademichnyi aspekt [Digital competence system: Applied academic aspect]. In *University Library at a New Stage of Social Communications Development. Abstracts of the VI International Scientific and Practical Conference*. Retrieved from http://conflib.diit.edu.ua/Conf_univ_Library_2021/paper/view/24782/13708 (in Ukrainian)

CHANGING ROLES: FROM INFORMATION PROVIDERS TO EDUCATORS

- Humeniuk, V. V., & Kostin, D. O. (2021, April). Informatsiino-psykhologichni ataky v umovakh pandemii. In *Radio Electronics and Youth in the XXI Century. Proceedings of the 25th International Youth Forum* (Vol. 1, pp. 139-140). Kharkiv National University of Radio Electronics. Retrieved from <https://openarchive.nure.ua/bitstream/document/15612/1/GumenukKostin2021.pdf> (in Ukrainian)
- Kasperski, R., Blau, I., & Ben-Yehudah, G. (2022). Teaching digital literacy: Are teachers' perspectives consistent with actual pedagogy? *Technology, Pedagogy and Education*. doi: <https://doi.org/10.1080/1475939X.2022.2091015> (in English)
- Khalamendyk, V. B. (2008). Informatsiina hihiena yak faktor zberezhennia psikhichnoho zdorovia liudyny. *Humanities Bulletin of Zaporizhzhie State Engineering Academy*, 35, 83-91. Retrieved from https://old-zdia.znu.edu.ua/gazeta/VISNIK_35_7.pdf (in Ukrainian)
- Koval, Z. (2017). Zaprovdzhennia kompleksnykh mekhanizmiv informatsiinoi hihieny yak zasobiv zabezpechennia informatsiino-psykhologichnoi stiikosti liudyny, suspilstva, derzhavy [Implementation of complex mechanisms of informational hygiene as ways of providing informational-psychological firmness of person, society, state]. *Actual Problems Of Public Administration*, 2(70), 62-67. Retrieved from [http://lib.rada.gov.ua/static/about/text/Zbirnik-2\(70\)-2017.pdf#page=62](http://lib.rada.gov.ua/static/about/text/Zbirnik-2(70)-2017.pdf#page=62) (in Ukrainian)
- Laar van, E., Deursen van, A. J. A. M., Dijk van, J. A. G. M., & Haan de, J. (2019). Twenty-first century digital skills for the creative industries workforce: Perspectives from industry experts. *First Monday*, 24(1). doi: <https://doi.org/10.5210/fm.v24i1.9476> (in English)
- Li, X., & Hu, R. (2022). Developing and validating the digital skills scale for school children (DSS-SC). *Information, Communication & Society*, 25(10), 1365-1382. doi: <https://doi.org/10.1080/1369118X.2020.1864002> (in English)
- Ministerstvo tsyfrovoy transformatsii Ukrainy. (2021). *Opys ramky tsyfrovoy kompetentnosti dlia hromadian Ukrainy*. Retrieved from https://thedigital.gov.ua/storage/uploads/files/news_post/2021/3/mintsifra-oprilyudnyue-ramku-tsifrovoy-kompetentnosti-dlya-gromadyan/%D0%9E%D0%A0%20%D0%A6%D0%9A.pdf (in Ukrainian)
- Scientific and Technical Library NTU "KhPI". (2021a). *Moi bazhannia – moi mozhlyvosti*. Retrieved from http://library.kpi.kharkov.ua/uk/no_barriers/health (in Ukrainian)
- Scientific and Technical Library NTU "KhPI". (2021b). *My dity tvoi, Ukraino!* Retrieved from http://library.kpi.kharkov.ua/uk/no_barriers/%C2%AB%D0%BC%D0%B8-%D0%B4%D1%96%D1%82%D0%B8-%D1%82%D0%B2%D0%BE%D1%97-%D1%83%D0%BA%D1%80%D0%B0%D1%97%D0%BD%D0%BE%C2%BB (in Ukrainian)
- Shynkaruk, O., Imas, E., Denysova, L., & Kostykevich, V. (2018). Vplyv informatsiino-komunikatyvnykh tekhnolohii na fizychnu ta psikhichnu zdorov'ia liudyny [Influence of information and communication technologies on physical and mental human health]. *Physical Education, Sport and Health Culture in Modern Society*, 2(42), 13-24. doi: <https://doi.org/10.29038/2220-7481-2018-02-13-24> (in Ukrainian)
- Tinmaz, H., Lee, Y.-T., Fanea-Ivanovici, M., & Baber, H. (2022). A systematic review on digital literacy. *Smart Learning Environments*, 9, 21. doi: <https://doi.org/10.1186/s40561-022-00204-y> (in English)
- Verkhovna Rada of Ukraine. (2021). *Kontseptsiiia rozvytku tsyfrovoykh kompetentnostei*. Retrieved from <https://zakon.rada.gov.ua/laws/show/167-2021-%D1%80#n13> (in Ukrainian)

CHANGING ROLES: FROM INFORMATION PROVIDERS TO EDUCATORS

Verkhovna Rada of Ukraine. (2022). *On education: Law of Ukraine*. № 2145-VIII. Retrieved from <https://zakon.rada.gov.ua/laws/show/2145-19#n1235> (in Ukrainian)

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Безпека як одна з найважливіших складових системи цифрових компетентностей в умовах воєнного часу

Мета. Визначити місце безпекових навичок в системі цифрових компетентностей та роль бібліотеки університету у їх формуванні у користувачів. Оволодіння безпековими навичками роботи з інформацією дозволить користувачам нівелювати та контролювати негативний вплив зовнішніх інформаційних факторів. Серед факторів, які негативно впливають на людину, є колосальний обсяг інформації, який складається з актуальної, релевантної та корисної інформації, а також з перекрученої, фейкової, маніпулятивної, деструктивної. **Методика.** У дослідженні використано емпіричні методи. Проаналізовано практичний досвід та рекомендації міжнародних та національних експертів у напрямі формування навичок безпечної роботи з інформацією. Проведено моніторинг рівня їх виконання бібліотекою на даному етапі. **Результати.** Визначено, що для якісного та цілісного формування у користувачів безпекових навичок роботи з інформацією, слід розширити перелік робіт та тем за напрямом для їх популяризації та навчання. Оволодіння користувачами безпекових основ роботи з інформацією що дозволить відновити та підтримувати контроль над фізичним та психологічним здоров'ям. **Висновки.** Таким чином, уміння безпечно взаємодіяти з інформацією є однією з найважливіших складових системи цифрових компетентностей користувачів, що особливо важливо за умов воєнного часу. Навчання таким компетентностям допоможе користувачам усвідомлювати, контролювати та нівелювати негативний вплив зовнішніх інформаційних факторів, і саме тому це можна вважати актуальною задачею для бібліотек як установ, які є компетентними з питань роботи з інформацією.

Ключові слова: цифрові компетентності; безпека; медіаграмотність; інформаційна гігієна; психологічне здоров'я

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Ethical Component of Library Competencies Design: Professional View

Objective. Substantiation of the ethical component place in the set of modern librarians' key competencies. **Methods.** Conclusions and results have been obtained due to use of dialectical, socio-communicative, analytical-review methods, methods of systematization, comparative analysis, bibliographic analysis, content analysis and document analysis. **Results.** The need to supplement the educational standards on the speciality 029 "Information, Library and Archival Affairs" bachelor's and master's levels with ethical component – the librarian's understanding of the principles and values of information and professional ethics, academic integrity and capacity to follow them was justified. **Conclusions.** Adherence to professional ethical norms and the spread of the academic integrity culture creates the conditions for the demand for other librarian's professional competencies because it provides the value of knowledge and personal theoretical and applied achievements. Given the urgent need to spread the culture of academic integrity in the scientific and educational environment and the lack of relevant educational goals in bachelor and master educational standards, Ukrainian Library Association offers the scientific and methodological basis for the formation of the academic integrity culture as an important competence of a modern librarian within the framework of implementation of the compensatory function.

Keywords: professional competencies; librarian; academic integrity; All-Ukrainian public organization "Ukrainian Library Association"

Introduction

The trend towards universalization of professional library education, caused by the rapid development of information technology, the crisis of the library profession and its transformation by strengthening the information and archival components, raises the issue of determining the competencies that potential employers expect future librarians to have, as certain competencies ultimately determine the library environment development (Panda & Panda, 2019, p. 365).

Core competencies relevant to the professional development goals and consistent with the library's mission and vision determine the guidelines of professional library education and act as a necessary condition, the basis for further updating of educational programs, curricula, and disciplines.

At the same time, changes in the social role of the librarian himself, who transforms from an information scientist to a knowledge "facilitator," and the constant improvement and modernization of professional activity technological principles lead to increased scientific attention not only and not so much to "hard skills" (work with information in various formats, use of a wide range of digital tools, resources and technologies, launching and managing electronic libraries, etc.) but to skills that qualify as "soft" as well: be able to work in a team and autonomously, think critically, generate new ideas, develop and implement projects, etc. (Hranchak, 2021, p. 13). A special role in the complex of soft skills is played by the ethical component, which is directly related to the social responsibility of the library profession. It is the adherence to ethical principles that determines the implementation of the whole set of other professional competencies for the benefit of society and the individual.

The aim of the article is to determine the place of the ethical component in the vision of key competencies of a modern librarian by the professional community.

Methods and Materials

The results of the study have been obtained due to use of dialectical and social communication methods, which allowed to consider professional library education in its development and relationship with the transformation of library practice, as well as from the standpoint of compliance with current needs of libraries and their clients; analytical review method useful to study the professional literature; methods of systematization and comparative analysis, which were necessary due to the need to compare different views on the training of librarians and identify common general trends; bibliographic analysis, the heuristic potential of which proved to be useful for outlining the theoretical basis of the study; methods of content analysis and document analysis when working with sources. The source base of the study consisted of current professional publications on selected issues, legal documents, specialized Internet resources.

Results and Discussion

Given the transformation of the profession, caused by the widespread introduction of modern Internet technologies and online service in library practice, supplementing library specialities with archival and documentary components, diversification of forms and methods of library work due to intensifying of libraries' project activities, issues of content training of librarians are in the focus of scientific attention of many domestic and foreign scholars and library practitioners, are discussed on the pages of professional scientific publications and at the level of relevant library organizations.

The predominant attention of foreign researchers (Atanda et al., 2021; Panda & Panda, 2019; Kaur & Sharma, 2018; Santos, 2018; Swapna & Biradar, 2016; Bin Hashim & Mokhtar, 2012; Nonthacumjane, 2011) is paid to computer, media, information, and communication competencies of librarians, their ability to self-development and solving problems of management and organization of production processes.

The ethical component among the list of competencies required for a librarian is insufficiently represented in the professional scientific publications, although it is mentioned by some researchers (Manu et al., 2018; Nonthacumjane, 2011; Tanloet & Tuamsuk, 2011).

In particular, the researchers (Manu et al., 2018) provide an overview of core competencies for library and information science professionals developed by various national and international library professional associations and networks, emphasizing the need for future librarians to develop knowledge and principles of information ethics along with competencies such as knowledge of information systems and technologies, information literacy, ability to provide information services, information retrieval and data analysis, understanding of information architecture, approaches to data organization, information and knowledge and providing access to them, information and knowledge management, etc. In general, these skills can be organized in five groups of competencies: IT competencies, organization and management of library collections, organization and implementation of library and information services, management and leadership, ethics and further training.

Issues of ethics and social responsibility are considered by scholars in the context of the general skills of the librarians (Nonthacumjane, 2011) and their personal qualities (Tanloet & Tuamsuk, 2011).

As for the scientific achievements of domestic scientists, their conclusions with some clarifications are mostly correlated with the results obtained by colleagues abroad.

First of all, in this context it is worth mentioning a number of domestic scientific papers on the analysis of higher education standards in the speciality 029 "Information, Library and Archival

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Affairs,” development of relevant educational programs in higher education institutions, substantiation of relevant components (Hranchak, 2021, 2017; Makeeva, 2021, Matviienko, Tsyvin, & Humenchuk, 2021; Novalska & Kasian, 2021; Davydova & Marina, 2020; Kukhtiak, 2019; Solyanik, 2018, 2016).

The vision of leading domestic scholars and practitioners of the set of the most important competencies that a librarian should possess is reflected in the approved standards of higher education on the speciality 029 “Information, Library and Archival Affairs.” The documents define the general and professional competencies of the future librarian, as well as learning outcomes, which can be systematized into groups of personal, managerial, communicative, information technology competencies and supplemented by a group of research competencies at the level of Doctor of Philosophy.

Despite the active scientific development of issues related to the profile of the modern librarian and the reform of library and information education, scientists still note the “contradictions between: modern labour market requirements for training of information, library and archival professionals and the actual level of their training; educational goals outlined in normative and program documents, and functional possibilities of the existing educational and methodical maintenance for their realization; necessity of formation of readiness for professional activity of bachelors of information, library and archival business in higher education institutions and need of updating the educational and methodological support for their training” (Kukhtiak, 2019, p. 4).

The contradiction between the needs of the labour market and the existing educational goals outlined in the regulations and policy documents should be added to the above. In particular, this applies to the “lost” in educational standards on the speciality 029 “Information, Library and Archives” bachelor’s and master’s degree, but a key for the librarian an ethical component, his understanding of values and adherence to the principles of academic integrity, following the principles of information ethics.

Mention of ethical principles of library and information activities can be found only in the general competencies of the professional educational standard at the level of Doctor of Philosophy: “an ability to solve complex problems in information, library and archival affairs on the basis of a systematic scientific worldview and general cultural outlook in compliance with the principles of professional ethics and academic integrity” (*Ministry of Education and Science of Ukraine, 2021*). However, such wording somehow narrows the scope of the principles of professional ethics and academic integrity, limiting it to situations of complex problems, while, ideally, these principles should be at the heart of all library and information activities and professional responsibilities.

In the professional library environment (Makeeva, 2021; Horoshok & Zhovtko, 2020; Karpenko, 2016) mastery of the code of ethics and conduct, understanding of ethics and values of the library profession are determined as competencies, necessary for a librarian along with the ability to analyse, evaluate, compare, structure information, use modern information and communication technologies, manage information resources, complete the fund with traditional and electronic media in accordance with the standards of librarianship in Ukraine, think logically and critically, ability to work in a team, solve problems of varying complexity, take initiative, constantly improve their educational level, etc.

Adherence to professional ethical norms and the spread of a culture of academic integrity creates the conditions for the demand for all further professional competencies of a librarian because it provides the value of knowledge and personal theoretical and applied achievements. According to Makeeva (2021), “ethical competence represents and regulates the main actions that are consolidated in the skills, traditions, principles of life and professional activity, mental states, actions, deeds, and qualities of a university librarian” (p. 44). The need to find information and

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access knowledge loses its relevance if the key to success is not professional knowledge and skills, but the ability to adapt, personal loyalty and devotion, the ability to build a network of useful connections and so on. Corrupt traditions devalue professional knowledge, which leads to the spread of imitation practices during training. Under such conditions, students no longer try to find the necessary information (lose of relevance of information retrieval activities, information evaluation), create a secondary original information product based on it (creativity, research skills, ability to analyse, synthesize information, use methodological tools) and etc. Their main purpose is to simulate the creation of the required product, which ultimately causes reputational damage to science and leads to an overall decrease in the level of professional competence of graduates. Libraries can play a key role in spreading the culture of academic integrity, so the formation of understanding of its principles and adherence to values is one of the basic competencies for future librarians, the formation of which should permeate his training at all levels of higher education.

In this context, the in-service training programs for librarians (Brui, Kulyk, Nazarovets, & Soshynska, 2020; Voskoboinikova-Huzieva et al., 2018), methodological advice (Savenkova & Chukanova, 2016) and the librarians competence profile on academic integrity (Brui, Savenkova, & Chukanova, 2019), developed by experts of the Ukrainian Library Association (hereinafter – ULA), deserve attention because their content allows us to draw conclusions about the required for library practitioners competencies, the lack of which is observed in the professional environment.

The approved profile of librarians' competencies in academic integrity reveals their content, that consists of:

- *understanding* the basics and principles of scientific communication; principles, methods and means of organizing the educational and scientific processes of the university; interaction of participants of educational and scientific processes of the university; current trends in the development of the academic integrity movement in Ukraine and the world; interaction and mutual influence of all components and participants of scientific and educational communication in the process of formation and development of a virtuous academic environment; features of the process of academic publication; principles of formation and operation of scientometric indicators and tools; interaction and mutual influence of participants of the process of scientific communication on observance/violation of the principles of academic integrity in scientometric indicators; the impact of open access on the formation and dissemination of a culture of academic integrity;

- *knowledge* of general principles and foundations of academic integrity; authoritative domestic and international informational scientific and educational sources; general methods and means of information retrieval; features of search in library catalogues; features of search in specific domestic and international databases of authoritative informational scientific and educational sources; basics of intellectual property, including copyright; features of intellectual property, in particular copyright, in research (Ukrainian and international context); principles, rules and features of open access; requirements and rules for registration of scientific and educational works (Ukrainian and international context); standards and rules of references and citations in scientific and educational works (Ukrainian and international context); standards and rules of bibliographic description (Ukrainian and international context); basics of scientometrics and bibliometrics; methods of teaching educational material for certain categories of students;

- *ability* to teach tutoring material; organize practical classes; control the level of knowledge and skills of certain categories of students (Brui, Savenkova, & Chukanova, 2019, p. 7-8).

The relevance of the formation of the competence of the librarian in academic integrity is also confirmed by the ULA's participation in the Academic Integrity Project in Ukraine (SAIUP) and the Academic Integrity in School Project (SAISS) from the American Councils for

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International Education in cooperation with the Ministry of Education and Science of Ukraine and the USA Embassy in Ukraine (Hranchak & Soshynska, 2019, p. 119).

Thus, in conditions of urgent need to spread the culture of academic integrity in the scientific and educational environment and the lack of defined relevant educational goals in professional educational standards specialties, ULA in frames of implementation of the compensatory function fills the gap and offers scientific and methodological tools for forming an academic integrity culture of library and information staff.

Conclusions

The issues of designing a profile of a librarian who would meet the needs of library practice are in the focus of attention of many domestic and foreign theorists and practitioners of library affairs. At the same time, only some scholars emphasize the need to form a set of competencies in information ethics and academic integrity in a modern librarian. There is no ethical component in the national educational standards in the speciality 029 “Information, Library and Archival Affairs” of master’s and bachelor’s levels, which complicates the formalization of relevant educational goals in educational programs for bachelors and masters of information, library and archival affairs. Given the existing gap and taking into account the needs of practical library activities, Ukrainian Library Association provides a scientific and methodological basis and systematically implements measures to form a culture of academic integrity in scientific, educational and professional environments. Theoretical conclusions in the field of library science and the ULA experience confirm the importance of supplementing bachelor’s and master’s level educational standards on the speciality 029 “Information, Library and Archival Affairs” with ethical components – the librarian’s understanding of principles and values of information and professional ethics, academic integrity and ability to follow them.

REFERENCES

- Atanda, A. D., Owolabi, K. A., & Ugbala, C. P. (2021). Professional competence and attitudes of library personnel towards digital services in selected university libraries in Nigeria. *Digital Library Perspectives*, 37(3), 209-222. doi: <https://doi.org/10.1108/DLP-08-2020-0076> (in English)
- Bin Hashim, L., & Mokhtar, W. N. H. W. (2012). Preparing New Era Librarians and Information Professionals: Trends and Issues. *International Journal of Humanities and Social Science*, 2(7), 151-156. Retrieved from <http://www.ijhssnet.com/journal/index/924> (in English)
- Bruil, O., Savenkova, L., & Chukanova, S. (2019). *Profil kompetentnosti bibliotekariv z akademichnoi dobrochesnosti* [Profile of competencies of librarians on academic integrity]: rekomendatsii. Ukrainska bibliotekna asotsiatsiia, Kyiv. Retrieved from <https://ula.org.ua/resursy/vydannia> (in Ukrainian)
- Bruil, O., Kulyk, Ye., Nazarovets, M., & Soshynska, Y. (2020). *Universytetska biblioteka v systemi naukovykh komunikatsii* [University library in the system of scientific communications]: prohrama navchalnoho moduliu pidvyshchennia kvalifikatsii pratsivnykiv bibliotek. UBA, Kyiv. Retrieved from <https://ula.org.ua/resursy/vydannia> (in Ukrainian)
- Davydova, I., & Marina, O. (2020). Rozvytok tsyfrovyykh kompetentnosti studentiv biblioteknykh spetsialnosti [Development of the Library and Information Science Students’ Digital Competencies]. *Ukrainian Journal on Library and Information Science*, 6, 97-104. doi: <https://doi.org/10.31866/2616-7654.6.2020.218614> (in Ukrainian)

CHANGING ROLES: FROM INFORMATION PROVIDERS TO EDUCATORS

- Horoshok, V. V., & Zhovtko, H. Y. (Ed.). (2020). *Profesiini kompetentsii biblioteknykh fakhivtsiv* [Professional competencies of librarians]: metod. porady. Ternop. obl. univers. nauk. b-ka, Ternopol. <https://bit.ly/2YLJoUU> (in Ukrainian)
- Hranchak, T. (2017). Dystsipliny analitychnoho profilu yak komponent prohramy pidhotovky bakalavriv iz spetsialnosti "informatsiina, bibliotekna ta arkhivna sprava" [Disciplines of the Analytical Profile as a Component of the Bachelor's Degree Program "Information, Library and Archive Science"]. *Naukovi pratsi Natsionalnoi biblioteki Ukrainy imeni V. I. Vernadskoho*, 46, 165-180. (in Ukrainian)
- Hranchak, T., & Soshynska, Ya. (2019). Akademichnyi plahiat v Ukraini v umovakh kulturnoho tranzytu [Academic Plagiarism in Ukraine in Conditions of Cultural Transit]. *Mizhdystsiplinarni doslidzhennia skladnykh system*, 15, 107-127. doi: <https://doi.org/10.31392/iscs.2019.15.107> (in Ukrainian)
- Hranchak, T. Yu. (2021, March). Pidhotovka bibliotekaria – «fasyliatora» znan: metodychni pidkhody [Training of a librarian – "facilitator" of knowledge: methodological approaches]. In *Suchasna informatsiino-bibliotekna osvita: metamorfozy navchalnoho dyzainu. Proceedings of the International Scientific and Practical Conference* (pp. 13-17), Ukrainian Library Association. Kyiv, Ukraine. Retrieved from https://issuu.com/ukrainian_library_association/docs/zbirnyk_ula_slavske_2021 (in Ukrainian)
- Karpenko, O. O. (2016, October). Information Culture as a Component of Professional Competence of Librarians in the Information Society. In *Biblioteki i suspilstvo: rukh u chasi ta prostori. Proceedings of the Scientific and Practical online-Conferenc*, Scientific library of Kharkiv National Medical University. Kharkiv, Ukraine. Retrieved from <https://cutt.ly/7U7a2Ro> (in English)
- Kaur, R., & Sharma, A. K. (2018). 21st Century Library Professionals in Dynamic Role in Digital Era. *Library Progress (International)*, 38(1), 129-139. doi: <https://doi.org/10.5958/2320-317X.2018.00013.2> (in English)
- Kukhtiak, O. Ya. (2019). *Osoblyvosti navchalno-metodychnoho zabezpechennia profesiinoy pidhotovky bakalavriv informatsiinoi, biblioteknoi ta arkhivnoi spravy* [Features of Methodological Support for Professional Training of the Bachelors of Information, Library and Archival Affairs] (PhD Dissertation). Natsionalnyi universytet «Lvivska politekhnika» Lviv, Ukraine. Retrieved from <https://ena.lpnu.ua/items/e1614a14-df30-4a85-b7ee-2811063c9217> (in Ukrainian)
- Makeeva, I. I. (2021). Professional Competencies of a Librarian of a Higher Educational Institution. In *University Library at a New Stage of Social Communications Development. Conference Proceedings*, VI, 40-46. doi: https://doi.org/10.15802/unilib/2021_248511 (in English)
- Manu, T. R., Shashikumara, A. A., Asjola, V., Chaudhary, P., & Muduli, P. K. (2018, November). Core Competencies for 21st Century Library and Information Science Professionals. In *Marching Beyond the Libraries: Managerial Skills and Technological Competencies. International Conference*, Kalinga Institute of Industrial Technology (KIIT), Bhubaneswar, India. Retrieved from <https://cutt.ly/KU46Wif> (in English)
- Matviienko, O. V., Tsyvin, M. N., & Humenchuk, A. V. (2021). *Suchasni kontseptsii dokumentno-informatsiinoi nauky: pidhotovka fakhivtsiv za spetsialnistiu 029 "Informatsiina, bibliotekna ta arkhivna sprava"* [Modern concepts of documentary and information science: training of specialists in the specialty 029 "Information, library and archival affairs"]. Kyiv, Ukraine: Lira-K. (in Ukrainian)
- Ministry of Education and Science of Ukraine (2021). *Standart vyshchoi osvity Ukrainy: tretii riven, stupin doktor filosofii, haluz znan 02 Kultura i mystetstvo, spetsialnist 029 "Informatsiina, bibliotekna ta arkhivna sprava"* [Standard of higher education of Ukraine: third (doctoral) level, field of

CHANGING ROLES: FROM INFORMATION PROVIDERS TO EDUCATORS

- knowledge 02 Culture and art, specialty 029 "Information, library and archival business"]. Kyiv, Ukraine. Retrieved from <https://cutt.ly/LMlq8Sw> (in Ukrainian)
- Nonthacumjane, P. (2011). Key skills and competencies of a new generation of LIS professionals. *IFLA Journal*, 37(4), 280-288. doi: <https://doi.org/10.1177/0340035211430475> (in English)
- Novalska, T., & Kasian, V. (2021). Teoretyko-metodolohichni zasady pidhotovky internet-marketoloha za spetsialnistiu 029 «informatsiina, bibliotechna ta arkhivna sprava» [Theoretical and Methodological Fundamentals of Internet Marketing Training in Specialty 029 “Information, Library and Archival Affairs”]. *Ukrainian Journal on Library and Information Science*, 7, 71-82. doi: <https://doi.org/10.31866/2616-7654.7.2021.233297> (in Ukrainian)
- Panda, J., & Panda, S. P. (2019, November). Role of LIS Education and Competency Building for LIS Profession in the 21st Century. In *12th International CALIBER-2019 KIIT*, (pp.359-369). Kalinga Institute of Industrial Technology (KIIT), Bhubaneswar, India. Retrieved from <https://ir.inflibnet.ac.in/handle/1944/2320> (in English)
- Santos, Y. T. P. (2018). The Profile of a Modern Filipino Librarian: An Examination of Perceived Competencies. *International Information & Library Review*, 50(4), 276-290. doi: <https://doi.org/10.1080/10572317.2017.1409051> (in English)
- Savenkova, L. V., & Chukanova, S. O. (2016). *Navchannia studentiv akademichnii dobrochesnosti u bibliotetsi VNZ* [Teaching students academic integrity in the university library] : metodychni porady. Kyiv, Ukraine: UBA. (in Ukrainian)
- Solyanik, A. A. (2016, February). Zmist invariantnoi chastyny osvitno-profesiinoi prohramy pidhotovky bakalavra ta mahistra zi spetsialnosti 029 "Informatsiina, bibliotechna ta arkhivna sprava" [Content of the invariant part of the educational and professional program of bachelor's and master's degree in specialty 029 "Information, library and archival affairs"]. In *Problemy rozvytku dokumentalno-informatsiinykh system u suchasnomu informatsiino-komunikatsiinomu seredovyschi*. Proceedings of the all-Ukrainian Scientific and Practical Conference (pp.133-135), Rivne State University of Humanities. Rivne, Ukraine (in Ukrainian)
- Solyanik, A. (2018). *Innovatsiini kryterii rezultatyvnosti stupenevoi pidhotovky fakhivtsiv zi spetsialnosti 029 «Informatsiina, bibliotechna ta arkhivna sprava»* [Innovative criteria of results of student preparation of professionals with specialties 029 «Information, library and archive studies»]. *Ukrainian Journal on Library and Information Science*, 1, 64-75. doi: <https://doi.org/10.31866/2616-7654.1.2018.146291> (in Ukrainian)
- Swapna, G., & Biradar, B. S. (2016). Competencies for library professionals in digital environment. *e- Library Science Research Journal*, 5(2), 1-5. <https://cutt.ly/oU44Eh9> (in English)
- Tanloet, P., & Tuamsuk, K. (2011). Core competencies for information professionals of Thai academic libraries in the next decade (A.D. 2010-2019). *International Information & Library Review*, 43(3), 122-129, doi: <https://doi.org/10.1080/10572317.2011.10762889> (in English)
- Voskoboinikova-Huzieva, O. V., Zahumenna, V. V., Kulyk, Ye. V., Pashkova, V. S., Serbin, O. O., Soshynska, Ya. Ye., & Shevchenko, I. O. (2018). *Akademichna dobrochesnist ta biblioteky* [Academic Integrity and Libraries]: prohrama pidvyschennia kvalifikatsii pratsivnykiv bibliotek. Kyiv, Ukraine: UBA (in Ukrainian)

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Етичний компонент дизайну компетентностей бібліотечного фаху: професійний погляд

Мета. Обґрунтування місця етичного компоненту в наборі ключових компетентностей сучасного бібліотекаря. **Методика.** Висновки і результати отримані шляхом використання діалектичного, соціальнокомунікаційного аналітико-оглядового методів, методів систематизації, компаративного аналізу, бібліографічного аналізу, аналізу контенту та аналізу документів. **Результати.** Обґрунтовано потребу доповнення освітніх стандартів за спеціальністю 029 "Інформаційна, бібліотечна та архівна справа" освітніх рівнів бакалавра і магістра етичним компонентом – розумінням бібліотекарем принципів і цінностей інформаційної і професійної етики, академічної доброчесності та слідування їм. **Висновки.** Дотримання професійних етичних норм і поширення культури академічної доброчесності формує умови для затребуваності інших професійних компетентностей бібліотечного працівника, адже передбачає цінність знань і особистих теоретичних і прикладних досягнень. За гострої потреби поширення в науково-освітньому середовищі культури академічної доброчесності й відсутності визначених у фахових освітніх стандартах бакалавра і магістра відповідних освітніх цілей науково-методичне підґрунтя для формування культури академічної доброчесності як важливої компетентності бібліотечно-інформаційних працівників пропонує ВГО "Українська бібліотечна асоціація" в рамках реалізації компенсаторної функції.

Ключові слова: професійні компетентності; бібліотекар; академічна доброчесність; ВГО "Українська бібліотечна асоціація"

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Віршування як ресурс відновлення емоційної рівноваги

Мета. Стаття спрямована на аналіз поетичного досвіду аматорів, членів спільноти Університету Григорія Сковороди в Переяславі (УГСП), як ефективного психотерапевтичного методу відновлення емоційної рівноваги в період повномасштабної війни росії з Україною. Розглянути долучення до віршування у воєнний час бібліотекарів інших ЗВО України. **Методика.** Досвід поетів-аматорів, народжений через біль, кохання, страждання, турботу протягом березня-жовтня 2022 р., в період російсько-української війни, проаналізовано в контексті віршотерапії як ресурсу відновлення емоційної рівноваги і життєвої енергії. **Результати.** Створення авторських поезій, в т.ч. аматорських текстів, дає можливість фантазувати, розвивати свої приховані здібності та долучатись до читання й спілкування з іншими однодумцями. Це яскраво продемонстровано в творчості воєнного часу студентами, викладачами, бібліотекарями. **Висновки.** Кожна творча людина показує біль у своєму, доступному саме їй форматі. У такий спосіб самоцілення людина стає спокійнішою, відновлює душевну атмосферу, зустрічається зі своїм внутрішнім «Я».

Ключові слова: поезія воєнного часу; аматорська поезія; творчість університетських спільнот; українські бібліотекарі; емоційна рівновага; віршотерапія; війна в Україні

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Poetry as a Resource for Restoring Emotional Balance

Objective. The article is aimed at analyzing the poetic experience of amateurs, members of the community of Hryhorii Skovoroda University in Pereiaslav (HSUP), as an effective psychotherapeutic method of restoring emotional balance during the full-scale war of Russia against Ukraine; considering the participation of librarians of other higher education institutions of Ukraine in poetry during wartime. **Methods.** The experience of amateur poets birthed through pain, love, suffering, care during March-October 2022, in the period of Russian-Ukrainian war, is analyzed in the context of poetry therapy as a resource for restoring emotional balance and vital energy. **Results.** Creation of author's poems, including amateur texts, gives us the opportunity to fantasize, develop our hidden abilities, as well as to read and communicate with other like-minded people. This is clearly demonstrated in the work of wartime by students, teachers, and librarians. **Conclusions.** Every creative person shows pain in their own format available to them. In this way of self-healing, a person becomes calmer, restores the mental atmosphere, meets their inner "I."

Keywords: wartime poetry; amateur poetry; creativity of university communities; Ukrainian librarians; emotional balance; poetry therapy; war in Ukraine

Літературне життя суспільства нерозривно пов'язане із епохою, в якій воно живе. Сьогоднішня війна, розв'язана росією проти України, як і будь-яка інша трагедія, увиразнює відчуття та усвідомлення. Багатовіковий досвід українців у відстоюванні свободи особистості, свободи її волі, вибору і засобів їхньої реалізації дає іншу візію життя і культури. Цей досвід прагне нового слова.

В. Малімон впевнений, що «...екзистенційна самотність і креативне мислення стають своєрідними точками опори, які дозволяють підтримувати певний рівень особистісної безпеки в умовах сьогодення та формувати стратегії життя на майбутнє, накопичувати емоційний та екзистенційний капітал» (Malimon, 2022). Для кожної людини, особливо під час кризових ситуацій в житті, наймовірно важливо знайти свій вид самовираження для самозбереження, відновлення емоційної рівноваги. Весь досвід

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існування людства доводить, що саме під час криз та незгод творча думка сягає неймовірних висот, народжуючи нові ідеї, рішення, моделі, твори! (Kolesnykova, 2016, p. 128).

Таким ресурсом є віршування, яке має велику цінність – розвивати в людині інтелектуально-атмосферне мислення. Віршування – це не лише мистецтво висловлювати свої думки у віршованій формі, але й духовна праця, спосіб спілкування через монолог до самого себе, творення чогось нового, раніше ніким не баченого. Поети не випадково виражають на папері свої емоції, радість, біль, яскраву експресію...

Для бібліотекарів самовираження та стан творчого розкриття, в т. ч. віршуванням – це своєрідний гуманітарний фронт, який має два аспекти. По-перше, це особисте створення креативного поетичного заходу, до якого можна долучати не одне коло людей з творчою іскрою – поетів, письменників, художників. По-друге – це також здатність дослухатись до свого внутрішнього Я, домовлятися з собою, рефлексувати біль кризь змістовні рядки своїх творів.

Війна в Україні сколихнула всіх і кожного. Вона залишає свій слід у творчому житті країни. Це творчість особлива, яка народжується через біль і кохання, страждання й турботу, сльози і радість... Колись війна закінчиться, але ми пам'ятатимемо, бо вона залишиться у розповідях очевидців, у спогадах військових, у віршах поетів, картинах художників, фільмах режисерів і піснях музикантів. І саме бібліотекарі будуть не тільки хранителями цих спогадів, але й очолюватимуть популяризацію поетичної творчості воєнного часу.

Огляд

Знаний на весь світ іспанський філософ Х. Ортега-і-Гассет підкреслював здатність людини час від часу зупиняти свою звичну життєдіяльність і занурюватися вглиб себе, щоб дослухатися до свого внутрішнього світу, зайнятися собою (Ortega y Gasset, 2014). Філософ вважав, що під час такого занурення людина самовдосконалюється, набуває нові компетентності, що дозволяє їй віднаходити нові ресурси та успішно вирішувати існуючі проблеми.

В умовах війни це може означати, зокрема, здатність абстрагуватися від суспільної нестабільності та домінування насильства і мови ворожнечі, спроможність, створити свій острівець свободи, любові й творчості.

Наприклад, якщо говорити про теоретичне самоувиразнення українських бібліотекарів у воєнний час, то воно відбувається в різних формах і в різних контекстах.

Так, рядки поезії Тетяни Добко (Tetiana Dobko, Національна бібліотека України імені В. Вернадського) влучно, талановито, чуттєво відтворюють стан душі кожного українця після 6 місяців війни.

Весна пройшла без відчуття весни,

І осінь йде так само, наче повз.

Сум'яття і тривога на душі.

Ми всі, де б не були, на цій війні

(Tetiana Dobko, 2022, November 2)

Наталія Хілобоченко (Khilobochenko Nataliia, Бібліотека Київського національного університету будівництва і архітектури) відгукується на жакіття війни віршами-сльозами, «бо вірші – це сконцентроване відлуння наполоханого серця. Сум, жах, скорбота... лють».

МИ Б ЗАГИНУЛИ, КОЛИ Б НЕ ГИНУЛИ...

Як в цій вогнЕнній, сивій днині
Розгледіти куточок тиші,
Коли ті крила журавлині
Відносять в вирій хлопців душі.

(Nataliia Khilobochenko, 2022, September 25)

Ніна Долматова (Dolmatova Nina, Наукова бібліотека Українського державного університету науки і технологій), відчуваючи, що поезія є прекрасним інструментом пізнання Бога і можливістю ще раз до нього звернутись, пише:

Я вірю в Бога.
І Йому приношу я палкі молитви.
Хай буде щастя на Землі!
Дай, Боже, Україні жити!!!

(Nina Dolmatova, 2022)

Мета роботи – аналіз поетичного досвіду аматорів, членів спільноти Університету Григорія Сковороди в Переяславі (УГСП), як ефективного психотерапевтичного методу відновлення емоційної рівноваги в період повномасштабної війни росії з Україною. Авторка має на меті також розглянути долучення до віршування у воєнний час бібліотекарів інших ЗВО України.

Методика

Досвід поетів-аматорів, народжений через біль, кохання, страждання, турботу в період російсько-української війни, проаналізовано в контексті віршотерапії як ресурсу відновлення емоційної рівноваги і життєвої енергії. Представлено досвід аматорського віршування членів спільноти (викладачів, студентів і особистої творчості директорки бібліотеки – авторки даної статті) Університету Григорія Сковороди в Переяславі (УГСП) протягом березня-жовтня 2022 р. Розглянуто аматорське поетичне самовираження українських бібліотекарів, опубліковане авторами в соціальній мережі Facebook.

Результати та їх обговорення

На основі аналізу віршів поетів-аматорів УГСП та власної рефлексії прийшло надзвичайно важливе усвідомлення, що будь-яка емоція – це нормальне явище. І її непотрібно придушувати в собі й заганяти в середину. Кожну емоцію треба проживати, висловлювати або прописувати, тоді відбувається відновлення життєвої енергії у людини.

У воєнний час ми всі, як звичайне мирне населення, знаходимось у стресовому стані. І саме віршування в нашому контексті націлене на подолання негативних переживань, страхів, і діє як терапевтичний засіб, який формує культуру читання, культуру слухання, культуру творення.

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«В моїй душі ще досі лютий»... Саме з такою назвою 06.04.2022 р. на університетському сайті була оприлюднена добірка нових аматорських поезій скovorodinivciv (13 авторів), написаних у воєнний час (Hryhorii Skovoroda University in Pereiaslav, 2022a). Вона – про передчуття й проживання війни. Здебільшого ці тексти написано упродовж останніх сорока днів; і хоч подекуди в них може «шкунтильгати» рима, вони про головне – біль від втрат, любов до Батьківщини і віру в краще майбутнє.

В моїй душі ще досі лютий
Такий холодний, до кісток.
Хоча виходить часом сонце,
Але в той день вже не зійшло.
А за календарем вже квітень,
Трава зелена, і цвітуть сади.
Та в наших українських душах
Вкарбовані навік чужі сліди.

(Ірина Безпалько, студентка, березень 2022 р.)

Я хочу додому, до рідного краю,
Де вранці на ганку щебечуть птахи.
Де тихо і звуки сирен не лунають,
Вибиті вщент і дотла москалі.
Люблю Україну – квітучу й незламну,
Душею і серцем я неньку люблю.
Тебе не покину – ти встоїш, я знаю,
За тебе, рідненька, я Бога молю.

(Дарина Рябокiнь, студентка, березень 2022 р.)

У час російської збройної агресії проти України інформаційна війна несе в собі загрозові наративи в соціальних мережах, відбувається емоційне вигорання українців. Тому дуже важливим стало онлайн-спілкування в соцмережах із психологами університету під час нічних повітряних тривог. Психолог УГСП Тетяна Кузьменко прописувала на своїй сторінці ФБ початковий рядок майбутнього вірша, і всі бажаючі долучалися до даного завдання. До прикладу:

Є у нас те, що безцінне,
Що плакається з татових рук,
Дух і звитяга, сила, уміння:
Так гартується гідність без мук.
Є у нас те, що безцінне,
Що голубиться в маминім серці завжди –
Це любов і повага до рідного краю,
Де квітують, міцніють родинні зв'язки.

(Ольга Шкира, 07.04.2022 р.)

Немає мас – єдиний є народ
Не панство і холопи – є Людина!

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Не сподівайтесь на чужих заброд,
Тоді і вам уклониться Вкраїна!

(Олександр Потапенко, викладач, березень 2022 р.)

Маємо бути готові:

Світанки стрічати святкові,
Долати «смердючу потвору»,
Очистити землю від мору.
Маємо бути готові:
Міцніти у правді, у Волі,
Єднатись серцями у Вірі,
Україну відчуту у Силі.

(Ольга Шкира, 09.04.2022 р.)

Усі герої із міфів марніють:

Ахіл, Геракл, Ясон...
Перед людьми із заліза та сталі
Із південного міста Херсон.

(Тарас Сафонюк, студент, квітень 2022 р.)

У серці панує надія –

На спокій, на мир, на життя.
Завойована Воля у вірі –
Це отриманий шанс в майбуття.

(Ольга Шкира, 10.04.2022 р.)

В університетських спільнотах України, які формують і розвивають інтелектуальний потенціал нації, незважаючи на несприятливі умови, обов'язково є колективи науковців і викладачів, активно продукуючих і поширюючих нові знання, нові творчі практики (Kolesnykova, 2016, р. 128). Це, наприклад, альманахи поезій «ДПТівські сонети» (Kolesnykova & Dolmatova, 2010, Kolesnykova & Dolmatova, 2022), видані Науковою бібліотекою Українського державного університету науки і технологій до широкомасштабної російсько-української війни.

Але яскравим прикладом поетичного слова воєнного часу є поезії сквородинців – творчої університетської родини, до якої належить і авторка даної статті. За словами студентів, викладачів, бібліотекарів УГСП, саме творчість допомагає нам часто говорити за допомогою поезії, малюнка, ніби ставлячи правильні питання та отримуючи правильні відповіді. (Hryhorii Skovoroda University in Pereiaslav, 2022a).

Дійсно, цей спосіб дає можливість фіксувати досвід, психологічний стан, а також документувати події чітко й лаконічно. До того ж, володіючи інформаційними навичками, в т.ч. як користувачі різних мережевих каналів, сквородинці створили віддалене коло друзів, зацікавлених у творчому самовираженні. Наприклад, ми розсилаємо цікаві творчі однакові завдання один одному, які прописуємо, читаємо, обмінюємося думками.

Такими завданнями можуть бути: 1) Написати авторський вірш-лемерик; 2) Написати оповідку про улюблену шкідливу звичку; 3) Написати рекламний текст; 4) Створити розповідь-монолог дерева; 5) Створити опис майбутньої професії; 6) Створити

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асоціативний опис своєї душі; 7) Написати вірш про колір; 8) Створити казку про веселку тощо.

Критерії у творчому самовираженні через віршування, малюнок тощо проявляється у високій потребі в нових враженнях, схильності керуватися більше образним мисленням, відчуттям і розумінням, ніж розумом. Тож на початку війни викладачка Університету Григорія Сковороди в Переяславі, художниця Марта Генесеріан, використовувала збірку поезій Doliana/Доляни (Ольги Шкири) «Набутися з тобою» (2019) для відновлення своєї емоційної рівноваги, як інструмент релаксації. Дане поетичне видання (57 віршів) для викладачки М. Генесеріан стало супровідним матеріалом імпровізацій особистих асоціацій у кольористиці.

Така співтворчість ілюструє, як в часи буденності періоду війни, отримуючи натхнення у використанні поетичних творів для активізації мисленевої діяльності, були знайдені словесні й художні дотики до творчості двох особистостей, поетки Ольги Шкири та художниці Марти Генесеріан, які в синергії дали початок творенню нового асоціативного психологічного продукту. До прикладу наводимо два вірші – «Розкіш» та «Образа» із описами асоціацій в малюнках.

РОЗКІШ

Набутися з тобою, потайне бажання –

Це більше, ніж «провести час»,

Укутатися хвилиною любові,

Затриматись подовше нам у нас...

Смакуючи грайливими словами,

Подбати в чистоті думок

Про розкіш бути разом у єднанні,

Знайти себе в тобі, тебе в мені...

(Ольга Шкира, 2019 р.)

(Супроводжує вірш малюнок-імпровізація у вигляді мазків рожевого кольору, який асоціюється з чарівністю, чуйністю, ніжністю, коханням художниці Марти Генесеріан, березень 2022 р.).

ОБРАЗА

Образа, як мішок, наповнюється смутком

Дошкулює й гірчить у мареві думок;

Марудить душу, болем защемляє,

Огидою смердить, шукає передзвін...

Мішок тріщить по швам: образа утікає

На поміч сміх біжить, бо це уже не жарт.

Фільтруючи слова, чужі думки і настрої,

Убережим себе у гідності чеснот!

(Ольга Шкира, 2019 р.)

(Супроводжує вірш малюнок-асоціація з мазками в холодних гамах зеленого, коричневого, фіолетового кольорів, сприймання яких створює дискомфорт, художниці Марти Генесеріан, березень 2022 р.).

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07.06.2022 р. у стінах Переяславської художньої школи відбулася презентація художнього альбому «Заквітчана Україна» (Kuzmytska & Shkyra, 2021). Його авторками є творчий тандем директорки Переяславської художньої школи Ірини Кузьмицької та директорки бібліотеки Університету Григорія Сковороди в Переяславі Ольги Шкири. В альбомі представлено 25 картин, створених І. Кузьмицькою. Переважно вона писала їх на дачі під надихаючу музику. Текстовий супровід до картин створено Ольгою Шкирою, яка надихнулася ними під час демонстрації в університетській бібліотеці (Hryhorii Skovoroda University in Pereiaslav, 2022b).

У День Конституції України, 28 червня 2022 р., у Просвітницькому центрі Переяслава, іменованому «Народним музеєм», пройшов «День творчої ініціативи: Екочитальня», співорганізаторами якого були бібліотека Університету Григорія Сковороди в Переяславі (директорка Ольга Шкира) та Відділ культури і туризму Переяславської міської ради (керівниця Анна Скляренко). Цей формат вже добре знайомий читачам університетської книгозбірні. З нагоди одного з найголовніших свят української державності на гостину до господаря центру, краєзнавця Миколи Богатиря завітав наш земляк Володимир Шовкошитний – відомий громадський та політичний діяч, письменник і видавець. У ході зустрічі, яку, серед інших, відвідало багато жителів міста та науковців, викладачів та людей мистецтва, Володимир Федорович презентував книги родинного видавництва Шовкошитних «Український пріоритет», зокрема перевидання творів Івана Білика (трилогія «Скіфи», «Меч Арея» та ін.), історичні романи Леся Качковського «Вибір князя Аскольда», «Олег – імператор русів», «Рюрик із роду Ск'ельдунгів», романи Оксани Зененко «Останній лицар гетьмана», «Таємна місія гетьмана». Усі вони зможуть повністю змінити наші уявлення про славне минуле українського народу. Творити і/або руйнувати міфи – основне завдання історичних творів, переконаний В. Шовкошитний. І презентовані книги саме цю функцію і виконують – руйнують міф про меншовартість українців, який нав'язували століттями загарбні сусіди, натомість творять міф про героїв свого часу, які бились за землю, на якій жили. На затишному подвір'ї читались вірші, звучала класична музика. Відповідна атмосфера створювала затишок і спокій для відвідувачів заходу (Library of Hryhorii Skovoroda University in Pereiaslav, 2022).

Вірші – це ліки, які допомагають активізувати мізки й душу. Із кожним новим написаним словом відбувається відчуття очищення. Творчість фіксує рефлексії, події, втілюючи їх у слова. Це є своєрідна гімнастика для пам'яті, а також підтримка інтелектуальної активності, яка позитивно впливає на психічне здоров'я людини. Невеликі вірші легко вивчати напам'ять.

Як пахне Мир? Пахне травою,
Ароматом бузковим, дощем веселковим!
Як Мир упізнати? Спокійним, затишним
Дзвінким, голосистим і сонячно чистим!

(Ольга Шкира, 20. 07.2022 р.)

НАМАЛЮЮ

Словесно намалюю побачення з красою,
У павітрах духмяних відчую насолоду,
Торкнуся подумки глибин, в собі відкрию,
Бентежний стан, ранкову прохолоду...

(Ольга Шкира, 26.06.2022)

СОНЦЕ

Сонце сідає за обрій,
Ховається в схилах полів,
Здається, нічого й не треба,
Спокій чарує у сні.

(Ольга Шкира, 29.09.2022 р.)

ПРОМЕНІ

Промені сонця сягають землі,
Дотиком сяйва грайливі в теплі,
В урочистій тиші видніють з-за хмар,
Мінливі, цнотливі, як сонячний дар.

(Ольга Шкира, 05.08.2022 р.)

ТУМАН

Окутує туман луги вечірні
Після дощу у літню пору,
Ховають таїну луги молочні,
Холодні зорі споглядають наготу.

(Ольга Шкира, 06.08.2022 р.)

Віршування – це своєрідний тип мови, в якому є ритм і рима. Призначення авторів поетичної творчості – донести частину емоцій до людей. А бібліотекарі, при організації різноманітних творчих заходів, добре знають, що читання поезій вголос, інтонаційно, виразно, приносить, задоволення та радість (Shkyra, 2022).

КРАЇНА УКРАЇНА

Україна – це країна сонячного світла,
Край духовних цінностей і знань,
Край, який гартується в години лихоліття,
Захища кордони без вагань.
Міць, незламність – це найбільша сила,
Долею плекається у спадок поколінь,
Україна – це країна, що дає нам крила,
Волею і Духом підніма з колін!

(Ольга Шкира, 31.03.2022)

...І день у день, і з ночі в ніч, сини боронять Батьківщину...
Нас розтинають на шматки... кати зламати хочуть волю,
А ми не звали вас сюди, на нашу землю...наше поле...
...І встане ця земля з колін...ми відбудуємо державу,
І вся Європа... увесь світ... нам скаже: «Україні Слава!

(N. Novorodovska, 2022)

CHANGING ROLES: FROM INFORMATION PROVIDERS TO EDUCATORS**Висновки**

Створення авторських поезій, в т.ч. аматорських текстів, дає можливість фантазувати, розвивати свої приховані здібності та долучатись до читання й спілкування з іншими однодумцями. Це яскраво продемонстровано в творчості воєнного часу студентами, викладачами, бібліотекарями.

Аматорське поетичне самовираження українських бібліотекарів двоаспектне. По-перше, це особисте створення креативного поетичного заходу, до якого можна долучати не одне коло людей з творчою іскрою – поетів, письменників, художників... По-друге – це також здатність дослухатись до свого внутрішнього Я, домовлятися з собою, рефлексувати біль крізь змістовні рядки своїх творів.

Окрім віршів, під час 200 днів війни, було також створено багато малюнків, в т.ч. як візуальне доповнення поетичної творчості.

Кожна творча людина показує біль у своєму, доступному саме їй форматі. У такий спосіб самоцілення людина стає спокійнішою, відновлює душевну атмосферу, зустрічається зі своїм внутрішнім «Я».

REFERENCES

- Library of Hryhoriy Skovoroda University in Pereiaslav. (2022, June 29). *Ekochytalnia v «Narodnomu muzei»: berehyni knyhy universytetu zustrilysia z pismennykom ta vydavtsem Volodymyrom Shovkoshytnym*. Retrieved from <https://library.uhsp.edu.ua/2022/06/29/ekochoytalnia-v-narodnomu-muzei-beregyni-knygy-universytetu-zustrilysia-z-pismennykom-ta-vydavtsem-vo> (in Ukrainian)
- Dobko, T. (2022, November 2). *Vesna proishla bez vidchuttia vesny, I osin yde tak samo nache povz*. Facebook. Retrieved from <https://www.facebook.com/tetiana.dobko/posts/pfbid0384473n1Pz6bvWM31ap1PG6Fg5RHaWqmnTTA6TVS7xhjFpyRKYVdeU6n7hkQd89tZl> (in Ukrainian)
- Doliana. *Nabutysia z toboiu...* (2019). Kyiv, Ukraine: Vydavnytstvo Liudmyla (in Ukrainian)
- Dolmatova, N. (2022). Ya viriu v Boha. In T. O. Kolesnykova, & N. I. Dolmatova. (Comp.). *DIIT sonnets: poem almanac* (p. 97). Dnipro, Ukraine: Ukrainian State University of Science and Technology. Retrieved from <http://omp.diit.edu.ua/index.php/main/catalog/book/8> (in Ukrainian)
- Hryhorii Skovoroda University in Pereiaslav. (2022a, April 6). «*V moii dushi shche dosi liutyi*»: *dobirka novykh poezii skovorodynivtsiv napysanykh u viiskovyi chas*. Retrieved from <https://uhsp.edu.ua/2022/04/06/v-moyij-dushi-shhe-dosi-lyutyj-dobirka-novykh-poezij-skovorodynivtsiv-napysanykh-u-vijskovyj-chas/> (in Ukrainian)
- Hryhorii Skovoroda University in Pereiaslav. (2022b, June 7). *U Pereiaslavi prezentuvaly khudozhnij albom «Zakvitchana Ukraina». Yoho spivavtorkoiu ye dyrektorka biblioteki Olha Shkyra*. Retrieved from <https://uhsp.edu.ua/2022/06/07/u-pereiaslavi-prezentuvaly-khudozhnij-albom-zakvitchana-ukrayina-jogo-spivavtorkoyu-ye-dyrektorka-biblioteki-olga-shkyra/> (in Ukrainian)
- Khilobochenko, N. (2022, September 25). *My b zahynuly, koly b ne hynuly*. Facebook. Retrieved from <https://www.facebook.com/nhilobochenko> (in Ukrainian)
- Kolesnykova, T. (2016). *Universytetska biblioteka: stvoriuiemo prostir uspikhu* [The University Library: Create a Space of Success]. *University Library at a New Stage of Social Communications Development. Conference Proceedings*, 3, 128-135. doi: <https://dx.doi.org/10.6084/m9.figshare.4263314> (in Ukrainian)

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- Kolesnykova, T. O., & Dolmatova, N. I. (Comp.). (2010). *DIIT sonnets: poem almanac*. Dnepropetrovsk, Ukraine: Dnipropetrovsk National University of Railway Transport named after Academician V. Lazaryan. Retrieved from <http://eadnurt.diit.edu.ua/jspui/handle/123456789/3612> (in Ukrainian)
- Kolesnykova, T. O., & Dolmatova, N. I. (Comp.). (2022). *DIIT sonnets: poem almanac*. Dnipro, Ukraine: Ukrainian State University of Science and Technology. Retrieved from <http://omp.diit.edu.ua/index.php/main/catalog/book/8> (in Ukrainian)
- Kuzmytska, I., & Shkyra, O. (2021). *Zakvitchana Ukraina*. Albom. Pereiaslav, Ukraine: Fokus-Media. (in Ukrainian)
- Malimon, V. I. (2022, July). Ekzystentsiina samotnist ta kreatyvnist liudyny v umovakh viiny. In *Psychological problems of creativity: Proceedings of the XXII International Scientific and Practical Conference* (pp. 156-160), National Academy of Educational Sciences of Ukraine. Kyiv, Ukraine. Retrieved from <https://lib.iitta.gov.ua/732852/> (in Ukrainian)
- Ortega y Gasset, J. (2014). *Ensimismamiento y alteración. Meditación de la técnica y otros ensayos* [Self-absorption and alteration. Meditation on the technique]. Madrid, Spain: Alianza Editorial Sa. (in Spanish)
- Novorodovska, N. (2022, April 6). ... *I den u den, i z nochi v nich, syny boroniat Batkivshchynu*. Hryhorii Skovoroda University in Pereiaslav. Retrieved from <https://uhsp.edu.ua/2022/04/06/v-moyij-dushi-shhe-dosi-lyutyj-dobirka-novyh-poezij-skovorodynivziv-napysanyh-u-vijskovyj-chas/> (in Ukrainian)
- Shkyra, O. (2022, October 7). *Kraina Ukraina*. [Video]. YouTube. Retrieved from <https://www.youtube.com/watch?v=5lb7QRY9nHU&list=PL5JyULTHzcTR2l4XPvhAYeOAhFR1WNVzw&index=32> (in Ukrainian)

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European Practices of Overcoming Language Barriers in Times of Crisis: Open Educational Resources

Objective. In any given country, the national language and education not only help to impart knowledge but also broaden the horizons of students, teaching them to be more tolerant of different cultures. Today, the Ukrainian language as an important component of national identity and state building is one of the main goals of Russia in its war against Ukraine. That is why one of the main challenges for higher education in Ukraine during wartime is to create modern and high-quality educational materials in the national language as quickly as possible, in order to facilitate remote teaching, learning and research processes at universities. The mechanism for responding to this challenge is to turn to the experience of creating, adapting and using Open Educational Resources (OER) in Europe and the rest of the world. The aim of the study is to consider the practices of creating, adapting and using OER in European universities and libraries in the context of their benefits, including the possibilities of overcoming language barriers in times of crisis. **Methods.** This article is based on the analysis of the literature on OER practices in facilitating the overcoming of language barriers, on the activities of ENOEL, on the practices of librarians and educationalists of several European universities, as well as on self-reflection and direct experience of the circumstances of the war by Ukrainian librarians, who continue information support of the educational process. **Results.** The theoretical aspects and implemented practical solutions demonstrate that OER can be an effective solution in times of crisis (whether a pandemic or a war) to the issue of quality information support of distance education with materials in the national language in any country in Europe and the world. In the context of higher education in Ukraine, OER is a means and one of the methods of overcoming linguicide by the Russian Federation – the purposeful destruction of the Ukrainian language as the main feature of the ethnic group. The experience of working with OER of the USUST Scientific Library (Dnipro, Ukraine) is the story of a library that was looking for opportunities to answer its local challenges and resolve problems during the COVID-19 pandemic, and found solutions that became necessary during the war with Russia. **Conclusions.** The authors hope that Ukrainian-language OER will soon become a mandatory element in the cultural environment of Ukrainian universities. And it is OER that can help overcome Ukrainian linguicide in educational resources. The experience of librarians of the European Network of Open Education Librarians (ENOEL) proves that one of the most important roles in this is played by university librarians.

Keywords: open educational resources; language barriers; university library; distance education; ENOEL; linguicide; war in Ukraine; library in wartime; information support for distance learning; USUST; SPARC Europe

Introduction

Linguistic diversity is one of the world's riches. Throughout the history of different countries, their language, culture and education have always organically complemented and enriched each other.

However, in the context of this study, we will focus on the aspect of the official language of education and educational resources as information support for teaching, learning and research in various European countries, including Ukraine.

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The national language is a means of communication, identification and self-identification of the nation. It promotes the development of culture, worldviews, creative abilities, research skills, self-development and self-learning in the context of global changes and challenges.

In any given country, the national language and education not only help to impart knowledge (as without it, one will not be able to understand or convey their understanding of the subject) but also broaden the horizons of students, teaching them to be more tolerant of different cultures. Developed language skills enable the creation of educational materials by teacher-authors, as well as their understanding and most effective use by students.

Today, the Ukrainian language as an important component of national identity and state building is one of the main goals of Russia in its war against Ukraine. The brutal war unleashed by Russia intends to seize the territory of Ukraine and destroy it as a nation while destroying its language, culture, education and science.

Literature Analysis

For an extended time, education in Ukraine, including higher education, had been largely informed by educational literature primarily in Russian. Permeated with imperial ideology, Moscow and Russia, and later the USSR, strictly prohibited teaching in Ukrainian, as well as the creation, printing and use of educational resources in Ukrainian with the aim of destroying the Ukrainian language. This was done by using intimidation, physical force, psychological pressure, freedom restriction, kidnapping, torture and murder (Ocheretianko & Riabets, 2020; "Linhvotsyd ukrainskoi movy", n.d.).

In 1944, Polish lawyer Rafał Lemkin coined the term "genocide" (Rafał Lemkin, n.d.). He believed that genocide is a coordinated action aimed at destroying national groups, as well as their freedom, health, dignity, political and social institutions, culture, language, national consciousness, religion and economic basis of existence. In 1946, genocide was recognised as an international crime in the UN General Assembly Resolution (UN. General Assembly, 1947). On November 23, 2022, the European Parliament recognised Russia as a "state sponsor of terrorism" and a state that "uses means of terrorism" against the Ukrainian people (News European Parliament, 2022).

Nowadays, the language policy against Ukrainians carried out by Russian invaders in the temporarily occupied territories of Ukraine is called "linguicide" and is derived from the term "genocide" (State Language Protection Commissioner, 2022). According to Ukraine's Commissioner for the Protection of the State Language, "Linguicide is the purposeful destruction of the Ukrainian language as the main feature of the ethnic group, which is carried out by its ousting from various public spheres, forced inclusion of Ukrainian citizens in the Russian linguistic and cultural space, assimilation of the population, etc. It is a way of dismantling the constitutional system of Ukraine, one of the components of the Russian policy of exterminating the Ukrainian people in the occupied territories, which is recognised by the Verkhovna Rada of Ukraine, numerous other parliaments in the world and international organizations as a genocide" (ArmiiaINFORM, 2022). That is, linguicide is language murder.

The first steps taken by the Russian invaders in the temporarily occupied Ukrainian territories were the seizure of Ukrainian-language literature from the libraries of schools, colleges and universities and the demonstrative burning of books in front of the residents held at gunpoint. British Ambassador to Ukraine Melinda Simmons released photos of Russians burning books on the history of Ukraine under the pretext of so-called "denazification" (Yavorovych, 2022).

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In his play-tragedy “Almanson” (1821), the world-famous writer Christian Johann Heinrich Heine said, “Where they burn books, they will ultimately burn people too.” His words turned out to be prophetic (Heinrich Heine, n.d.).

Russian terrorists pursue, among other things, a clear goal – to oust the Ukrainian language as the language of the educational process. It is to be achieved by full or partial transfer of educational institutions to the Russian language of instruction; termination or reduction of the teaching of the Ukrainian language and literature as a subject; restriction of access to, prohibition of distribution and destruction of literature and other printed materials in Ukrainian.

That is why one of the main challenges for higher education in Ukraine during wartime is to create modern and high-quality educational materials in the national language as quickly as possible, in order to facilitate remote teaching, learning and research processes at universities. Such educational documents, primarily textbooks and manuals, should be an important part of the funds and digital collections of libraries of higher educational institutions of the state. The Ministry of Culture and Information Policy of Ukraine in its recommendations notes that the updating of library collections is necessary, but should be done in a balanced manner, taking into account the type of library, and with an individual approach to each document in its collection (Ministry of Culture and Information Policy of Ukraine, 2022).

The authors of this study argue that the mechanism for responding to this challenge is to turn to the experience of creating, adapting and using Open Educational Resources (OER) in Europe and the rest of the world. Such practices significantly reduce the time necessary to create new educational material (for example, by translating and adapting already existing resources under an open license) and improve its quality.

The benefits of involvement in OER for the institutions included the improvement of students’ learning performance; easy access and use of learning resources; the cost reduction and dismantling of learning barriers; and the sharing of learning resources and collaboration (Santos-Hermosa, Proudman, & Corti, 2022). On the other hand, there were various challenges, namely the limitations of the technology infrastructure; the problems of intellectual property rights; the inadequacy of policy and support; the absence of learning objectives; and the language barriers (Li & Wong, 2021).

University of Groningen Press (UGP) is part of the University Library and offers a new initiative (Buist-Zhuk & Nieborg, 2022). This initiative is the creation of an open textbook publishing service that builds on the experience and lessons learned from the already well-established Open Access to Journals and Open Monographs initiatives. By including open educational resources (as OER) in the form of interactive open textbooks in its portfolio, the UGP together with the Library is transitioning to being an all-round open publisher that enables mutual enrichment and fruitful exchange between different fields of Open Science, thus enhancing the synergy between them. The language aspect in the Netherlands is taken into account. Many bachelor and master programs are taught only in Dutch, so a lot of literature (educational and research) is in the Dutch language. At the same time, the University of Groningen has 2 official languages: Dutch and English.

Open Educational Resources (OER) aim to support access to education for all. However, this potential is not fully exploited due to various obstacles in the production, distribution and use of OER. Among the typical obstacles for OER developers, such as lack of technical skills, different types of devices and systems, there are also cultural and linguistic differences, including in cross-border collaboration (Nurhas, Pawlowski, Jansen, & Stoffregen, 2016).

Practices of overcoming language barriers in OER have been studied in the world: in several aspects. For example, the rapid progress of modern AI tools for automatic speech

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recognition and machine translation is leading to a progressive cost reduction to produce publishable subtitles for educational videos in multiple languages (Pérez et al., 2021).

OER aim to provide equal access to education. Yet, as the language level used in OER presents a barrier to many learners, there is a need to make these resources more comprehensible (Rets & Rogaten, 2021).

Therefore, our international team of authors **aims** to consider the practices of creating, adapting and using OER in European universities and libraries in the context of their benefits, including the possibilities of overcoming language barriers in times of crisis.

Methods

This article is based on the analysis of the literature on OER practices in facilitating the overcoming of language barriers, on the activities of ENOEL, on the practices of librarians and educationalists of several European universities, as well as on self-reflection and direct experience of the circumstances of the war by Ukrainian librarians, who continue information support of the educational process.

The matter of opportunities and benefits of OER is analysed as a means of understanding the present and future of academic libraries in their development and providing services to teachers, students, researchers and universities in general.

In this study, the authors rely on their own experience with OER in the framework of the SPARC Europe, European Network of Open Education Librarians, University of Groningen Library (Groningen, the Netherlands) and Scientific Library of the Ukrainian State University of Science and Technologies (USUST) (Dnipro, Ukraine).

Results and Discussion

Overcoming Language Barriers in Times of Crisis: ENOEL Experience

We care about Diversity, Equity and Inclusion within SPARC Europe (<https://sparceurope.org/>) and the European Network of Open Education Librarians – ENOEL (SPARC Europe, n.d.). It is librarians; how can it be different? The ENOEL members' contribution to the Open Education movement relies largely on voluntary efforts because, more often than the contrary, librarians are not formally involved in open education activities in their institutions. Despite this reality, librarians made significant efforts in the past two years to contribute with local language materials. As an example, we published “*An ENOEL Toolkit: Open Education Benefits*” (2022) to raise awareness and advocate for more Open Education through its benefits for different stakeholders - students, teachers, institutions, and all citizens, - with the initial purpose of offering it in 5-6 language versions. After brainstorming to identify, select and prioritise the benefits, members agreed to share them all in the toolkit so that reusers could pick and them choose according to their own priorities (consistently with an open approach). Additionally, we created some tools to manage the translation process. It was a complex undertaking that had to be managed at a distance while always passing through English, a second language for the large majority of contributors. Translation tricks were needed, and potential misunderstandings were always behind the corner. After testing the process with the first pilot language versions, we fixed some issues and shortcomings. We learned how to make things easier and faster for the contributors (our own members) while centralising the final testing process so that it could become a parallel activity. As a result, we have 18 language versions now and expect one more to be released soon.

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An interesting avenue for our network to explore is discussing with librarians how a local language might enhance their chances of getting people to cooperate with them and get the community involved. As with the OE Benefits Toolkit, having open education content in local languages could ignite some further practical steps. Open education could become part of the discussions at decision-making tables and the more popular Open Access policies.

Another interesting aspect that deserves further attention is finding ways to design simple, easy-to-adapt tools that require few skills and leave room for personalisation with local institutions' logos, colours, and fonts so that the final result can be part of the local discourse around openness. After all, being inclusive also means not raising technical barriers. Embracing diverse approaches also means allowing others to adapt with low or no time-consuming necessary activities.

Why does ENOEL care about translation and localisation, then? Because it is a basic step toward inclusion but also representation, involvement, and recognition of cultural diversity. On top of all this, it gives us a chance to understand how rich Europe and the world are, thanks to all the languages and all the words' meanings connected with different origins. This is part of who we are: as a local community sharing the same language, but also as part of a larger network of people who need to find ways to communicate effectively and to progress by sharing the same values, starting with collaboration.

The work we did as a network lately was recognised at the global level: the ENOEL was awarded the Open Education Award of Excellence 2022 for Open Collaboration (OE Awards for Excellence, 2022b) because together we created "A successful environment that fosters the collective production of open resources and open practices with a shared goal. An interchange of ideas supported through technologically mediated collaborative platforms, encouraging new opportunities for people to form ties with others and create things together; encouraging diversity of goals, backgrounds and cultures".

The work the ENOEL did with the Ukrainian members during 2022 in a difficult time of crisis with the ongoing war provided support for some specific OE-related activities that helped raise awareness and ignite further activities. Such activities are consistent with the challenges the higher education sector faces under the stress and limitations imposed by air raids, bombing, lack of infrastructure and budget for secondary needs. No one wanted to stop supporting students whenever possible, and librarians were often the first to provide such support. Open Educational Resources were created, adapted, and distributed to make study still an option. The work done deserves to be visible and to be supported further. In particular, the Scientific Library of the Ukrainian State University of Science and Technologies (USUST) was recognised with the Open Resilience 2022 Award of Excellence (OE Awards for Excellence, 2022a).

Now it is time to think ahead: how to continue, despite all the electricity interruptions that have become a daily reality for our Ukrainian members? How can we manage language-related challenges? We will continue having meetings with the support of members who speak more than one language; we will continue adapting to machine translation to communicate asynchronously. Any way forward is fine; any contribution that enhances our experiences in getting closer to other cultures and helping each other when needed is part of the shared European values. It is also part of the goals set by the European Commission in various funding opportunities (i.e. ERASMUS+ programme) because our cultures are richer together, and each one of them deserves to be preserved, also through our diverse languages.

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Overcoming Language Barriers in Times of Crisis: Experience of an OER Librarian

What can librarians and other OER advocates and practitioners do to help communities they serve overcome language barriers, especially in times of disruptions to educational processes? Our answers will center around the benefits of and access to OER as an essential and accessible means to this end.

Due to their adjustable nature and embedded permissions empowered by open licenses (“Defining the “Open” in Open Content and Open Educational Resources”, n.d.), OER are well suited to bridge sociolinguistic and other barriers by providing equity of access to education and information in multiple languages. In some cases, it is as simple as having unabridged access to up-to-date, just-in-time, accurate versions of academic resources and other types of materials useful in the educational setting. Availability of such materials in open access enables a quicker transition to remote teaching and learning and contributes to the community’s resilience in times of unprecedented disruptions such as a full-scale war or a global pandemic.

However, mere access is not enough if these resources cannot be adjusted to fit the needs of the local communities and be inclusive, culturally equitable and linguistically diverse. Ensuring and supporting effective, inclusive and equitable access to quality OER is one of the five action areas of the *UNESCO Recommendation on Open Educational Resources* (UNESCO, 2019). Going beyond linguistic diversity and translation, UNESCO also encourages the development and adaptation of OER in a variety of cultural contexts to ensure the relevance and accessibility of such materials, respecting indigenous knowledge and rights (UNESCO, 2012). These efforts should also be inclusive of learners in formal and non-formal education contexts, irrespective of their age, gender, physical ability, socioeconomic status or any other characteristics (UNESCO, 2019).

Due to their role as educational enablers, close contacts with various academic communities and their unique skill sets, librarians are widely recognised as important stakeholders in implementing inclusive and equitable access to education in general and OER in particular. When advising the faculty on OER reuse, remix, adaptation, or creation, academic librarians are uniquely positioned to also address the needs of the underrepresented, not very vocal communities. Think of vulnerable groups, linguistic minorities, those disadvantaged by discrimination, war-affected veterans in need of retraining or upskilling, as well as displaced persons looking for lifelong learning opportunities. Open education librarians in Europe already organise themselves in broader networks and communities, such as the ENOEL, where they can share their experience in this realm, give insights into local undertakings and best practices and serve as the inspiration for fellow colleagues in need of new ideas and working solutions.

Undoubtedly, mere access to rich open resources across the continents is not enough. Educators and librarians need access to essential infrastructures: reliable translation tools that can make information available in multiple languages; services to support, quickly and efficiently, its dissemination; open tools for the creation of resources in multiple formats; repositories for uploading and storing such materials in a well-organised way, making them easily retrievable.

Language adaptation is, in principle, one of the lower-threshold ways to localise already existing OER and customise them to the institutional context. Think of adding multilingual subtitles using built-in features of applications; translating the text into your local language using online AI tools; adding short textual summaries for easier comprehension; producing a voiceover to accommodate children and people with visual impairments. To enable all those activities, open materials should be designed in such a way that requires as few technical skills as possible to adapt them to local contexts and languages. Furthermore, it is also important to consider learners and

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fellow educators with (at times) limited or intermittent access to the Internet while making the resources modular and available for further integration in different formats and media.

In the Netherlands, faculty that create new and reuse existing OER are advised and encouraged by librarians to use, whenever possible, user-friendly and adaptable formats, non-proprietary open-source software alternatives and interoperable systems. Information about such recommendations and software can often be found on academic library websites and library guides (University of Groningen, n.d.), or during consultation hours with OER librarians. In this way, librarians also support linguistic diversity in classrooms and on the (virtual) bookshelves of Dutch academic libraries, ensuring that teachers are well equipped to localise materials by translating them into the Dutch language, whenever needed, or adjusting them otherwise to local and regional specifics.

On the national level, repositories and dissemination systems for sharing OER are supported by governmental funding and facilitated through several nationwide initiatives and frameworks. Within one of them, Dutch academic librarians collectively work on developing a nationwide OER repository and search engine (<https://edusources.nl/en/>) together with SURF, the collaborative organisation for ICT in Dutch education and research. Furthermore, open education librarians in the Netherlands organise themselves in special interest groups and communities, collectively work on developing guidebooks and knowledge clips and regularly conduct knowledge sessions on OER-related subjects.

Finally, mere access is not enough: librarians and the faculty they support need the skills to navigate the complex universe of OER and engage in the adoption, (co)creation, reuse, remixing and dissemination of these resources. Effective adaptation, creation and implementation of OER are fundamental for engaging in open education and require new skill sets outlined in the 2016 UNESCO competency framework (International Organisation of La Francophonie, 2016). First workshops and seminars that mostly focused on the basics of OER, copyright and open licensing and aimed at spurring the enthusiasm of open-minded educators and early adopters will now have to be replaced with more structural training that focuses on developing OER-related skills. Furthermore, the pedagogical component is an equally important part of this mix that helps ensure the move beyond the basics of OER towards new learning models and unleash the potential of OER in innovative teaching strategies, co-creation and learning environments. This translates, ultimately, into a larger process of building skill sets for sustainable staff development and OER-enabled resilience in times of crisis.

At the University of Groningen in the Netherlands, the need to help faculty develop skills for meaningful engagement with OER was facilitated by a natural collaboration between the University Library and the Education Support and Innovation team at the University's Centre for Information Technology. In the spirit of openness, these two groups combined their knowledge bases and skill sets and blended information literacy services and didactic expertise to create a series of interdisciplinary workshops (edusources, n.d.). These training sessions were intended to grow the pool of early OER adopters at the University and subsequently engage with a wider academic community. The workshop introduces OER and their many benefits, especially in times of rapid transition to online and blended learning, but also follows the aim of "developing a 'pick and mix' learning design toolbox of different resources and tools to help designers/teachers make informed decisions about creating new or adapting existing learning activities" (Conole & Weller, 2008). Using in this training, each field of the UNESCO OER competency framework is addressed, namely building familiarity, searching, using, creating and sharing. Since navigating OER is swiftly becoming an essential skill, this topic has also been embedded as a sub-module in

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the teacher professional development courses provided at the University (Raj, Zhuk, van Rij, & Beldhuis, 2021).

While OER are widely recognised as essential in helping academia and local communities ensure access to “Quality education for all” (as stated in Sustainable Development Goal 4) (United Nations, 2015) and overcoming language barriers, such disruptive situations as a full-scale and protracted war expose the vulnerabilities of educational systems and, once again, highlight the need for well-functioning support services, infrastructure and cooperation across institutional and country borders. After all, open educational resources carry a largely untapped potential for reforming traditional learning paths and facilitating a move towards broader, linguistically diverse and inclusive learning environments.

First Experience of Creating Ukrainian-Language OER: Scientific Library of the Ukrainian State University of Science and Technologies (Dnipro, Ukraine)

The experience of working with OER of the USUST Scientific Library is not very extensive yet, as it started at the end of 2019. Nevertheless, this is the story of a library that was looking for opportunities to answer its local challenges and resolve problems during the COVID-19 pandemic, and found solutions that became necessary during the war with Russia. These solutions can also be useful to institutions and communities thousands of kilometers away from the city of Dnipro.

Was it and is it still difficult for us to work in wartime? To answer with a simple “yes” is to say nothing. It was physically, morally and psychologically demanding.

Taking advantage of every opportunity (termination of air-raid alarms, restoration of electricity, good connection, etc.), we work with our patrons and with each other both remotely and physically on the library premises.

Destroying the myths about the conservatism of librarians, we quickly enhanced our own experience of organizing the workplace. Although it was almost impossible to imagine this before February 24, 2022, we have been working in basements and subways, in cafes and cars, in “Invincibility Points” or corridors between two walls to avoid windows. Sometimes, in order to send a message or an email, we have to climb to the top branch of an old apricot tree using a ladder... And we can already tell by the sound what exactly exploded.

We learned to estimate whether the electricity obtained with the help of uninterruptible power supplies, batteries, generators, and mobile or wired Internet connection would be sufficient to complete a particular activity in case there were scheduled or emergency power outages again.

After Russian terrorists destroyed most of the critical infrastructure of Ukraine, librarians, teachers and various university support services learned to work in classrooms, offices or library halls at a constant temperature of mere 6-9 degrees Celsius. But at these times the connection is on, and we learn to “catch” these moments and feel happy because we have done something useful.

In the context of implementing OER and utilising their potential in overcoming language barriers, there is a need to create a certain environment at the USUST. This applies to creating textbooks, course manuals and other educational materials in Ukrainian. Such an environment should be culturally more familiar to the residents from eastern, central-eastern and southern regions of Ukraine (who are used to using, in addition to Ukrainian, the Russian language in everyday life) and should provide social opportunities for students with more diverse needs and expectations.

Dnipro is a frontline city, one of the largest in Ukraine, with a pre-war population of over a million people. It is known as the space capital of Ukraine, a major transport hub and a center of

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mechanical engineering. The city is located on the banks of the mighty Dnipro River; it is famous for its historical past as the center of the free Cossack lands.

Today, in wartime, the city hosts a lot of internally displaced persons (IDPs) from those parts of the east and south of Ukraine that are currently occupied by Russian troops: districts of Donetsk, Luhansk, Kherson and Zaporizhzhia regions. Among the IDPs, there are many children, teenagers and women who have nowhere to return to after the end of the war because homes, schools, colleges and universities in their cities were destroyed. They plan to stay in Dnipro to live and get an education or a new qualification.

In addition, a significant increase is expected in the number of native residents of the Dnipro region who have been physically affected by the war and have received various degrees of disability. It is physically difficult for them to come to the university in person, but they also have the right to receive higher education or obtain a new qualification. It is the libraries that should be ready to support inclusiveness with their resources and services.

Given these circumstances and aiming to facilitate the development of open education and OER at USUST, it is necessary to create an environment that is culturally more familiar to the aforementioned regions and to provide social opportunities inclusive of a diverse group of students. This may prove to be an effective strategy for achieving greater equity in bringing higher education closer to potential beneficiaries.

The availability of up-to-date teaching materials in Ukrainian should be a mandatory element in the cultural environment of USUST. However, due to the ongoing war, the economic crisis, the lack of funds to replenish library collections, the inability of commercial publishers to develop models of working with electronic textbooks for libraries and other adverse factors, it is impossible to quickly provide the information support for learning and teaching with Ukrainian-language educational materials.

In addition, we experience a lack of potential authors of textbooks in Ukrainian because some of the young teachers have been conscripted to fight in the ranks of the Armed Forces of Ukraine. Other issues familiar to those teachers who continue to work in critical conditions are the heavy teaching load, moral and psychological pressures of wartime life and lack of time for creative authorship. All these issues are exacerbated by power and communication outages.

That is why the management of the USUST Library, which has functioned as a digital publisher (Kolesnykova, 2017) and Openness lab (Kolesnykova & Matveyeva, 2021), since 2010, agreed on the following philosophy: *non-standard situations require non-standard solutions*.

The Library's focus on (digital) OER became such a non-standard solution to the issue of information support for distance learning, teaching and research in times of crisis and physical inaccessibility of printed collections and local digital collections. Moreover, this was a "bottom-up" initiative, rather than a "top-down" approach originating, for example, at the Ministry of Education and Science of Ukraine.

It should be noted that open education and OER are still in their infancy in Ukraine. In recent years, the Ministry of Education and Science has made it a priority to work more systematically to bring Ukrainian academia closer to the European research and innovation community. Several institutions have already embraced some open educational practices, but open education and OER are not yet mentioned in official national documents.

Therefore, the University took a big step forward in April 2022 when the USUST leadership and its Scientific and Methodological Council expressed their full support for the Library's capacity-building activities aimed to create, reuse, repurpose, adapt and disseminate OER.

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However, already in October 2019, the Library made the first and most difficult steps aimed at raising teachers' and librarians' awareness about the importance of open education and OER and their benefits for students, teachers, institutions and society.

It was back in 2019 (while today it seems a lifetime away) that we chose the "small steps tactics - little by little, but constantly" for directing the development of the OER support.

Where did these small steps begin for the USUST Library?

- Realisation that teachers and librarians are not yet aware of open education and OER;
 - Training librarians to enable them to further share ideas and knowledge with the university community, explaining the essence of open education and OER;
 - Creating an information block on "Open Educational Resources" (available in Ukrainian and English versions) on the Library's website; systematically improving and updating it with new resources (Scientific Library of USUST, n.d.);
 - Readiness of librarians to work with considerable doubts and resistance of teachers, just as they did 10-12 years ago when the first repository in the Dnipro region was introduced (Kolesnykova, 2011);
 - Resilience of librarians to significant criticism coming from commercial publishers;
 - Persistence of librarians in delivering their messages; and even more persistence;
 - Participation in the development of the first USUST documents that officially enable the use of textbooks and course manuals created as OER by the University teachers;
 - First specific plans: working with the prospective teacher-authors, determining the scope of work and its timeline, agreeing on responsibilities;
 - Helping teacher-authors in the pilot project on publishing the first 5 textbooks as OER.
- This enabled the development of the "Model of Library Activities for Implementing OER at the University", which enables the discussion of advantages and disadvantages of certain activities, examining expectations and making assumptions.



Fig. 1. Working on the Creation of an Open Textbook: Authors – Professor Mykhailo Kapitsa, Associate Professor Dmytro Bobyr, and Library Staff – Library Director Tetiana Kolesnykova, Deputy Director for Informatisation Maryna Shcherbyna, Head of the Information Technology Department Tetiana Shcherbatiuk (June 2022)

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These publications were placed in the institutional repository eaDNURT in the section "Open Educational Resources" (eaDNURT, n.d.) and integrated into the international system Open Educational Resources Search Index – OERSI (OERSI, 2022). Currently, these are the only Ukrainian open textbooks available in OERSI. All 5 books are primary sources with ISBN and DOI and have been published under a CC license.

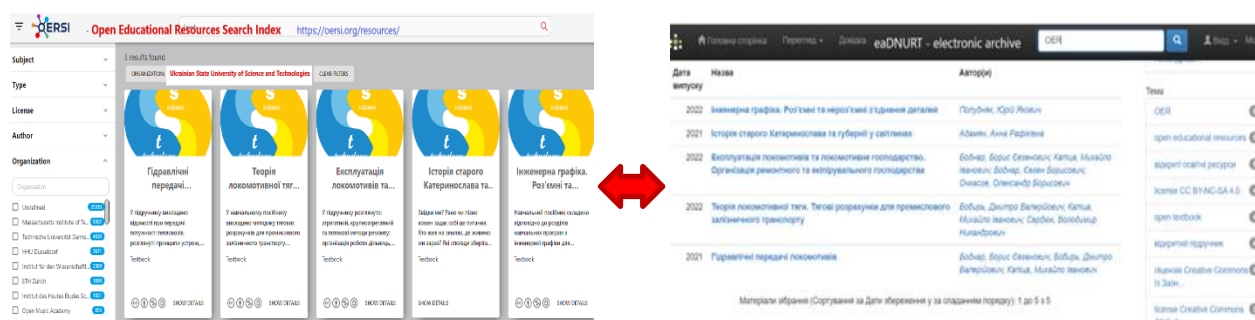


Fig. 2. Integration of OER from USUST Repository into OERSI

The USUST librarians try to use every opportunity to study international practices of supporting teacher-authors in the adaptation of existing OER in English, Spanish, German and other languages. The adaptation of existing OER to the institutional context will greatly accelerate the creation of new resources, enrich them with international practices, promote the involvement of students as co-creators of materials and improve their knowledge of a particular subject.

For example, a common challenge in both online and blended learning is how to produce multilingual video subtitles of publishable quality at scale and low cost (as OER). Clearly, a direct approach to this is to use modern AI tools for automatic speech recognition (ASR) and machine translation (MT): raw (automatic) subtitles in the source (spoken) language are produced first by an ASR system; then, they are machine-translated into a number of other, target languages of interest.

Adaptation of existing OER to the institutional context will speed up the creation of new resources, enrich them with international practices, promote the involvement of students as co-creators of documents and improve their awareness of a particular subject.

In our opinion, this is the only way to overcome the lack of modern textbooks in the Ukrainian language during the active war waged by the aggressor state of Russia against Ukraine and on the territory of Ukraine.

Dr. Tetiana Kolesnykova and Tetiana Shcherbatiuk (USUST Scientific Library) have been members of the ENOEL/SPARC Europe since 2020. They have learned from the experience of colleagues from other European universities, participated in webinars and surveys and translated ENOEL materials and tools into Ukrainian. At the same time, they had the opportunity to share their own experience and inform the larger OER community about the specifics of the USUST Library's work in the field of OER in the local and national contexts.

The USUST Scientific Library is the representative of Ukraine in SPARC Europe. This is a great honor but also a great responsibility.

In May 2022, ENOEL/SPARC Europe nominated the advocacy work of the USUST librarians for the Open Education Awards for Excellence by Open Education Global. The Board of Directors and the Award Committee recognized the importance of the work of the USUST librarians in advancing open education in Ukraine and providing continuous support to students

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and teachers even in extreme conditions. The USUST Scientific Library became a winner of the special Open Resilience Award (OE Awards for Excellence, 2022a).



Fig. 3. Open Resilience Award WINNER 2022

Conclusions

The aforementioned theoretical aspects and implemented practical solutions demonstrate that OER can be an effective solution in times of crisis (whether a pandemic or a war) to the issue of quality information support of distance education with materials in the national language in any country in Europe and the world.

In the context of higher education in Ukraine, OER is a means and one of the methods of overcoming linguocide by the Russian Federation – the purposeful destruction of the Ukrainian language as the main feature of the ethnic group. That is, OER can help to overcome the Ukrainian linguocide in educational resources.

Undoubtedly, it will be incredibly difficult for the university communities of Ukraine to implement a new model of information support for learning, teaching, research during martial law. After all, higher education institutions around the world have been improving practices and researching every aspect of creating, repurposing, adapting, disseminating, using OER and their impact on student learning outcomes, on the statements of teachers and other participants in the educational process about new opportunities for many years. Our foreign colleagues have been harmonizing OER year after year in terms of education, finance, legal, intellectual property and copyright issues, including the Creative Commons (CC) license system.

But Ukrainian education in the conditions of a fierce war has no time for slowness. That is why it is necessary now, actively studying the experience of universities in Europe and the world, to introduce local OER projects in their universities, and in the future - at the country level.

The authors hope that Ukrainian-language OER will soon become a mandatory element in the cultural environment of Ukrainian universities. The experience of librarians of the European Network of Open Education Librarians (ENOEL) proves that university librarians play one of the most important roles in this.

Ukrainian librarians can now and in the future count on assistance in OER issues from SPARC Europe and the European Network of Open Education Librarians (ENOEL). Together we

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care about diversity, equality and inclusion. This gives us the opportunity to understand how rich Europe and the world is thanks to all the languages and meanings of words associated with different backgrounds.

Yes, war is our new reality. The reality of Ukraine, Europe, and the world ... And in this reality, the librarians of USUST and librarians of other universities of Ukraine are determined to continue to support students, teachers, scientists, often even in extreme conditions and at a time when it is most needed. We understand that it depends on each of us whether we will overcome the linguocide (destruction) of the Ukrainian language in educational resources.

Thanks to their special role as educational intermediaries, close contacts with different university communities and unique skills, librarians are already widely recognized worldwide as important stakeholders in the implementation of inclusive and equitable access to education in general and to OER in particular.

REFERENCES

- An *ENOEL toolkit: open education benefits*. (2022, October 25). Retrieved from <https://zenodo.org/record/7248918> (in English)
- ArmiiaINFORM. (2022, Chervnia 21). *Linhvotsyd ye skladovoiu polityky henotsydu proty ukraintziv na tymchasovo zakhoplenykh terytoriiakh*. Retrieved from <https://armyinform.com.ua/2022/06/21/lingvoczyd-ye-skladovoyu-polityky-genoczydu-proty-ukrayincziv-na-tymchasovo-zahoplenyh-terytoriyah/> (in Ukrainian)
- Buist-Zhuk, M., & Nieborg, M. (2022). A new university press as a space to connect the building blocks of Open Science: A look through the prism of an open textbook publishing pilot. *Septentrio Conference Series, 1*. doi: <https://doi.org/10.7557/5.6626> (in English)
- Conole, G., & Weller, M. (2008). Using learning design as a framework for supporting the design and reuse of OER. *Journal of Interactive Media in Education, 1*, Art. 5. doi: <https://doi.org/10.5334/2008-5> (in English)
- Defining the "Open" in Open Content and Open Educational Resources*. (n.d.). Retrieved from <https://opencontent.org/definition/> (in English)
- eaDNURT. (n.d.). *Open textbooks, open tutorial*. Retrieved from <http://eadnurt.diit.edu.ua/jspui/handle/123456789/15313> (in English)
- edusources. (n.d.). *RUG OER*. Retrieved from <https://edusources.nl/en/collections/40725f52-d13b-4ed0-8f11-7cf26e76c5eb> (in English)
- Heinrich Heine. (n.d.). In *Wikipedia*. Retrieved from https://en.wikipedia.org/wiki/Heinrich_Heine (in English)
- International Organisation of La Francophonie. (2016). *Open educational resources competency framework OER*. Retrieved from https://unesdoc.unesco.org/ark:/48223/pf0000266159_eng (in English)
- Kolesnykova, T. O. (2011). Formuvannia komunikatsiinykh vidnosyn pry orhanizatsii bibliotekoiu instytutsiinoho repozytariiu VNZ [Formation of communication relations within organization of university institutional repository by library]. *Visnyk Knyzhkovoï palaty, 7*, 15–18. Retrieved from <http://eadnurt.diit.edu.ua/jspui/handle/123456789/821> (in Ukrainian)
- Kolesnykova, T. O. (2017). Tantsi krapel na vodi z elementamy aikido abo rozvytok «Library Publishing» u VNZ Ukrainy [Dancing drops on the water with aikido elements or development of library publishing in universities of Ukraine]. *Visn. Odes. nats. un-tu. Bibliotekoznavstvo*,

THE CONTRIBUTION OF THEORY AND RESEARCH TO THE TRANSFORMATION OF LIBRARIES

- bibliohrafoznavstvo, knyhoznavstvo*, 22(2), 285-304. Retrieved from <http://eadnurt.diit.edu.ua/jspui/handle/123456789/10284> (in Ukrainian)
- Kolesnykova, T. O., & Matveyeva, O. V. (2021). First steps before the jump: Ukrainian university librarians survey about OER. *University Library at a New Stage of Social Communications Development. Conference Proceedings*, 6, 96-107. doi: https://doi.org/10.15802/unilib/2021_248379 (in English)
- Li, K. Ch., & Wong, B. T.-M. (2021). A review of the use of open educational resources: The benefits, challenges and good practices in higher education. *International Journal of Innovation and Learning*, 30(3), 279-298. doi: <https://www.inderscienceonline.com/doi/abs/10.1504/IJIL.2021.118189> (in English)
- Linhvotsyd ukrainskoi movy. (n.d.). In *Wikipedia*. Retrieved from https://uk.wikipedia.org/wiki/%D0%9B%D1%96%D0%BD%D0%B3%D0%B2%D0%BE%D1%86%D0%B8%D0%B4_%D1%83%D0%BA%D1%80%D0%B0%D1%97%D0%BD%D1%81%D1%8C%D0%BA%D0%BE%D1%97_%D0%BC%D0%BE%D0%B2%D0%B8 (in Ukrainian)
- Ministry of Culture and Information Policy of Ukraine. (2022, May 23). *Rekomendatsii Ministerstva kultury ta informatsiinoi polityky Ukrainy shchodo aktualizatsii biblioteknykh fondiv u zviazku zi zbroinoiu ahresiiieu rosiiskoi federatsii proty Ukrainy*. Retrieved from <http://mkip.gov.ua/files/pdf/rekomendacii.pdf> (in Ukrainian)
- News European Parliament. (2022, November 23). *European Parliament declares Russia to be a state sponsor of terrorism*. Retrieved from <https://www.europarl.europa.eu/news/en/press-room/20221118IPR55707/european-parliament-declares-russia-to-be-a-state-sponsor-of-terrorism> (in English)
- Nurhas, I., Pawlowski, J. M., Jansen, M., & Stoffregen, J. (2016). OERauthors: Requirements for Collaborative OER Authoring Tools in Global Settings. In: K. Verbert, M. Sharples, T. Klobučar. (Eds.), *Adaptive and Adaptable Learning. EC-TEL 2016. Lecture Notes in Computer Science* (Vol. 9891, pp. 460-465). Cham, Switzerland: Springer. doi: https://doi.org/10.1007/978-3-319-45153-4_43 (in English)
- Ocheretianko, S. I., Riabets, L. V. (2020). Zaborona ukrainskoi movy. In I. M. Dziuba, A. I. Zhukovskiy, M. G. Zhelezniak, et al. (Eds.). *Entsyklopediia suchasnoi Ukrainy* (Vol. 10). Kyiv, Ukraine: Instytut entsyklopedychnykh doslidzhen NAN Ukrainy. Retrieved from https://esu.com.ua/search_articles.php?id=17240 (in Ukrainian)
- OE Awards for Excellence. (2022a). *Advocacy work of the Scientific Library to advance Open Education in Ukraine*. Open Practices Award. Retrieved from <https://awards.oeglobal.org/awards/2022/open-resilience/advocacy-work-of-the-scientific-library-to-advance-open-education-in-ukraine/> (in English)
- OE Awards for Excellence. (2022b2). *Open Collaboration Award. European Network of Open Education Librarians – ENOEL*. Open Practices Award. Retrieved from <https://awards.oeglobal.org/awards/2022/open-collaboration/enoel/> (in English)
- OERSI. (2022). *Ukrainian State University of Science and Technologies*. Retrieved from <https://oersi.org/resources?sourceOrganization=%5B%22Ukrainian+State+University+of+Science+and+Technologies%22%5D> (in English)
- Pérez, A., Díaz-Munío, G. G., Giménez, A., Silvestre-Cerdà, J. A., Sanchis, A., ... & Juan, A. (2021). Towards cross-lingual voice cloning in higher education. *Engineering Applications of Artificial Intelligence*, 105, 104413. doi: <https://doi.org/10.1016/j.engappai.2021.104413> (in English)
- Rafał Lemkin. (n.d.). In *Wikipedia*. Retrieved from https://uk.wikipedia.org/wiki/%D0%A0%D0%B0%D1%84%D0%B0%D0%BB_%D0%9B%D0%B5%D0%BC%D0%BA%D1%96%D0%BD (in English)

THE CONTRIBUTION OF THEORY AND RESEARCH TO THE TRANSFORMATION OF LIBRARIES

- Raj, R., Zhuk, M., van Rij, F., & Beldhuis, H. (2021). Shifting gears towards the reuse and co-creation of OER: New skill sets for sustainable staff development. In M. Baas, R. Jacobi, & R. Schuwer (Eds.). *Reuse of open educational resources* (pp. 27-34). SURF, collaborative organisation for ICT in Dutch education and research. Retrieved from <https://communities.surf.nl/files/Artikel/download/Theme%20edition%20Reuse%20OER.pdf> (in English)
- Rets, I., & Rogaten, J. (2021). To simplify or not? Facilitating English L2 users' comprehension and processing of open educational resources in English using text simplification. *Journal of Computer Assisted Learning*, 37(3), 705-717. doi: <https://doi.org/10.1111/jcal.12517> (in English)
- Santos-Hermosa, G., Proudman, V., & Corti, P. (2022, October). Open education in European libraries of higher education (Report). SPARC Europe, ENOEL. doi: <https://doi.org/10.5281/zenodo.7267592> (in English)
- Scientific Library of USUST (n.d.). *Open educational resources*. Retrieved from <https://library.diit.edu.ua/en/page/OER> (in English)
- SPARC Europe. (n.d.). *European network of open education librarians (ENOEL)*. Retrieved from <https://sparceurope.org/what-we-do/open-education/enoe/> (in English)
- State Language Protection Commissioner. (2022, June 28). *Rosiiska polityka linhvotsydu na okupovanykh terytoriiakh Ukrainy yak sposib demontazhu konstytutsiinoho ladu Ukrainy ta element henotsydu proty ukrainskoho narodu* [Russian policy of linguocide in the occupied territories of Ukraine as a way of dismantling the constitutional order of Ukraine and an element of genocide against the Ukrainian people]. Retrieved from <https://mova-ombudsman.gov.ua/news/rosijska-politika-lingvocidu-na-okupovanih-teritoriyah-ukrayini-yak-sposib-demontazhu-konstitucijnogo-ladu-ukrayini-ta-element-genocidu-proti-ukrayinskogo-narodu> (in Ukrainian)
- UN. General Assembly. (1947). *The crime of genocide*. Retrieved from <https://digitallibrary.un.org/record/209873?ln=en> (in English)
- UNESCO. (2012, June). *2012 Paris OER declaration*. World Open Educational Resources Congress, Paris. Retrieved from <https://unesdoc.unesco.org/ark:/48223/pf0000246687> (in English)
- UNESCO. (2019, November 25). *Recommendation on Open Educational Resources (OER)*. Retrieved from <https://www.unesco.org/en/legal-affairs/recommendation-open-educational-resources-oer> (in English)
- United Nations. (2015). *Goal 4 "Ensure inclusive and equitable quality education and promote lifelong learning opportunities for all"*. Department of Economic and Social Affairs. Sustainable Development GOALS. Retrieved from <https://sdgs.un.org/goals/goal4> (in English)
- University of Groningen. (n.d.). *Library Guide. Open Educational Resources for Teachers*. Retrieved from <https://libguides.rug.nl/OER> (in English)
- Yavorovych, T. (2022, Travnia 22). *"Denatsyfikatsiia" po-rosiisky. Rosiiany spalyly knyzhky z istorii Ukrainy*. Suspilne. Novyny. Retrieved from <https://suspilne.media/242207-denacifikacia-po-rosijski-rosiani-spalili-knizki-z-istorii-ukraini/> (in Ukrainian)

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**Європейські практики подолання мовних бар'єрів в умовах кризи:
Відкриті освітні ресурси**

Мета. У будь-якій країні національна мова та освіта допомагають не лише передавати знання, а й розширюють кругозір студентів, вчать їх бути більш толерантними до різних культур. Сьогодні українська мова як важлива складова національної ідентичності та державотворення є однією з головних цілей росії у її війні проти України. Саме тому, одним із головних викликів для вищої освіти України у воєнний час є якнайшвидше створення сучасних та якісних навчальних матеріалів державною мовою з метою сприяння дистанційному викладанню, навчанню та дослідницьким процесам в університетах. Механізмом реагування на цей виклик є звернення до досвіду створення, адаптації та використання відкритих освітніх ресурсів (OER) в Європі та світі. Мета дослідження – розглянути практики створення, адаптації та використання OER в європейських університетах та бібліотеках у контексті їх переваг, у тому числі можливостей подолання мовних бар'єрів в умовах кризи. **Методи.** Стаття базується на аналізі літератури про практики використання OER у сприянні подоланню мовних бар'єрів, про діяльність ENOEL, про практики бібліотекарів та освітян кількох європейських університетів, а також на саморефлексії та безпосередньому переживанні обставин війни українськими бібліотекарями, які продовжують інформаційний супровід освітнього процесу. **Результати.** Теоретичні аспекти та реалізовані практичні рішення демонструють, що OER можуть бути ефективним вирішенням в умовах кризи (чи то пандемії, чи то війни) питання якісного інформаційного забезпечення дистанційної освіти матеріалами державною мовою в будь-якій країні Європи та світу. У контексті вищої освіти України OER є засобом і одним із методів подолання лінгвоциду з боку російської федерації – цілеспрямованого знищення української мови як головної ознаки етносу. Досвід роботи з OER Наукової бібліотеки УДУНТ (м. Дніпро, Україна) – це історія бібліотеки, яка шукала можливості для відповіді на свої локальні виклики та вирішення проблем під час пандемії COVID-19, і знайшла рішення, які стали необхідними під час війни з росією. **Висновки.** Автори сподіваються, що україномовні OER незабаром стануть обов'язковим елементом культурного середовища українських університетів. І саме OER спроможні допомогти здолати український лінгвоцид в освітніх ресурсах. Досвід бібліотекарів Європейської мережі бібліотекарів відкритої освіти (ENOEL) доводить, що одну з найважливіших ролей у цьому відіграють бібліотекарі університетів.

Ключові слова: відкриті освітні ресурси; мовні бар'єри; університетська бібліотека; дистанційна освіта; ENOEL; лінгвоцид; війна в Україні; бібліотека у воєнний час; інформаційна підтримка дистанційного навчання; УДУНТ; SPARC Europe

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Accessibility Analysis of Digital Libraries and Specialized Library Resources

Objective. The article focuses on the current state of library web content accessibility. **Methods.** 56 library websites of different countries (27 digital libraries and 29 specialized library resources for people with disabilities) have been successfully tested for the compliance with the WCAG 2.1 standards using the Webaccessibility.com service. Using the Alexa.com service the comparative analysis of the websites traffic ranking has been additionally conducted. **Results.** It has been established that only 3 websites out of 56 meet the accessibility standards of WCAG 2.1 with the compliance score of 92%. **Conclusions.** It has been concluded that the libraries' current practices of providing web content accessibility are insufficient. The emphasis has been placed on the need to optimize and promote specialized library resources and to implement a continuous audit of web content accessibility by means of automatic testing and engaging users with disabilities into these processes.

Keywords: digital library; digital library website; digital library for persons with disabilities; website accessibility; web accessibility; web accessibility for people with disabilities; web content accessibility guidelines; WCAG 2.1

Introduction

Digitization is rapidly finding its way to all areas of the people's life, but still a lot of people do not have access to the most essential digital resources and are forced to fight for their use. Most particularly people with disabilities find themselves in the risk group and remain outside the digital society even in the countries with a high level of technology development and successful implementation of digital society strategies. Web accessibility for this category of users is the demand of times. In particular, it is becoming a priority to provide access to web content produced by libraries as they are institutions that produce, store and transmit information of social importance.

Libraries are working their way and adjusting to technological social development. Currently they are actively engaging in socio-communicative processes and are focusing on introduction of digital technologies and improvement of information, library and socio-communication technologies. The library's contribution to society with reference to people with disabilities is in performing the following functions: informational, cultural, educational, socializing and inclusive including but not limited to performing them in the digital environment. However, the standards of library's web content accessibility in different countries still do not meet the needs of users with disabilities and it makes it more difficult for libraries to perform the above

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mentioned functions. It happens due to the lack of attention to this question in the library field at the institutional level and it is complicated by the dynamics of technological development.

This article sheds light on the current state of accessibility of both digital libraries, as they are universal resources for a wide number of users, and specialized library websites for people with disabilities and their compliance with the WCAG 2.1 standard.

The aim of the article is to examine the state of accessibility and the implementation level of different types of digital libraries and specialized library resources websites' content for people with disabilities.

Literature review

An analysis of recent studies and publications shows that the question of web content accessibility is addressed from different angles. Groups of authors develop a methodology for selecting general criteria for adapting websites for people with disabilities (Horoshevskij & Matyunina, 2017); determine the structure of information materials, summarize the design of resources and the range of digital library services potentially needed by people with disabilities during social and educational inclusion (Devi & Verma, 2017; Xie et al., 2021; Spina & Cohen, 2018), analyze the national libraries' websites accessibility (Marina & Marin, 2019) and websites of research libraries and state institutions of different countries and their compliance with WCAG 2.0 standard (Pasichnyk et al., 2019); outline the possibilities of using digital library projects by different categories of users with disabilities (Xie et al., 2019), etc.

Since the introduction of the first (1999) and second editions (2008), Web content accessibility guidelines (WCAG) have become the main international standard for website accessibility, which has been seen as a “globally recognized and technology-neutral set of web content accessibility guides” (*Information and Communication Technology (ICT)*, 2017). WCAG has been included into the legislative framework in Australia, Ireland, Israel, Italy, the Netherlands, Switzerland and the United Kingdom, and in France, Germany and the Republic of Korea it has been adapted to it. However, despite the broad introduction of WCAG 1.0 and WCAG 2.0 (WCAG 2.0, 2018), the content that complied with the guidelines was not always fully accessible by all categories of users with disabilities.

Considering the overall situation with web accessibility, the libraries' web content has not become generally available for people with disabilities during WCAG 1.0 and WCAG 2.0 functioning and in most countries its adaptation for the above mentioned user category has not become a priority among the other areas of institutional policy of library and information science field. However, many libraries have referred to the WCAG 2.0 criteria to set their own accessibility standards. In the United States, for example, the survey of members of the Association of Research Libraries showed that 67% of respondents used WCAG 2.0 AA as a criterion for web accessibility testing, and 12% of them went on to use AAA compliance as an accessibility criterion. The survey also showed that only 33% of respondents included the factor of accessibility in their policy for the development of digital collections (Spina & Cohen, 2018). In most countries, ignoring the optimization of libraries' web content to the needs of socially vulnerable users has led to its de facto absence. Even the accessibility of national resources has become challenging. This was confirmed by the results of a study of 151 national libraries websites of different countries in 2019. Specifically 29 of them (19%) fully complied, 3 - partially complied, 119 - did not comply with the WCAG 2.0 recommendations at the A, AA and AAA levels (Marina & Marin, 2019).

WCAG 2.1 is the third updated version of the standard that was released on June 5, 2018. This version was initiated to improve accessibility guidelines for three main groups of users: users

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with cognitive difficulties; low vision users; users with disabilities who prefer to use mobile devices and tablets. WCAG 2.1 introduced 17 additional success criteria to increase the usability of web content based on language recognition software; optimization of motion and gestures; simplification of content use without display orientation restrictions; visual presentation of non-text components; animation settings; facilitating the ways of inputting information; streamlining of gesture optimization, etc. (W3C, 2018). Given that the adaptation of library resources to WCAG 2.0 has not been completed, the compliance with the new WCAG 2.1 criteria has become a challenge to them.

On January 21, 2021 the first public working draft of WCAG 3.0 was presented, which provides a wide range of recommendations for making web content more accessible to users with disabilities. These guidelines address accessibility of web content on desktops, laptops, tablets, mobile devices, wearable devices, and other web of things devices. They address various types of web content including static content, interactive content, visual and auditory media, as well as virtual and augmented reality, a variety of web tools such as browsers and assistive technologies. The presented new accessibility guidelines fit into the existing structure of WCAG 2.0 and WCAG 2.1, but also qualitatively extend the previous versions. With the implementation of WCAG 3.0 the inability to test resources automatically will be a challenge.

Methods

Within the framework of the current study the quantitative analysis of the collected data has been done by applying the descriptive research methodology. The Webaccessibility.com service has been chosen as the library web content accessibility data source. Having used the above mentioned service, 56 library websites have been tested and their compliance with the Web Content Accessibility Guidelines 2.1 standard has been determined. Additionally, the comparative analysis of the websites traffic ranking has been conducted. Alexa.com has been chosen as the global traffic ranking data source. The process of data accumulation was done on January, 2022.

Results and Discussion

In order to determine the web accessibility of library web content, the webometric analysis of 56 library websites and the comparative analysis of their Global Rank have been conducted at the first stage of the current study. Alexa.com has been used for this purpose. The first group of the resources that have been studied consists of digital libraries of different types and scale of implementation (Table 1). The second group includes specialized library resources focused on serving different categories of users with disabilities (Table 2): digital libraries, websites of specialized libraries of national, state and regional levels.

Table 1

WCAG 2.1 Compliance Score of Digital Libraries' Web Content

Number Library	Name	URL	Global Rank
Lib.1	CyberLeninka	cyberleninka.ru/	1637

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Lib.2	World Digital Library — UNESCO	unesdoc.unesco.org/library	3706
Lib.3	Gutenberg	gutenberg.org/	7197
Lib.4	Gallica	gallica.bnf.fr/	14381
Lib.5	National Digital Library of India	ndl.iitkgp.ac.in/	19593
Lib.6	The World Digital Library	www.wdl.org/	50806
Lib.7	Digital library of historical and cultural heritage (Ukraine)	irbis-nbuv.gov.ua/cgi- bin/irbis_ir/cgiirbis_64.exe?C21COM=F&I2 1DBN=NAV&P21DBN=ELIB	71249
Lib.8	Europeana	europeana.eu	87861
Lib.9	California Digital Library	cdlib.org/	123443
Lib.10	BNDigital	bndigital.bn.gov.br/	143546
Lib.11	Biblioteca Digital Hispánica	bne.es/es/Catalogos/BibliotecaDigitalHispani ca/Inicio/	144758
Lib.12	Digital Public Library of America	dp.la/	163866
Lib.13	Networked Digital Library of Theses and Dissertations	ndltd.org	225631
Lib.14	International Children's Digital Library	childrenslibrary.org/	282484
Lib.15	National Digital Library Polona	polona.pl/	293241
Lib.16	Latvijas Nacionālās digitālās bibliotēkas	lndb.lv	411565
Lib.17	DigiVatLib	digi.vatlib.it/	495795
Lib.18	China Digital Library	apabi.com/ruc/pub.mvc/Index2?pid=login&c ult=US	586508
Lib.19	Digitale Bibliotheek voor de Nederlandse Letteren	dbnl.org	612088

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Lib.20	Deutsche Digitale Bibliothek	deutsche-digitale-bibliothek.de	710986
Lib.21	Diasporiana	diasporiana.org.ua/	873339
Lib.22	Manuscriptorium	manuscriptorium.com	2334661
Lib.23	Digital Library of Mexico	bdmx.mx/	4068915
Lib.24	AODL	aodl.org	4556792
Lib.25	Digital Library of the Caribbean	dloc.com/	7205134
Lib.26	Czech Digital Library	http://czechdigitallibrary.cz/	-
Lib.27	ASEAN Digital Library	aseanlibrary.org	-

Table 2

Library Resources for People with Disabilities

Number Library	Name	URL	Global Rank
Lib.28	La Bibliothèque Numérique Francophone Accessible (BNFA)	bnfa.fr	354100
Lib.29	ÉOLE	http://eole.avh.asso.fr/	811787
Lib.30	Norwegian Library of Talking Books and Braille (NLB)	nlb.no	818330
Lib.31	Danish National Library for Persons with Print Disabilities (Nota)	https://nota.dk/	867987
Lib.32	State Special Central Library for the Blind and Visually Impaired	gbs.spb.ru	937885
Lib.33	Bibliothèque de la Ligue Braille	bibliotheque.braille.be/fr	1160652

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Lib.34	National Digital Library Services for the Blind	nlj.gov.jm/NDLSB/	1607343
Lib.35	National Library for the Disabled (NLD)	nld.go.kr/ableFront/index.jsp	2242694
Lib.36	National Network for Equitable Library Service	nnels.ca	2490158
Lib.37	Centre for Equitable Library Access Public library service for Canadians with print disabilities	celalibrary.ca/node/22584184	2928206
Lib.38	Russian State Library for the Blind	rgbs.ru	3030508
Lib.39	Biblioteca digital Tiflolibros	tiflolibros.tiflonexos.org/signin?ReturnUrl=%2FWorks%2FIndex	3313268
Lib.40	Hljóðbókasafns Íslands	hbs.is	3785823
Lib.41	National Library Service Talking Books	nlstalkingbooks.org/talkingbooksform	5039815
Lib.42	Bibliothèque Sonore Romande	bibliothequesonore.ch	6206175
Lib.43	Westdeutsche Bibliothek der Hörmedien für blinde, seh- und lesebehinderte Menschen e.V.	wbh-online.de	-
Lib.44	Central Specialized Library for the Blind. M. Ostrovsky	csbs.org.ua	-
Lib.45	The South African Library for the Blind	salb.org.za	-
Lib.46	The German Central Library for the Blind	dzblesen.de	-
Lib.47	Biblioteca Italiana per i Ciechi "Regina Margherita"	bibliotecaciechi.it	-

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Lib.48	Lithuanian Library for the Blind	labiblioteka.lt/en	-
Lib.49	Etoile Sonore	etoilesonore.ch	-
Lib.50	Centre d'accès équitable aux bibliothèques Services de bibliothèque publique pour les Canadiens incapables de lire les imprimés	bibliocaeb.ca	-
Lib.51	National Library Service for the Blind and Print Disabled	loc.gov/nls	-
Lib.52	Viittomakielinen kirjasto	viittomakielinenkirjasto.fi	-
Lib.53	Swiss Library for the Blind, Visually Impaired and Print Disabled	sbs.ch/startseite/	-
Lib.54	The National Accessible Library (Scotland)	accessiblelibrary.org.uk/	-
Lib.55	Latvijas Nerēdzīgo bibliotēka	neredzigobiblioteka.lv	-
Lib.56	Fachbibliothek und öffentliche (Schul)Bibliothek für Sehbehinderte und Blinde	odilieninstitut.web-opac.at/search	-

The formal popularity ranking of 42 library websites is the result of the current study. The analysis of webometric data has provided means of identifying a high demand level of digital library websites implemented at the international, national and regional levels. Still there has been an extremely low use of specialized resources for people with disabilities, even of the resources that are implemented at the national level in the developed countries. The comparative analysis has shown that the most visited websites in each group of resources are the websites of France and the Russian Federation. It has been determined that the resources of France, USA, Norway, Denmark and the Russian Federation have the websites for people with disabilities with the highest Global Rank. It should be noted that 14 specialized libraries' websites out of 56 studied websites have not been included into the rank as their Global Rank has not been established by means of the Alexa.com service due to the insufficient level of technical implementation.

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Both groups of library websites have been tested for compliance with the Web Content Accessibility Guidelines 2.1 using the Webaccessibility.com service. The results are shown in Table 3 and Table 4. The resources of the following countries have the highest established compliance score of web content accessibility for people with disabilities: the United States (California Digital Library project: 92%, 0 violations; Gutenberg project: 92%, 0 violations) and Iceland (Hljóðbókasafns Íslands project: 92%, 0 violations). It should be emphasised that only 3 websites out of 56 meet the accessibility standards with the compliance score of 92% and have no violations. 2 of these websites belong to the first group (Table 1), they are the projects of digital universal libraries - Lib.9, Lib.3; 1 website belongs to the second group (Table 2), it is the specialized project of the Icelandic Audio Library “Hljóðbókasafns Íslands project” - Lib.40. The following resources from the first group (Table 1): Lib.24, AODL project (76%, 129 violations); Lib.11, Biblioteca Digital Hispánica project (77%, 47 violations); and from the second group (Table 2): Lib.55, project Latvijas Neredzīgo bibliotēka (73%, 30 violations) have the lowest compliance score of web content accessibility.

Table 3

WCAG 2.1 Compliance Score of Digital Libraries' Web Content

Number Library	WCAG 2.1 compliance score, %	Number of violations
Lib.1	85%	5
Lib.2	77%	87
Lib.3	92%	0
Lib.4	85%	88
Lib.5	77%	21
Lib.6	88%	12
Lib.7	76%	18
Lib.8	88%	3
Lib.9	92 %	0
Lib.10	75%	19
Lib.11	77%	47
Lib.12	81%	8
Lib.13	78%	70
Lib.14	84%	4
Lib.15	88%	3

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Lib.16	74%	36
Lib.17	73%	19
Lib.18	73%	16
Lib.19	77%	12
Lib.20	80%	10
Lib.21	81%	3
Lib.22	79%	7
Lib.23	87%	13
Lib.24	76%	129
Lib.25	89%	12
Lib.26	81%	19
Lib.27	78%	6

Table 4

WCAG 2.1 Compliance Score of Specialized Libraries' Web Content

Number Library	WCAG 2.1 compliance score, %	Number of violations
Lib.28	82%	14
Lib.29	86%	6
Lib.30	82%	9
Lib.31	88%	5
Lib.32	78%	24
Lib.33	86%	4
Lib.34	87%	4
Lib.35	84%	23
Lib.36	81%	1
Lib.37	80%	16
Lib.38	76%	17

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Lib.39	88%	6
Lib.40	92%	0
Lib.41	89%	16
Lib.42	74%	10
Lib.43	91%	6
Lib.44	90%	1
Lib.45	88%	4
Lib.46	88%	2
Lib.47	86%	3
Lib.48	86%	16
Lib.49	85%	21
Lib.50	84%	13
Lib.51	82%	7
Lib.52	79%	23
Lib.53	75%	24
Lib.54	74%	15
Lib.55	73%	30
Lib.56	78%	7

The fact is that the range of WCAG 2.1 compliance score of the first group's resources (Fig. 1) is 92% -77%, and the range of compliance score of the second group's specialized resources (Fig. 2) is wider (92% -73%). At the same time, specialized resources that are developed for people with disabilities have fewer violations: the range of violations of the resources from the first group (Table 3) is from 3 to 129; the range of violations of the resources from the second group (Table 4) is from 1 to 30. In general, the accessibility level of the specialized resources for users with disabilities is not fundamentally different from the accessibility level of the resources that are designed for a wide audience.

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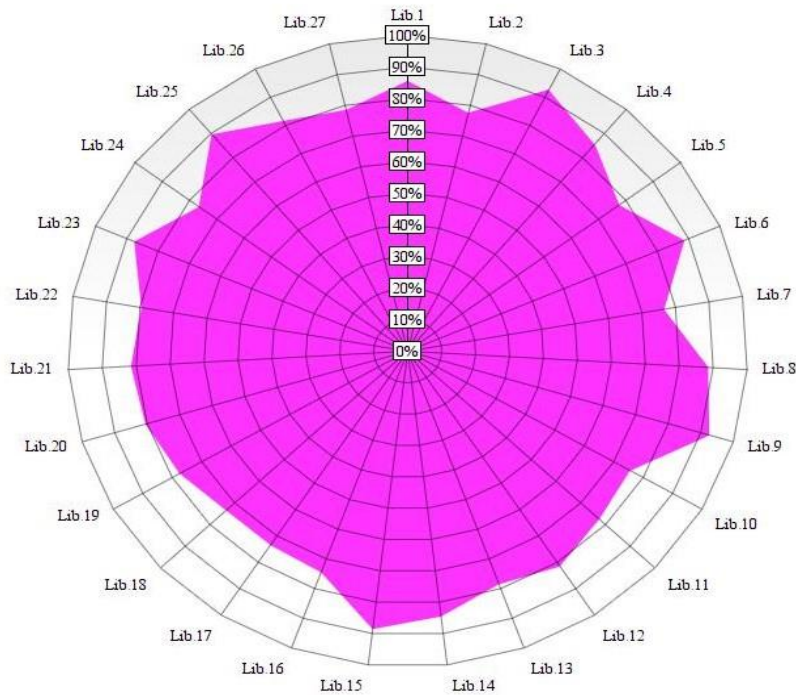


Fig. 1. The Range of WCAG 2.1 Compliance Score of the First Group's Resources

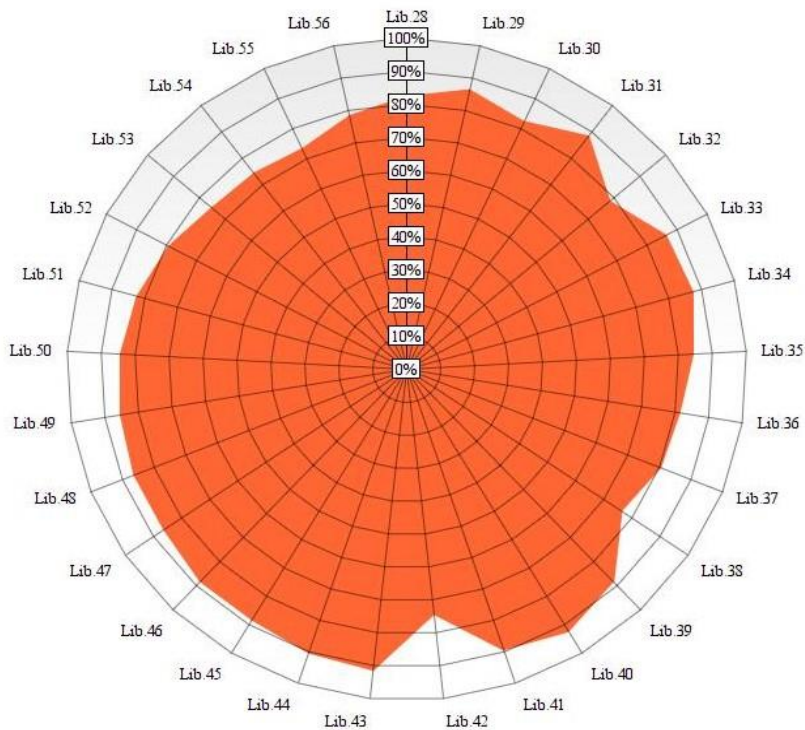


Fig. 2. The Range of WCAG 2.1 Compliance Score of the Second Group's Specialized Resources

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Analysis of violations has shown that the most common violation is the lack of text alternatives for non-textual content. 93% of all identified violations are violations associated with the fact that the developers did not pay enough attention to providing textual alternatives to visual objects. The content of the websites that do not always meet the language criteria is another common violation. The controversial criterion is the adaptability of the websites' pages, which allows to present the content in different ways (for example, a simple layout) without losing the semantics of the information provided. Functional violations have also been identified on the websites. They are imperfect navigation, which prevents users from finding content and clearly identifying where they are on the website; unavailability of certain website features when using the keyboard. A lot of violations are related to contrast, which makes textual content readable and understandable, making it easier for users to separate the foreground from the background.

Content analysis of 56 websites has indicated that most of them use a variety of tools that allow people with disabilities to be potential users of these websites. In most cases, the studied resources offer users the functions of scaling texts and images, audio playback of the documents. These functions are required and can be found in different forms on almost 100% of the studied specialized libraries websites, but very few digital libraries websites have the described functionality. For example, the ReadSpeaker technology is only used by the World Digital Library (Lib.6), Norwegian Library of Talking Books and Braille (Lib.30), Hljóðbókasafns Íslands (Lib.40). Some libraries offer specialized services for users with disabilities. The Digital Library of Brazil (Lib.10) offers an innovative «VLibras» system that translates digital audio and video content into Brazilian Sign Language for people with hearing disability. Sign language e-library Viittomakielinen kirjasto (Lib.52) has been established in Finland.

Conclusions

The results of the study indicate that current practices are insufficient to allow most libraries to achieve a medium level of compliance with WCAG 2.1 standard. No version of WCAG standard guarantees web content accessibility, but each version is an important standard for providing users with disabilities with equal access to web content and digital library services. No version of WCAG standard takes into account all possible aspects of library web content accessibility, but each demonstrates the need for a more integrated approach to organizing its accessibility.

The state of library resources requires implementing continuous audit of accessibility, most particularly by means of automatic testing using free tools, and their regular optimization. At the same time, it should be stated that in-depth testing of the websites automatically is not possible. That is why real and potential users with disabilities should be engaged into the evaluation, development and optimization processes. To ensure effective accessibility of web content, libraries should not only strive to meet certain success criteria of WCAG 2.1, but also develop workflows, bring in best practices of interaction with special users, which will make functional accessibility a priority at all stages of creation and promotion of web content. It should be done systematically and it should cover social and digital inclusion matters. From this point of view, WCAG 2.1 effectively takes accessibility beyond technological implementation and encourages libraries to consider further adaptation of policies, services for people with disabilities and people facing social and digital exclusion due to physical or cognitive impairments.

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REFERENCES

- Devi, K. K., & Verma, M. K. (2017). Content evaluation and the design trends of national institutes of technology (NITS) library websites of India: an evaluative study. *Journal of Indian Library Association*, 53(2&3), 135-147. Retrieved from <https://www.ilaindia.net/jila/index.php/jila/article/viewFile/99/72> (in English)
- Horoshevskij, A. I., & Matyunina, Y. A. (2017). Method of selection criteria for adaptation of this site for people with disabilities. *Information processing systems*, 2, 246-252. doi: <https://doi.org/10.30748/soi.2017.148.46> (in English)
- Information and Communication Technology (ICT) Standards and Guidelines. (2017). Retrieved from <https://www.federalregister.gov/documents/2017/01/18/2017-00395/information-and-communication-technology-ict-standards-and-guidelines> (in English)
- Marina, O., & Marin, S. (2019). Version of WCAG and Accessibility of library web-content. *Bulletin of Kharkiv State Academy of Culture*, 56, 86-95. doi: <https://doi.org/10.31516/2410-5333.056.08> (in Ukrainian)
- Pasichnyk, V., Shestakevych, T., Kunanets, N., Rzhеuskyi, A., & Andrunyk, V. (2019). Accessibility analysis of scientific libraries web resources. *ECONTECHMOD. An International Quarterly Journal on Economics of Technology and Modelling Processes*, 8(2), 9-16. Retrieved from <https://oldena.lpnu.ua/handle/ntb/46300> (in English)
- Spina, C., & Cohen, M. (2018). SPEC Kit 358: Accessibility and universal design. Washington, DC: Association of Research Libraries. Retrieved from <https://publications.arl.org/Accessibility-Universal-Design-SPEC-Kit-358/> (in English)
- Web Content Accessibility Guidelines (WCAG) 2.1*. (2018). Technical Report. World Wide Web Consortium. Retrieved from <https://www.w3.org/TR/WCAG21/> (in English)
- Web Content Accessibility Guidelines (WCAG) 2.0*. (2008). Retrieved from <https://www.w3.org/TR/2008/REC-WCAG20-20081211/> (in English)
- Xie, I., Babu, R., Lee, T. H., Castillo, M. D., You, S., & Hanlon, A. M. (2019). Enhancing usability of digital libraries: designing help features to support blind and visually impaired users. *Information Processing & Management*, 57(3), 102110. doi: <https://doi.org/10.1016/j.ipm.2019.102110> (in English)
- Xie, I., Babu, R., Lee, H. S., Wang, S., & Lee, T. H. (2021). Orientation tactics and associated factors in the digital library environment: comparison between blind and sighted users. *Journal of the Association for Information Science and Technology*, 72(8), 995-1010. doi: <https://doi.org/10.1002/asi.24469> (in English)

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Аналіз доступності цифрових бібліотек та спеціалізованих бібліотечних ресурсів

Мета. Дослідження сучасного стану доступності бібліотечного веб-контенту. **Методика.** 56 бібліотечних веб-сайтів різних країн (27 цифрових бібліотек та 29 спеціалізованих бібліотечних ресурсів для людей з обмеженими можливостями) пройшли успішну перевірку на відповідність стандартам WCAG 2.1 за допомогою сервісу Webaccessibility.com. За допомогою сервісу Alexa.com додатково проведено порівняльний аналіз рейтингу відвідуваності сайтів. **Результати.** Встановлено, що лише 3 веб-сайти з 56 відповідають стандартам доступності WCAG 2.1 з показником відповідності 92%. **Висновки.** Зроблено висновок, що існуючі в бібліотеках практики забезпечення доступності веб-контенту є недостатніми. Акцент було зроблено на необхідності оптимізації та просування спеціалізованих бібліотечних ресурсів та впровадження постійного аудиту доступності веб-контенту шляхом автоматичного тестування та залучення до цих процесів користувачів з обмеженими можливостями.

Ключові слова: цифрова бібліотека; веб-сайт цифрової бібліотеки; цифрова бібліотека для людей з обмеженими можливостями; доступність веб-сайту; веб-доступність; веб-доступність для людей з обмеженими можливостями; рекомендації щодо доступності веб-контенту; WCAG 2.1

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Digital Civic Engagement and Youth Participation: Hungarian LIS Students' Perspective of Political Information

Objective. The research seeks to understand, how Hungarian LIS students use social media as an avenue to express their democratic actions and how social media political information affects the youth's trust and judgement when interacting with their close family and friends online. **Methods.** The study employed a quantitative approach to determine the social media engagement of the participants with close family and friends. Convenience sampling was applied in this study (Students of Library and Information Science, University, Hungary), and an online questionnaire was sent to all the potential participants (to 197 students). **Results.** A total of 43% participated in this research. The youth give a high level of trust to their family members and close friends even if they share, post, like, or comment on something that is different from their point-of-view in social media. Moreover, the youth have a low level of judgement towards family and close friends. **Conclusions.** Political participation among youth is voluntary and engagement with political information in social media is rare/low.

Keywords: civic engagement; youth participation; social media; political information; Hungary

Introduction

Access to political information among the youth will help them make politically informed decisions. Sources of political information can also come from family and friends. As young people deal with an abundance of online information shared on social media, how was their political engagement with family and close friends? Political participation and civic engagement are attributes of a democratic nation. The youth being idealistic individuals act in making a difference within the social structure once they are politically committed by studying political issues and putting an effort to advance their political commitment (Oross & Szabo, 2018). The presence of political information in social media makes it easy for its fast distribution online. Political information can also influence public perception as they target people of all ages.

Political discussions can be comfortable with family and can be a frequent topic when like-minded people come together to discuss political matters. Most of the time they come into an agreement as family members and as a matter of respect, they do not easily get upset with one another (Gerber, Huber, Doherty, & Dowling, 2012). As the family is the basic component of our society and individual beliefs and values are generated by family, trust is gained within this structure (Koranteng, Wiafe, Katsriku, & Apau, 2020).

With social media controlling our daily lives, changes in communication happen even with our families. The abundance of social networking websites is popular around the globe, in Europe, and in Hungary (Khan et al., 2019). Hungary has a population of 9.77 million (O'Neill, 2022)

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where 90.1% are internet users (Hungarian Central Statistical Office, 2021) and 3.7 million are social media users (NMHH, 2022). In Statista's report, 5.4M are Facebook users (Medve, 2022).

Background of the Study

Political information in Hungary

Political issues that affect national policies such as immigration policy and multiculturalism are some of the complex positions that Hungarian citizens discuss that lead them as to which party to support (Vegetti, 2019). Hungary has a relatively limited democratic experience and with the surge of political information in the era of infodiversity including social media, it is an overwhelming experience as to how news sources can influence the public as well as how political information coming from social media can shape a relationship among family and friends (Matuszewski & Szabó, 2019; Blokker, 2013).

At the height of disinformation, evidence showed that controversial information is spreading in Hungary. Certain images and videos tagged as propaganda that targets specific people continue to be distributed online. A glimpse of this report shared by Izabella Szentpéteri published by CEU Democracy Institute can be read under the title, "Brave New Hungary: The Anatomy of Fake News on Social Media" (Szentpéteri, n.d.).

Family and close relationships in Hungary

Albert and Dávid (2018) note that people in Hungary have fewer friends and acquaintances. Young people ages 16-25 discuss serious issues with middle-aged members of the family instead with their friends. In the Hungarian family setting, they remain to be traditional and family ties are strong. Immediate family members provide more emotional support and spend more time with family. Even when set apart, they maintain a strong relationship with their immediate family (Scroope, 2017). Interestingly, highly educated young men experience having enough friends in this age bracket while men in their middle age trust private information with their partners and spouses.

Statement of the Problem

Information sharing and interaction in social media becomes complex and sometimes virulent. Close relations with family and friends are affected if not everyone shares the same value, opinions, or beliefs. Knowledge acquired online triggers each social media user as to how they will take an action and behave online based on the level of how they understood the information processed.

With the increasing data of the younger population most exposed to social media content, how do they put trust and judgement as one of their personal values in evaluating information? It is interesting to know how library and information students build trust and pass judgement on family and friends' interaction on social media.

The main objective of this study is to understand how the youth, specifically Hungarian LIS students, position themselves and react to social media posts of their close family and friends in times when misleading and biased information erroneously appears as part of their daily content. This study describes the strength or weaknesses of a connection between the youth and their close relationships on the bases of making judgements and putting trust as their personal values.

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Specifically, the research questions are the following:

1. How does the youth express their thoughts and emotions about political information in social media?
2. How do Hungarian LIS students use social media in online political participation?
3. How does social media political information affect the youth's trust and judgement when interacting with their close family and friends?

Theoretical Framework

In studying how shared political information coming from close relations considers the value of trust and judgement, it is imperative to review existing frameworks that support this view. Koranteng et al. (2020) believe that the "formation of trust is informed by individual's beliefs and values which are often guided by culture". Our current cultural experiences are highly influenced by technological advancements in communication and information sharing. Thus, the value of kinship and friendship with the help of social media stabilizes and improves satisfaction, commitment, and intimacy as they continue to stay virtually connected with one another (Taylor, Zhao, & Bazarova, 2021). As the youth explore social networks in their almost adult life, the social capital theory applies social relationships in a system of trust and reciprocity that facilitates productive activity (Krishen, Leenders, Muthaly, Ziłkowska, & LaTour, 2018; Coleman, 1988).

Review of Related Literature

A study on trust formation and judgement among young people was conducted by Rowley, Johnson, and Sbaffi (2015). They stated that credibility is the most favored characteristic of giving trust. Credible information cannot be easily identified when someone consumes them online. The production and publishing of political information are easily shared by online media, and anyone can be exposed to this information at any time. It is also inevitable that political engagement is unavoidable due to the possible social interaction that may happen online (Ekström & Shehata, 2018). However, it is one's choice how to engage online. Some may read comments which continue to be a private activity and some may actively post comments which become a public activity. Today's generation is adept at the transformation of online communication particularly of social media. The online space has nurtured the youth's political identities and the way they source information (Vromen, Xenos, & Loader, 2015). Social media is a platform for the youth to share their thoughts, opinions, and personal comments (Khan et al., 2019).

It is also argued that having social media account does not mean that youth should join political organizations represented online. Yet, they can immerse themselves through access of information while enhancing their expressive behavior by sharing their political views at their own will. The youth's way of social interaction can also be thought of as an extension of their offline lives (Vromen, et al., 2015).

Conversations among family and friends do not stop in face-to-face interactions. Friends update each other on social media by sharing recent information about their lives. In some cases, family members who are away from each other also receive information when their kins start sharing the latest status and other personal content that may seem like a surprise to them. Regardless of the reason for sharing, everyone is entitled to fully express themselves online with caution.

How we deal with information on social media affects the way we think, act and engage depending on where the information is coming from. The trust or mistrust and credibility given to

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the information are based on who shared it. In interpersonal relationships, we judge based on trust. Before a person opens and becomes honest with another individual, perceived trust takes place. Toma (2014) added that in building relationships either professional or personal we allow the trust to happen even before we approach or avoid others.

Methodology

A set of Library and Information Science students from one higher education institution in Hungary was requested to partake in a digital civic engagement study. The research surveyed the social media engagement of the participants with close family and friends at a crucial moment in Hungarian history where Parliamentary elections happened in April 2022. The survey which was prepared in Hungarian language was sent to 197 students. It received 84 complete responses and one of them did not finish the questionnaire. A total of 43% participated in this research.

The study employed a quantitative approach using numerical data to describe and measure the mean and standard deviation.

Selection

A mix of undergraduate and graduate students at the master's level (ages 18-25) were the respondents in this study. Quota or convenience sampling was applied in this study and participation was purely voluntary. A link to the online questionnaire was sent to all the potential participants.

Data Collection

The online survey as a tool for data gathering aims to document and analyze Hungarian LIS students' civic participation in the conduct of Hungarian parliamentary elections. The survey was distributed using Google forms in March 2022. The survey focused on their utilization of social media and their behavior while engaging with people and information while they are online. Data will reveal their political participation experiences, the strength of trust, and perceived judgement in the social media environment.

Data Analysis

The results provided an overview of how select library and information science students behave and interact online given that trust and judgement are at risk when people engage online. To measure the frequency, a 5-point Likert scale containing the options always, very often, sometimes, rarely, and never was used. The results of the survey were tabulated, getting the mean and standard deviation, and encoded using IBM SPSS v.28. A total of 84 students (43%) accomplished the survey from a possible population of 197.

Results

Below are the results of the study. 85 students attempted to answer the online questionnaire but only 84 completed the survey.

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Ön használja a Facebookot?

85 responses

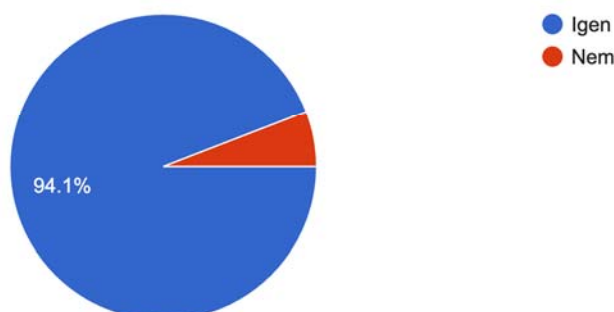


Fig. 1. Do you use Facebook?

Undeniably, many LIS students use Facebook as a means to contact and communicate with their family and friends.

Students were asked about their political information activities online. Below are the results.

I posted or shared something (status, meme, link...) concerning the upcoming national elections in a closed Facebook group.

Table 1

Posting or sharing a status

Never	Rarely	Sometimes	Often	Always
89.3%	3.6%	1.2%	2.4%	3.6%

Most Hungarian youth are not actively involved in any political communication as 89.3% of them do not post or share any status, memes, or links connected to politics and political information in social media (Table 1).

When my immediate family members share, post, like, or comment on something that I believe contains biased, fake, or misleading information, I call them out and talk to them.

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Table 2

Calling out family members

Never	Rarely	Sometimes	Often	Always
32.1%	11.9%	15.5%	17.9%	22.6%

Hungarian youth calls out their family members when they share, post, like, or comment on political information that contains misleading information or fake news. However, only 22.6% (Table 2) answered always and there is more youth who never calls out their family members as recorded by 32.1%.

When my close friends share, post, like, or comment on something that I believe contains biased, fake, or misleading information, I call them out and talk to them.

Table 3

Calling out close friends

Never	Rarely	Sometimes	Often	Always
28.6%	16.7%	19%	22.6%	13.1%

More Hungarian youth do not call out their close friends when they share, post, like, or comment on political information with fake news or misleading information. Only 13.1% do this with their close friends (Table 3).

Participants were asked to rate their answers using a Likert scale with the following legend: 1 = never; 2 = rarely; 3 = sometimes; 4 = often; 5 = always.

Table 4

Likert scale evaluation criteria

Score interval (Mean)	Evaluation criteria
1.00 - 1.79	Very low level
1.80 - 2.59	Low level
2.60 - 3.39	Medium level

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3.40 - 4.19	High level
4.20 - 5.00	Very high level

The evaluation and interpretation criteria for Likert scale questions (Table 4) was derived from Çelik and Oral (2016).

Table 5

Value of Trust

Statement	Mean	Standard Deviation
I trust my family even if they share, post, like, or comment on a different view or perspective that is against mine on social media.	4.059	1.144
I trust my friends even if they share, post, like, or comment on a different view or perspective that is against mine on social media.	3.857	1.131
I trust other people even if they share, post, like, or comment on a different view or perspective that is against mine on social media.	2.654	1.227

Three questions were asked to identify the level of trust given by the youth to their close family, friends, and others. Table 5 shows that the youth give a high level of trust (4.059) to their family members even if they share, post, like, or comment on something that is different from their point-of-view in social media. They also give a high level of trust in their close friends (3.857) and a medium level of trust to other people (2.654).

Table 6

Judging Others

Statement	Mean	Standard Deviation
I judge my family based on what they share, post, like, or comment on social media.	1.476	0.950
I judge my friends based on what they share, post, like, or comment on social media.	1.738	0.995
I judge other people not related to me based on what they share, post, like, or comment on social media.	2.428	1.174
I do not judge anyone based on what they share, post, like, or comment on social media.	3.380	1.240

Four questions were asked to identify how the youth judges their close family, friends, and others. Part of the question asks if they do not judge at all. Table 6 summarizes the mean and standard deviation of how the youth make judgements based on their social media posts.

Results showed that youth have a low level of judgement towards close family with a mean of 1.476, followed by friends with a mean of 1.738, and other people with a mean of 2.428 when they share information or interact on social media. Moreover, they recorded a medium level of judgement in one of the categories, *not judging anyone* with a mean of 3.380 based on what they share, post, like, or comment on social media.

Discussion

The primary reason for using Facebook by LIS students is to contact and communicate with family and friends. Students also mentioned that they use Facebook to interact with a larger network of people and to be updated with all sorts of news. Very few of them shares posts of others.

Action and engagement among the youth depend on who they trust. While they use social media particularly Facebook most of the time, they feel they should remain silent to actively participate even in social media. Trust is a major factor in valuing information shared online. This

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is the same as how the youth perceive credible information when shared by close family and friends. They strongly believe that close family and friends are responsible individuals which gives clearance to them to share all kinds of information on social media. Judgement is derived from how we act responsibly as individuals. In this study, judgement comes after a person shares and interacts online.

Personal ties built on a strong foundation will affect how information is communicated online and on social media. As personal relationships flourish in social media, personal ties continue to bond stronger (Chambers, 2013). The youth of today represented by students remain to trust their family members and will solve the issues immediately in case false information is shared. No negative perception will prevail, and it is highly likely that they will not judge their parents or siblings for sharing false information as they will try to correct the misinformation. As Toma (2014) argued we allow trust to happen even before we approach others. This familial trust is sealed.

Conclusion

Hungarian youth possess a low expressive engagement since they are less participatory in expressing opinions on social media. They also have a low level of judgement with family members and close friends. This translates to giving high value to recognizing freedom of expression. High trust is given to family and friends as strong relationships are built on trust.

Social capital is characterized by strong bonds and maintains reciprocity however the flow of information is not diversified and thus cannot express freely. Trusting other people on social media is an issue as most young people do not trust others online. Political participation is voluntary and practically nil since engagement with political information in social media is rare/low.

It is recommended that validation through interviews is needed to produce conclusive statements.

REFERENCES

- Albert, F., & Dávid, B. (2018). Interpersonal relationships in Hungary—an overview. *Metszetek*, 7(2), 72-93. doi: <http://dx.doi.org/10.18392/metsz/2018/2/6> (in English)
- Blokker, P. (2013). *New democracies in crisis? A comparative constitutional study of the Czech Republic, Hungary, Poland, Romania and Slovakia*. New York, NY: Routledge. Retrieved from <https://www.routledge.com/New-Democracies-in-Crisis-A-Comparative-Constitutional-Study-of-the-Czech/Blokker/p/book/9781138956414> (in English)
- Çelik, G. T., & Oral, E. L. (2016). Big five and organizational commitment—the case of Turkish construction professionals. *Human Resource Management Research*, 6(1), 6-14. Retrieved from <http://article.sapub.org/10.5923.j.hrmr.20160601.02.html>
- Chambers, D. (2013). *Social media and personal relationships: Online intimacies and networked friendship*. Basingstoke, UK: Palgrave Macmillan. Retrieved from <https://eclass.uoa.gr/modules/document/file.php/MEDIA310/Chambers-SocialMediaPersonalRelationships.pdf> (in English)
- Coleman, J. (1988). Social Capital in the creation of human Capital. *American Journal of Sociology*, 94(Suppl.), S95-S120. Retrieved from <https://faculty.washington.edu/matsueda/courses/587/readings/Coleman%201988.pdf> (in English)

THE CONTRIBUTION OF THEORY AND RESEARCH TO THE TRANSFORMATION OF LIBRARIES

- Ekström, M., & Shehata, A. (2018). Social media, porous boundaries, and the development of online political engagement among young citizens. *New Media & Society*, 20(2), 740-759. doi: <https://doi.org/10.1177/1461444816670325> (in English)
- Gerber, A. S., Huber, G. A., Doherty, D., & Dowling, C. M. (2012). Disagreement and the avoidance of political discussion: Aggregate relationships and differences across personality traits. *American Journal of Political Science*, 56(4), 849-874. doi: <https://www.jstor.org/stable/23317162> (in English)
- Khan, M. Y., Javeed, A., Khan, M. J., Din, S. U., Khurshid, A., & Noor, U. (2019). Political participation through social media: Comparison of Pakistani and Malaysian youth. *IEEE Access*, 7, 35532-35543. doi: <https://doi.org/10.1109/ACCESS.2019.2904553> (in English)
- Koranteng, F. N., Wiafe, I., Katsriku, F. A., & Apau, R. (2020). Understanding trust on social networking sites among tertiary students: An empirical study in Ghana. *Applied Computing and Informatics, ahead-of-print*. doi: <https://doi.org/10.1016/j.aci.2019.07.003> (in English)
- Krishen, A. S., Leenders, M. A., Muthaly, S., Ziółkowska, M., & LaTour, M. S. (2019). Social networking from a social capital perspective: a cross-cultural analysis. *European Journal of Marketing*, 53(6), 1234-1253. doi: <https://doi.org/10.1108/EJM-12-2016-0892> (in English)
- Matuszewski, P., & Szabó, G. (2019). Are echo chambers based on partisanship? Twitter and political polarity in Poland and Hungary. *Social Media + Society*, 5(2), 2056305119837671. doi: <https://doi.org/10.1177/2056305119837671> (in English)
- Medve, F. (2022). *Social media usage in Hungary – statistics & facts*. Statista. Retrieved from https://www.statista.com/topics/6592/social-media-usage-in-hungary/#topicHeader__wrapper (in English)
- NMHH (2022). *Internetes közönségmérés adatok (2022. I. negyedév)* [Internet audience measurement data]. Retrieved from https://nmhh.hu/cikk/228634/Internetes_kozonsegmeresi_adatok_2022_I_negyedev (in Hungarian)
- O'Neill, A. (2022). *Hungary – statistics & facts*. Statista. Retrieved from <https://www.statista.com/topics/2459/hungary/#dossierKeyfigures> (in English)
- Oross, D., & Szabo, A. (2018). Youth democratic practices in four European countries. *International Journal of Humanities Social Sciences and Education*, 5(3), 124-135. doi: <http://dx.doi.org/10.20431/2349-0381.0503013> (in English)
- Rowley, J., Johnson, F., & Scaffi, L. (2015). Students' trust judgements in online health information seeking. *Health Informatics Journal*, 21(4), 316-327. doi: <https://doi.org/10.1177/1460458214546772> (in English)
- Scroope, C. (2017). *Hungarian culture: Family*. Retrieved from <https://culturalatlas.sbs.com.au/hungarian-culture/hungarian-culture-family> (in English)
- Szentpéteri, I. (n.d.). *Brave New Hungary: The Anatomy of Fake News on Social Media*. CMDS. Retrieved from <https://cmds.ceu.edu/brave-new-hungary-anatomy-fake-news-social-media> (in English)
- Taylor, S. H., Zhao, P., & Bazarova, N. N. (2021). Social media and close relationships: a puzzle of connection and disconnection. *Current Opinion in Psychology*, 45, 101292. doi: <https://doi.org/10.1016/j.copsyc.2021.12.004> (in English)
- Toma, C. L. (2014, June). Counting on friends: Cues to perceived trustworthiness in Facebook profiles. In *Proceedings of the Eighth International AAAI Conference on Weblogs and Social Media*. (pp. 495-504). Association for the Advancement of Artificial Intelligence. Washington, DC. Retrieved from <https://www.aaai.org/ocs/index.php/ICWSM/ICWSM14/paper/view/8044/8150> (in English)

THE CONTRIBUTION OF THEORY AND RESEARCH TO THE TRANSFORMATION OF LIBRARIES

Vegetti, F. (2019). The political nature of ideological polarization: The case of Hungary. *The Annals of the American Academy of Political and Social Science*, 681(1), 78-96. doi: <https://doi.org/10.1177/0002716218813895> (in English)

Vromen, A., Xenos, M. A., & Loader, B. (2015). Young people, social media and connective action: From organisational maintenance to everyday political talk. *Journal of Youth Studies*, 18(1), 80-100. doi: <https://doi.org/10.1080/13676261.2014.933198> (in English)

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Цифрова громадянська активність та участь молоді: погляд угорських студентів з бібліотечно-інформаційних наук на політичну інформацію

Мета. Дослідження має на меті виявити, як угорські студенти з бібліотечно-інформаційних наук використовують соціальні медіа для вираження своїх демократичних дій та як політична інформація в соціальних мережах впливає на довіру й судження молоді під час спілкування з близькими родичами та друзями в інтернеті. **Методи.** У дослідженні використовувався кількісний підхід для визначення рівня залученості учасників дослідження до соціальних мереж їхніх близьких родичів та друзів. У цьому дослідженні була застосована зручна вибірка (студенти бібліотечних та інформаційних наук, університет, Угорщина), і всім потенційним учасникам (197 студентам) було надіслано онлайн-анкету. **Результати.** Всього в дослідженні взяли участь 43 %. Молодь дуже довіряє членам своєї родини та близьким друзям, навіть якщо вони розповсюджують, публікують, лайкають або коментують щось, що відрізняється від їхньої думки в соціальних мережах. Крім того, молодь має низький рівень критики, коли йдеться про родину та близьких друзів. **Висновки.** Політична участь серед молоді є добровільною, а активність стосовно політичної інформації в соціальних мережах є рідкісною/низькою.

Ключові слова: активність; участь молоді; соціальні медіа; політична інформація; Угорщина

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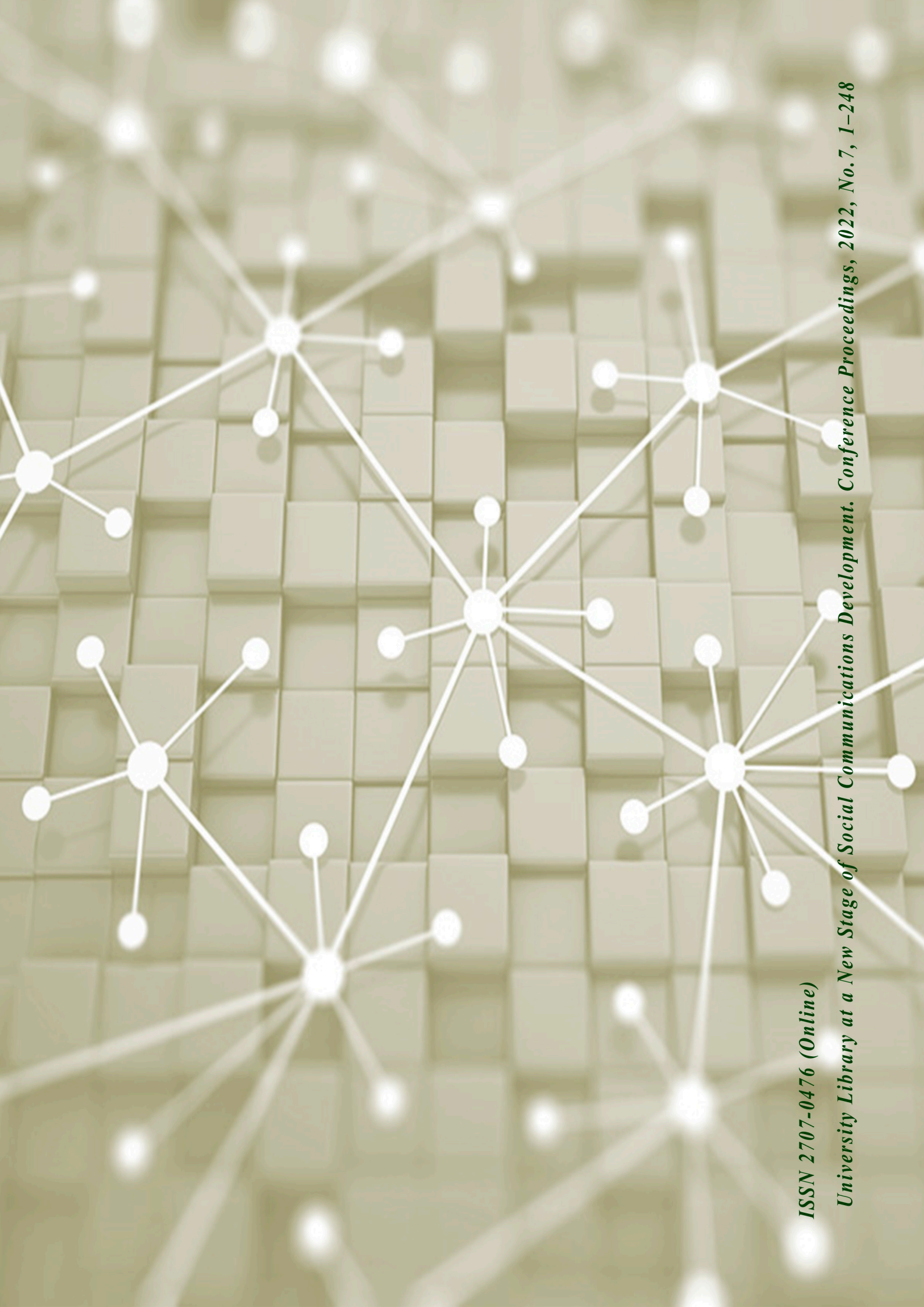
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