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Prospects for the implementation of the concept of digital citizenship in scientific libraries

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Abstract. The relevance of the research problem is determined by the active development of the digital society, which requires the formation of new forms of civic participation of the generation of the digital age, and Scientific libraries as leading information and communication institutions of society play a significant role in forming the value foundations of the worldview of modern youth as citizens of the digital age. The purpose of the article was to determine the prospects for the implementation of the concept of digital citizenship in scientific libraries. The research methodology was based on a combination of source analysis, comparative analysis, dialectical, systematic and logical methods of scientific research. As a result of the conducted research, it was stated that the representatives of the digital generation in the socio-communication aspect are an independent, critical, socially active community, formed thanks to the active use of the Internet and social media for obtaining information and communication. The characteristic features of the worldview of a "digital person" include fluency in digital and information-analytical technologies, speed of search and perception of new information, short attention span, giving preference to visualized information, brevity of presentation, "clip-like" perception. It is the character of the "digital person" that defines the reader not of the future, but of the present, because the generation of 20-30-year-olds is the first generation that was born in the digital world and can no longer imagine life without the mobile Internet and various gadgets, which necessitates the global transformation of traditional forms of work of libraries in the direction of active use of digital technologies. The work emphasized that university libraries should provide progressive education based on the expansion and deepening of digital competences of users, taking into account moral and ethical, socio-legal and psychological factors. The implementation of the concept of digital citizenship necessitates active digitization of library funds, expansion of the spectrum of virtual products and services, as well as active positioning of the library's activities in social networks. Prospects for further research consist in the expansion and deepening of practical recommendations for the formation of the concept of digital citizenship by means of library practices

Keywords: digital person; digital generation; digital reader; scientific libraries of higher education institutions; digital age; knowledge service

Introduction

In the digital age of global information challenges, the knowledge society's defining feature is the maximum use of the individual's intellectual potential for further self-improvement. The contemporary digital transformations presented a powerful challenge to modern libraries, as the global qualitative leap in information

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resources development led to the creation of a fundamentally new axiological orientation system, where the main actor is the "digital person". New digital technologies, which integrate into the social relations established formats, create unlimited possibilities in choosing the means for constructing self-identity. Modern young students are the digital generation representatives, formed in the context of active network technologies development, for whom lifelong learning is becoming a crucial necessity, so successful higher education institutions' academic libraries development largely depends on its ability to quickly respond to the changing environment challenges. In the above context, the problem of the scientific libraries' role in shaping the values of the modern youth worldview as the digital age citizens require additional attention.

To reveal the digital generation's essential features, it is worth noting S. Pichler *et al.* (2021) scientific researches, who focused on analysing the social and technological features of the Internet generation formation, its information and communication advantages. The authors highlight that easy access to technology makes the digital generation representatives more individualistic in learning, interpersonal interaction and communication, while the technology self-sufficiency has made learning through video, social media and search an independent activity; they usually communicate through emojis, symbols, images, videos and reactions to messages, digital productivity tools that allow instant feedback can be useful, especially on mobile devices. The digital generation has a lower tolerance for inequality as they have experienced a greater cultural perspectives diversity.

A. Munsch (2021) focuses on the digital generation psychological and communicative features: they interact with the world differently due to early exposure to technologies that are used to solve repetitive tasks that form the basis of learning and social participation; they are able to perform several tasks online simultaneously; the digital generation spends a significant amount of time on social media sites.

G.A. Talmon (2019) reveals the peculiarities of young people interaction with online content; in particular, the author emphasises that the digital generation representatives have a more pragmatic view of the world, which is manifested in a higher prevalence of risk aversion, financial frugality and the expectation of working harder than the preceding generation. M. Benítez-Marquez *et al.* (2022) based on a large scientific publication body analysis, identify the peculiarities of the scientific research dynamics on the digital generation psychological traits that differ from their predecessors, in particular, their professional preferences, career prospects perceptions, attitudes towards leadership, etc. The authors note the need for further development of various aspects related to the generation and the labour market, as the study shows a clear focus on management and generational diversity in the workplace.

In the last decade, the world scientific community has been actively discussing the issue of digital citizenship, which is aimed at creating a safe and comfortable humanity coexistence, taking into account the digital age challenges. The detailed content of the digital citizenship components is presented in N. Cem Dedebali & I. Dasdemir (2019), who note that the digital citizenship concept refers to the level of a person responsibility for the proper digital tools use, so everyone is a digital citizen in a certain sense. The digital age is abolishing borders across the globe, and for this reason, citizenship in the digital world does not necessarily mean adherence to the norms and ethical code of only one nation; citizenship requires global norms and rules that embrace the entire world.

S. Cortesi *et al.* (2020), based on the international regulatory framework analysis, consider digital citizenship as the ability to participate actively, continuously and responsibly in communities (local, national, global, online and offline) at all levels (political, economic, social, cultural and intercultural). The authors admit the need to use and broaden the term "digital citizenship", in particular, in terms of civic and political participation, active social position in social networks.

M. Saputra & I.H.A. Siddiq (2020) emphasise that the rapid technological and communication development has given a rise to a new world order that has affected all aspects of citizens' lives. This new world order is shaped by social media; the social media emergence has certainly brought both positive and negative consequences that have automatically caused disruptions in citizens' behaviour. Due to these media, the mobility of citizens' lives has accelerated, and the interaction between them has almost no borders, which necessitates the study and implementation of the digital citizenship concept.

The digital generation issue has also become a scientific focus for Ukrainian researchers. In particular, O. Dzoban (2021) focuses on the digital age worldview guidelines, and proposes the digital person definition as the newest human development stage, the main object and subject of information relations in the information society at the last stages of its development; a postmodern type of intelligent person capable of processing information, creating new information phenomena, relationships and structures. O. Ovcharuk (2020) distinguishes in the digital citizenship concept its active social position. S. Berezhna & O. Korobkina (2023) focus on the library collections digitisation, taking into account the new requirements of the digital age readers.

Consequently, the established Ukrainian and world scientific experience makes it possible to define the purpose of the study – to determine the prospects for implementing the digital citizenship concept in scientific libraries. The research problem is revealed in the following tasks: to clarify a "digital person" defining features that forms the "digital reader" figure of a modern library; to determine the "digital citizenship" concept specifics in the scientific libraries' activity context; to study the

main directions of higher education institutions scientific libraries activity in implementing key aspects of digital citizenship among students.

Materials and Methods

Methodological basis of the study: The heuristic method was used in the searching process for the study source base. The dialectical method application allowed to identify key trends in the understanding of such concepts as "digital person", "digital generation", "digital citizenship", "digital reader", etc. The formal and logical method helped to establish logical relationships between the study key concepts; the mentioned method helped to identify the key assumptions and logical patterns underlying different approaches to digital citizenship; and also contributed to the logical relationships and structures disclosure in the interaction of users with digital resources of scientific libraries, which is important for understanding and improving digital citizenship. An important research method was the systematic method, which was used for a better understanding the digital citizenship specifics as a holistic system of interconnections of its key categories in the moral, ethical, social, legal and psychological aspects. The comparative analysis allowed to identify important trends and differences in the digital citizenship levels; at the same time, this method was used to compare various theoretical concepts, provisions and interpretations available in the contemporary literature on the digital citizenship issue. The classification and typology method allowed to identify the scientific library leading tasks in the context of introducing knowledge services for the digital age readers.

The world and Ukrainian scientific thought representatives works, which can be grouped into several main content blocks serve the theoretical basis of the study. The first works block is devoted to the worldview understanding of the "digital person" problem and is represented with studies analysis by A.J. Nicholas (2020), M. Benítez-Márquez *et al.* (2022), B. Barhate & K.M. Dirani (2022), which highlight the digital reader key features – technological efficiency, mobility, online resources active use, audio and video content. The second study block focuses on digital citizenship essence phenomenon analysing, various aspects of which are revealed in the studies of N. Cem Dedebali & I. Dasdemir (2019), O. Dzoban (2021), G. Öztürk (2021), F. Martin *et al.* (2019), M. Choi & D. Cristol (2021), L. Pangrazio & J. Sefton-Green (2021). On their basis, the digital citizenship content, its moral, ethical, legal, technological and security components are analysed. The third research block is devoted to the higher education libraries main activity directions in the digital citizenship key aspects implementation among students, in particular, by means of the source base: K. Schwertner (2017), M. Walters *et al.* (2019), A. Harris & A. Johns (2020), S. Berezhna & O. Korobkina (2023), M.P. Maksum *et al.* (2023), etc. On these grounds, the role of free access to digital resources in the information skills and media literacy development is highlighted, the significance of supporting students in working with digital tools and technologies is determined, such as search engines, electronic editors, databases, etc.; the scientific libraries role in conducting education and training in digital and media literacy, critical thinking skills development is described.

Results and Discussion

The "digital person" as a new reality in the academic libraries' activities

"Digital person" is a generalised term for the IGeneration representatives, the Internet generation, which is referred to in modern foreign literature by various names, such as iGen, Plurals, Founders, Pivotals and Homeland Generation. The generation, also known as post-millennials or Zoomers, has the following common features in their personal and social development, including full access to the Internet and social media, as well as their active use for information and communication. According to A.J. Nicholas (2020), the digital generation preferred communication modes are text messages and video reports, so creating a living learning environment will require creative approaches that combine social interactions, technology, and tasks that mimic real work situations or are community engagement projects.

A "digital person" worldview is characterised by the effective digital and information-analytical technologies use, the speed of finding and understanding new information, short attention span, preference for visualised information, conciseness of expression and the "clip" format quick perception. According to M. Benítez-Márquez *et al.* (2022), the generation information consumption is characterised by ethicality and openness in expression, which contributes to a better understanding of different types of people, cultures and nations. This broader perspective creates the conditions for enhancing intercultural understanding while remaining true to one's own values and goals.

Based on the scientific sources analysis, it is possible to characterise the youth of the digital generation by certain common parameters (Table 1).

Table 1. Digital generation features as library users in the digital age

Option	Specifics
age-related	date of birth, approximately covering 2000-2010
communicative	the predominant information source is online video, 95% of digital youth watch YouTube daily for educational information and entertainment
technological	smart devices ownership, daily interaction with digital content

Continued Table 1.

Option	Specifics
social	independence in own views, career growth orientation, active social position
psychological	ambitiousness and self-confidence; criticality in perceiving new information; realism in assessing events and phenomena, greater awareness and understanding about what is happening in the world
gaming	computer games are used constantly, not only for entertainment, but also for learning and self-development

Source: created by the author

B. Barhate & K.M. Dirani (2022) focus on the career transformation opportunities for the digital generation members, who seek to achieve functional competence and technical proficiency in their professional field. The digital generation envisages careers based on their self-image, self-awareness, relationships and motivation. They expect their managers to develop their leadership skills, influence their learning and support their career development through mentoring. Accordingly, the knowledge they obtain during their higher education will largely determine their motivation for further career development.

Consequently, a digital person is formed as a carrier and interpreter of a huge amount of information, but its quantitative volume is inferior to its qualitative assimilation. The "digital person" concept reflects not the future, but the present, as the generation aged 20 to 30 is the Zoomer generation, the first to be born in the digital world and cannot imagine life without mobile internet and various gadgets. It creates a need for a global transformation of traditional library methods towards the digital technologies active use. Digital generation youth are independent, critical thinkers, socially active, and focused on quick access to information and quick decision-making.

Specificity of the "digital citizenship" concept in the scientific libraries activity

Digital citizenship is the subject of various studies and policy analyses that define their respective qualifications. It involves understanding the digital world and its components, effectively using the various mechanisms of the digital environment, and following ethical rules that make technological behaviour socially acceptable when interacting with others. Similarly, as people need to learn how to be good citizens in their communities, they also need to understand the digital environment and tools ethics to be able to protect themselves, know their rights, develop their personalities and act wisely and responsibly in the digital world. The future belongs to digital citizens, so public policy should aim to reduce technological inequalities and disparities in society arising from age, race, ethnicity, income and education in order to achieve full digital participation (Milenkova & Lendzhova, 2021). In Western scholarship, the digital citizenship elements are considered in several main categories, including digital access, digital etiquette, digital law, digital communication, digital literacy, digital commerce, digital security, and digital health. Based on the analysis of scientific sources, it is possible to identify the substantive features of the digital citizenship categories (Table 2).

Table 2. Digital citizenship key categories

Category	Content features
digital access	Regulates equal opportunities for Internet access and social participation in the network environment
digital law	covers the international legal and regulatory framework governing the digital environment functioning
digital etiquette	defines a moral standard of behaviour system or procedures expected by other digital technology users
digital communication	refers to the electronic information exchange and the human capacity to invest in digital technologies by communicating with others
digital literacy	refers to a human capacity to use technology effectively, interpret and understand digital content, assess its reliability, and research and transmit information using appropriate tools.
digital commerce	identifies opportunities for the safe purchase and sale of goods online
artificial intelligence	characterises the understanding of the algorithms used in artificial intelligence-based platforms with which you interact
digital security	covers the protocols, policies and procedures that people use to ensure that their use of the Internet does not have a negative impact on other aspects of their lives
digital health	defines support for mental and physical well-being in the digital technologies world

Source: created by the author

M. Choi & D. Cristol (2021) have developed a digital citizenship model based on five complexity levels, such as technical skills, local/global awareness, networked engagement, critical perspective, and political engagement on the Internet. It helps to make the social relationship with technology more understandable and to promote emancipatory technological practices for social justice. L. Pangrazio & J. Sefton-Green (2021) note that digital citizenship is not only about fulfilling civic duties or being responsible, but also about how digital technologies facilitate new forms of participation that contribute to the civil society development. G. Öztürk (2021) describes the digital citizenship core elements content through three components: respect for oneself and

others, self-education and communication with others, and protection of oneself and others.

The technological component is an important part of digital citizenship. S. Cortesi *et al*. (2020) define digital citizenship as a set of skills necessary for young people to participate fully in the academic, social, ethical, political and economic spheres of a dynamic digital world. Digital skills are an integral part of digital citizenship and include operational skills for working with computers and the Internet, formal skills for navigating the Internet, information skills for evaluating and selecting information, strategic skills for achieving goals, content creation skills, and communication skills (Rui & Stefanone, 2013).

The rapid digital age development and network communications growth, both at the personal, corporate and global levels, leads to the blurring of international borders and emphasises the social and legal aspect of digital citizenship. Digital citizens need to be aware of the opportunities and risks in the digital world, and understand their rights and responsibilities in the online environment. Global citizens in the context of digital citizenship are people who have the ability to use the Internet for management, control, self- regulation and self-education. Proper and responsible use of digital technologies, as well as the ability to use them safely, is the standard. Law, responsibility and ethics must be recognised in the digital age, and the Internet must be used for political, economic and social and cultural participation for users, communities, countries and the world. A digital citizen is one who is aware of the thoughtful use of public spaces of the online community with the possibility of free expression, information sharing and access, including the personal sensitive information protection (James *et al.*, 2019; Mangkhang & Kaewpanya, 2021).

A. Al-Abdullatif & A. Gameil (2020) outline the following digital citizens characteristics: an understanding of humanistic, cultural and social issues related to technology; using legal and ethical behavioural practices; promoting safe, legal and responsible use of information and technology; demonstrating positive attitudes towards the use of technology that supports collaboration, learning and productivity; taking responsibility for their lifelong learning; commitment to intellectual honesty; respect for different cultures and societies in the virtual environments; and safeguarding personal information. The authors emphasise that the digital citizenship concept is closely linked to educational systems, as it helps educators understand what young people need to know in order to use technology appropriately. We support the position of these authors that a digital citizen is someone who uses the Internet regularly and effectively; digital citizens not only manage their actions but also their consequences and understand the risks and benefits of easy access to information.

Digital citizenship actualises the moral and ethical aspects of network technologies use, taking into account the values of not only one's own social community, but also the international community as a whole. U. Akcil & M. Bastas (2021) define a "digital citizen" as a person who knows how to use technology and digital devices that have become an integral part of their lives, shows respect for ethical rules and personal rights in the digital space, and knows how to use these devices safely and responsibly. Considering the actions that take place in the digital environment, citizens must understand their responsibility not only to the society in which they live, but also to the whole world.

Researchers in the global scientific community identify both advantages and disadvantages of digital citizenship. C. Erdem & M. Koçyiğit (2019) consider the virtual expansion of digital public space and civil society, increasing horizontal organisation and preventing bureaucracy as digital citizenship benefits, but they also point to risks associated with the digital environment, such as cyber fraud, cyberbullying, social media misuse, technology dependence, computer viruses and malicious content distribution.

Consequently, it is possible to state that digital citizenship behaviour enables people to continue their lives safely in the digital age. In the scientific libraries context, the digital citizenship most important factors are a combination of digital literacy, digital security, digital communication, and digital rights and responsibilities that determine the quality of the scientific library knowledge space.

Digital literacy skills in the university knowledge management system

It is essential to note that in the digital age, the technology development produces innovations that stimulate the accumulation of public goods. Considering the younger generation's high interest in digital tools, this means that a healthy sense of civic awareness is becoming widespread around the world. According to N. Cem Dedebali & I. Dasdemir (2019), one of the education system's tasks (which includes educational institutions scientific libraries) is to educate responsible citizens.

The academic library in modern higher education institutions is an online environment where three groups of subjects interact: students, teachers and librarians, and the digital education perspectives for these groups are different. Students are regarded as information users, teachers act as information competence trainers, and librarians are responsible for adapting and implementing information literacy standards. For "digital readers" T. Granchak (2019) proposes to distinguish a new type of library service as knowledge-based. In the scientific literature on modern information processes, the term "knowledge management" is increasingly used, which usually refers to systematic processes aimed at creating conditions for identifying and producing knowledge, preserving it, and using it effectively. Accordingly, knowledge services contribute to the knowledge management process.

A. Kafashpoor *et al.* (2013) define four processes in the knowledge management system, such as acquisition (assimilation of the latest knowledge from external sources), evaluation (activities and practices that make current knowledge more useful), application (actual use of knowledge) and protection (actions taken by the organisation to protect its internal knowledge and prevent its illegal and improper use). In this process, libraries act as information intermediaries that provide access to information and contribute to the optimisation of universities activities. In the educational space, the library functions are focused on information support for knowledge management, that is, expanding scientific research activities; creating conditions for improving the professional development system, both internal (self-study, consulting, practice, training) and external (internships); creating an electronic knowledge base as the collective intellectual potential and corporate memory reflection; labour market analytics with further advanced ideas involvement to improve professional competences.

As noted by O. Voskoboynikova-Guzeva & N.M. Tereshchenko (2021), in the field of education, higher education institutions libraries are becoming key components of the social and communication structure of society. They not only store book collections, but also create a global social communication network that promotes education and self-education. In this context, contemporary libraries priority values are the joint search for knowledge, stimulating cooperation, organising leisure and lifelong learning.

The "ubiquitous learning" concept reflects current trends in the educational process, where Internet technologies provide access to learning materials anywhere and anytime. This concept includes mobile learning development, which is based on mobile technologies use for education.

New educational trends are also affecting the main element of educational policy discourse around the world, the lifelong learning concept. Accordingly, those who seek to acquire or update knowledge can do so through massive open online courses that are one of the new forms of distance education that involves the online environment use as a space for studying various disciplines (The process of quality information support..., 2020). Considering the information age global challenges, librarians play a key role in coordinating these processes, having computer science knowledge, data archiving, copyright, cataloguing and information systematisation.

However, the digital skills and digital literacy concept is still new and poorly researched. The reason is that these skills are based on rapidly changing technologies, which makes it difficult to define precise criteria and requires constant adaptation to new practices. For this reason, the academic literature considers digital skills as a dynamic concept that is constantly being revised in the light of information technology and artificial intelligence development.

Digital literacy in the library sector is a set of knowledge and skills that allow people to use information effectively, in particular on the Internet, taking into account ethical principles and the ability to evaluate this information. It is important that citizens have these skills to use technology appropriately, which will contribute to their critical thinking and social and cultural development (Saputra & Siddiq, 2020).

The team of authors B.U. Zan *et al.* (2021) propose a twofold digital literacy understanding for both library users and librarians. In the university libraries context, which is actively transforming into digital libraries, digital literacy is a key indicator of user satisfaction with library services. Digital literacy is defined as the users' awareness, attitude and ability to effectively use digital tools to identify, access, manage, evaluate and analyse information. University libraries, as leading institutions in this area, should actively promote the digital literacy development among students, and librarians should be leaders in this process by providing progressive training programmes and resources. Consequently, university libraries should provide progressive learning that is appropriate at all levels in the access to academic information context, taking into account the digital literacy skills and differences of their users. Librarians also need to be equipped with digital literacy skills to fulfil this task.

The higher education institutions research libraries main activities in the realisation of digital citizenship key aspects among students

Digital literacy is a digital citizenship key component, and one area of collaboration between academic libraries and the academic community is to educate students as responsible digital citizens. Although digital citizenship is a fairly new concept, it is very important in our globalised virtual world. It involves not only the competent technology use, but also the responsible and ethical use of the Internet. Accordingly, librarians have an obligation to their institutions to inform broader curriculum discussions on digital literacy in their efforts to provide a quality educational experience for higher education students, as digital literacy is the foundation and basis for information technology and digital technologies use. Librarians have a great responsibility in educating students in this area, providing them not only with access to information resources, but also with skills and knowledge about safe and ethical use of the Internet. To achieve this goal, as noted by V. Voronkova *et al.* (2023), safety, cognitive and moral and ethical principles can be used, including careful information sharing, awareness of fake news spreading possibility, important information preservation, as well as personal data protection and positive information dissemination.

Digital security precautions are also an important part of digital citizenship. This includes the application of policies, procedures and technologies to ensure that users remain protected online. Good digital security

requires purchasing and installing virus protection, backing up important data, and using only safe online resources according to M. Walters *et al*. (2019). Accordingly, librarians play a key role in fostering digital literacy and digital safety among students so that they can become responsible and competent participants in the digital world. Effective knowledge management underpins organisational performance and enables organisations to realise the value of human capital. At the cognitive level, the knowledge management culture involves mobilising intellectual potential and changing the way of thinking, creative activity; at the managerial level, it involves the use of analytics and innovative leadership; at the technological level, it involves the active use of the latest information technologies (Lomachinska & Lomachinskiy, 2022).

Defining a library user in a broad sense, as an individual or legal entity accessing library services, opens up opportunities for improving services in the digital age. Taking into account the modern digital citizen characteristics, which include digital literacy, digital skills and conscious use of the Internet, it is possible to identify library users' key aspects, such as digital literacy, including fluency in digital technologies, regular and safe use of the Internet, conscious understanding of their digital rights and responsibilities for creating and using digital content, and adherence to digital etiquette in the virtual environment.

Knowledge resources digitisation is becoming an important element of technological development in knowledge management. However, according to K. Schwertner (2017), the main challenge is not technology, but the human factor, including cultural traditions, employee resistance to changes, and other factors. A shift in organisational strategy towards innovation can help address these challenges.

Along with the technical services landscape changing, university research libraries have moved towards greater collaboration with users, and distance education programmes require electronic access to library resources. In the humanities and social sciences, the need for access to primary sources is growing, so the digitalisation of national cultural heritage is becoming an issue in the context of implementing the basic digital citizenship principles. According to S. Berezhna & O. Korobkina (2023), the main library digitalisation benefits include quick and convenient access to information for library users without time and geographical restrictions; preservation and updating of library resources in electronic format; expanding the range of library services; improving the availability and usability of library resources, which contributes to improving the quality of user service; open access to digitised rare and valuable publications.

Historically, libraries have become one of the key places for acquiring cultural capital and, in the modern information age context, perhaps one of the most powerful means by which the state can overcome information inequality. The library resources digitisation is transforming the working practice with textual arrays and requires users to be flexible in choosing the necessary resources and to have the skills to search for information that meets their research objectives (Lomachinskyi, 2023).

Western researchers emphasise the benefits of using e-books by students, which has an impact on improving learning achievements. In particular, M. Maksum *et al*. (2023) note that a person's learning achievements begin with direct (concrete) experience, in this case, reading e-books independently with the help of information technology. Consequently, digital literacy with a clear source base can qualitatively improve the level of students' learning achievements, in particular, when searching for information.

The 21st century citizens, shaped by technology availability and unlimited digital access, tend to think and act differently from the previous generation. Almost all of their lives are spent in a time that requires a certain competence if they are to survive in the digital age. The digital age citizens live on both sides of the technological blade, if they can use it properly, they will have an easy life, and if they cannot use it properly, it will have a negative impact on their lives. Information flow makes life skills necessary for their life order to include critical and creative thinking and worldviews that influence social and cultural life that is safe and supportive (Saputra & Siddiq, 2020).

Access to social platforms through Internet technologies has allowed young people in the digital age to document almost every aspect of their daily lives, present themselves and manage social relationship online, communicate with friends who are part of their social network and from any part of the world, stay up-to-date with what is happening, interact with other cultures without time constraints, and access information that contributes to research and learning. Summing up the above theoretical analysis, it is essential to pay attention to the scientific discussion on the content, specificity and peculiarities of implementing the digital citizenship concept in the modern library practices context. The scientific approaches to the content of the digital citizenship categories in the world scientific thought are mainly determined by social and legal, security, and moral and ethical factors, which directly affects the peculiarities of the scientific libraries work with young people in the digital age.

According to A. Harris & A. Johns (2020), digital citizenship transcends digital literacy and cybersecurity borders, empowering the younger generation not only to navigate their own online well-being, but also to develop the skills, knowledge and values necessary to become effective, ethical and safe users of information and communication technologies. From M. Walters *et al*. (2019) perspective, digital citizenship can be regarded as a set of skills and knowledge necessary for successful interaction in social media, where the boundaries between producer and consumer are blurred, and new ethical challenges and opportunities arise in the context

of public and private life. Digital citizenship encompasses responsible and ethical aspects of the technology use in all areas, including websites, open education resources and social media.

Digital citizenship definition, as proposed by L. Pangrazio & J. Sefton-Green (2021), emphasises its relationship with digital rights and digital literacy. Digital rights are understood as the human rights to access, use, create and publish digital content on various devices and in virtual spaces. The authors also note that digital rights are context-sensitive, including the software architecture and digital platforms business models. Digital citizenship, digital rights and digital literacy, according to the authors, are the unifying "force" needed to create a value system in an increasingly complex digital world.

Digital citizenship implies an active social position. O. Ovcharuk (2020) distinguishes in the digital citizenship concept not only communication and technological skills (creating, publishing online content, searching and processing information, communicating and learning), but also social skills. This includes active and responsible participation in the value creation, knowledge and critical understanding, as well as the dignity and human rights protection. With the libraries support, higher education institutions should promote responsible digital citizenship among students. This will help to equip them with digital literacy skills and emphasise the constant search for knowledge for personal and professional growth. According to R.I. Odede & J. Glenrose (2019), the effective use of digital information resources by students is critical as it can improve the quality of their learning and their professional preparation. Consequently, digital literacy, which involves the ability to use technology to find, evaluate, create and transmit information, is becoming a vital necessity.

In addition to computer software and hardware practical knowledge, students also need to understand a wide range of applications such as word processing, presentations and web resources. Digital literacy encompasses the ability to perform successful digital activities in all aspects of their daily lives, including work, study and leisure. In recent years, the world has become much more connected due to technology exponential development, forcing technology users to learn how to become "digital citizens". In order to successfully implement digital citizenship concept in the educational environment, A.L. Phillips & R.L. Victor (2019) recommend to use digital citizenship instruction as a comprehensive learning strategy not only for students but also for teachers. These instructional materials help to teach the new literacy skills needed to interact online and require constant updating due to the dynamic nature of the digital environment, which includes social media and various platforms.

"Digital citizenship" concept is also widely discussed as a digital identity component that determines the degree of information culture proficiency in the digital age. In particular, F. Martin *et al.* (2019) emphasise the importance of digital identity formation among students, defining digital citizenship as the demonstration of appropriate and responsible behaviour in the digital technologies use. Digital identity refers to the perception of oneself and others in the context of online activities. According to the ISTE 2016 standards, students are expected to understand their digital actions consequences and manage their digital identity and reputation. Since digital identity includes beliefs and self-identity formation for healthy use of digital tools, educational institutions research libraries should create the preconditions for digital identity development among students.

Consequently, knowledge digitisation is consistent with modern digital citizenship development and contributes to quality library services provision. Library digitisation transforms the working practice with knowledge, making it more accessible and convenient for users. It also opens up new opportunities for learning and research, providing greater access to information for students and researchers. Digital literacy and information retrieval skills in combination are becoming key to successful learning and research. Accordingly, modern citizens, especially the younger generation, need to develop these skills to function effectively in the digital world.

Conclusions

Digital generation representatives, as digital readers, display peculiarities in various aspects: The information and communication aspect determines the speed of searching for and perceiving new information: digital readers quickly navigate the information space and quickly assimilate new data; they use the Internet and social media to obtain information, communication and cooperation. The technological aspect focuses on the active use of technology in working with information, as digital readers are open to using various technologies for education, self-education, and leisure. The psychological aspect reveals digital readers' specific psychological traits, such as short attention spans, quick switching from one source of information to another, preference for visualised information and concise presentation, and a tendency to perceive graphs, videos and short texts. The social aspect is manifested in a significant freedom of expression, with digital readers openly expressing their opinions and views online; actively interacting in social networks and other online communities; and tolerance of different forms of identity and different forms of personal expression in the online environment.

Digital citizenship implies an awareness of the digital world and its components, effective practices of using digital world mechanisms, and ethical rules that make a person's technological behaviour socially acceptable when interacting with others. In Western scholarship, digital citizenship elements are considered in several main categories, including digital access, digital etiquette, digital law, digital communication, digital literacy, digital commerce, digital security, and digital health.

Digital citizenship encompasses legal and ethical behaviour; advocacy for the safe, legal and responsible use of information and technology; and the active use of technology for collaboration, education and self-education. Digital citizens need to be aware of the opportunities and risks in the digital world, as well as understand their rights and responsibilities in the online world. Digital citizenship is seen as the appropriate, ethical and responsible use of technology by people, an effective way to prepare students for socially active participation in society and service to the nation's interests in the digital environment.

A research library in a modern higher education institution structure is an online environment which functions are aimed at ensuring the effective knowledge management functioning. Higher education institutions modern libraries are a global network of social communications, a space for education and self-education. Considering the contemporary young generations' qualitative characteristics, it is possible to identify the digital generations' priorities as library users: fluency in digital, information and analytical technologies, search speed and new information comprehension, an active Internet and social media use for information search and communication, self-confidence, criticality in perceiving information messages, and an active position in social media. University libraries should provide progressive learning based on the expansion and deepening of users' digital competences, taking into account moral and ethical, social and legal, and psychological factors. Libraries can provide education and training for students on media literacy, information evaluation, critical thinking, online safety, and other digital citizenship aspects. The digital citizenship concept implementation determines the necessity of active library collections digitisation, expanding the spectrum of virtual products and services, as well as active library activities positioning in social media. Academic libraries can support students in creating their own digital content, such as scientific articles, researches, videos, blogs, etc., which contributes to the development of their digital skills and creativity.

Prospects for further studies are to expand and deepen the practical recommendations for the digital citizenship concept formation by means of library practices.

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Conflict of Interest

None.

References

[1] Akcil, U., & Bastas, M. (2021). Examination of university students' attitudes towards e-learning during the COVID-19 pandemic process and the relationship of digital citizenship. *Contemporary Educational Technology*, 13(1), article number ep291. doi: 10.30935/cedtech/9341.

[2] Al-Abdullatif, A., & Gameil, A. (2020). Exploring students' knowledge and practice of digital citizenship in higher education. *International Journal of Emerging Technologies in Learning (iJET*), 15(19), 122-142. doi: 10.3991/ijet.v15i19.15611.

[3] Barhate, B., & Dirani, K.M. (2022). Career aspirations of generation Z: A systematic literature review. *European Journal of Training and Development*, 1-2, 139-157. doi: 10.1108/EJTD-07-2020-0124.

[4] Benítez-Márquez, M., Sánchez-Teba, E., Bermúdez-González, G., & Núñez-Rydman, S. (2022). Generation Z within the workforce and in the workplace: A bibliometric analysis. *Frontiers in Psychology,* 12, article number 736820. doi: 10.3389/fpsyg.2021.736820.

[5] Berezhna, S., & Korobkina, O. (2023). Digitization of the scientific library of ZVO: Current state and prospects. *Scientific Collegium: Scientific and Information Journal,* 3(111), 55-59.

[6] Cem Dedebali, N., & Dasdemir, I. (2019). Social studies teacher candidates' perception of digital citizenship. *International Journal of Educational Methodology,* 5(3), 465-477. doi: 10.12973/ijem.5.3.465.

[7] Choi, M., & Cristol, D. (2021). Digital citizenship with intersectionality lens: Towards participatory democracy driven digital citizenship education. *Theory into Practice,* 60(1), 1-17. doi: 10.1080/00405841.2021.1987094.

[8] Cortesi, S., Hasse, A., Lombana-Bermudez, A., Kim, S., & Gasser, U. (2020). *Youth and digital citizenship+ (plus): Understanding skills for a digital world*. Retrieved from https://cyber.harvard.edu/publication/2020/youth-and-digital-citizenship-plus.

[9] Dzoban, O. (2021). Digital man as a philosophical problem. *Informational Law,* 2(37), 9-11. doi: 10.37750/2616-6798.2021.2(37).238330.

[10] Erdem, C., & Koçyiğit, M. (2019). Exploring undergraduates' digital citizenship levels: Adaptation of the digital citizenship scale to Turkish. *Malaysian Online Journal of Educational Technology,* 7(3), 22-38 doi: 10.17220/mojet.2019.03.003.

[11] Granchak, T. (2019). Landmarks of library development in the environment of generation Z. *Ukrainian Journal of Library Science and Information Sciences*, 3, 20-34. doi: 10.31866/2616-7654.3.2019.169663.

[12] Harris, A., & Johns A. (2020). Youth, social cohesion and digital life: From risk and resilience to a global digital citizenship approach. *Journal of Sociology*, 57(4), 394-411. doi: 10.1177/1440783320919173.

[13] James, C., Weinstein, E., & Mendoza, K. (2019). *Teaching digital citizens in today's world: Research and insights behind the Common Sense K-12 digital citizenship curriculum*. Retrieved from https://pz.harvard.edu/resources/teaching-digital-citizens-in-todays-world.
[14] Kafashpoor, A., Shakoori, N. & Sadeghian S. (2013). Linking organizational culture, structure, Leadership Style, strategy, and organizational effectiveness: Mediating role of knowledge management. *Advanced Research in Economic and Management Sciences,* 10, 158-172.
[15] Lomachinskyi, B. (2023). Information culture in the library space: Challenges of digitization. *Library science. Documentary Science. Informatology*, 4, article number 7583. doi: 10.32461/2409-9805.4.2023.294077.
[16] Lomachinska, I., & Lomachinskiy, B. (2022). Culture of knowledge management at a modern university. In Ogneviuk, V. (Ed.). In *Quality of university education: Educological discourse* (pp. 190-210). Prague: Oktan Print.
[17] Maksum, M.P., Najmudin, N., & Sunarko, B. (2023). The effect of e-book use, digital literacy and availability of library book collections on learning achievement. *Soedirman Economics Education Journal*, 5(1), 55-65. doi: 10.32424/seej.v5i1.8275.
[18] Mangkhang, C., & Kaewpanya, N. (2021). The digital etiquette enhancing to global citizenship of social studies teachers in a new normal society. *Higher Education Studies*, 11(3), 89-94 doi: 10.5539/hes.v11n3p89.
[19] Martin, F., Gezer, T., & Wang, C. (2019). Educators perception of student digital citizenship practices. *Computers in the Schools: Interdisciplinary Journal of Practice, Theory, and Applied Research,* 36(4), 238-254. doi:10.1080/07380569.2019.1674621.
[20] Milenkova, V., & Lendzhova, V. (2021). Digital citizenship and digital literacy in the conditions of social crisis. *Computers*, 10(4), article number 40. doi: 10.3390/ computers10040040.
[21] Munsch, A. (2021). Millennial and generation Z digital marketing communication and advertising effectiveness: A qualitative exploration. *Journal of Global Scholars of Marketing Science*, 31(1), 10-29. doi: 10.1080/21639159.2020.1808812.
[22] Nicholas, A.J. (2020). Preferred learning methods of generation Z. *Faculty and Staff - Articles & Papers,* 74.
[23] Odede, I.R., & Glenrose, J. (2019). Exploring dimensional constructs of digital literacy skills for higher education. *Library Philosophy and Practice (e-journal).*
[24] Ovcharuk, O. (2020). Modern approaches to the development of a person's digital competence and digital citizenship in European countries. *Information Technologies and Teaching Aids*, 76(2). 1-13.
[25] Öztürk, G. (2021). Digital citizenship and its teaching: A literature review. *Journal of Educational Technology & Online Learning,* 4(1), 31-45. doi: 10.31681/ jetol.857904.
[26] Pangrazio, L., & Sefton-Green, J. (2021). Digital rights, digital citizenship and digital literacy: What's the difference? *Journal of New Approaches in Educational Research*, 10(1), 15-27. doi: 10.7821/naer.2021.1.616.
[27] Phillips, A.L., & Victor, R.L. (2019). Whose responsibility is it? A statewide survey of school librarians on responsibilities and resources for teaching digital citizenship. *School Library Research*, 22, 1-20.
[28] Pichler, S., Kohli, C., & Granitz, N. (2021). DITTO for Gen Z: A framework for leveraging the uniqueness of the new generation. *Business Horizons*, 64(5), 599-610 doi: 10.1016/j.bushor.2021.02.021.
[29] Rui, J., & Stefanone, M. (2013). Strategic self-presentation online: A cross-cultural study. *Computers in Human Behavior,* 29(1), 110-118. doi: 10.1016/j.chb.2012.07.022.
[30] Saputra, M., & Siddiq, I.H.A. (2020). Social media and digital citizenship: The urgency of digital literacy in the middle of a disrupted society era. *International Journal of Emerging Technologies in Learning (iJET)*, 15(7), 156-161. doi: 10.3991/ijet.v15i07.13239.
[31] Schwertner, K. (2017). Digital transformation of business. *Trakia Journal of Sciences*, 15(1), 388-393. doi:10.15547/tjs.2017.s.01.065.
[32] Talmon, G.A. (2019). Generation Z: What's next? *Medical Science Educator*, 29(1), 9-11. doi: 10.1007/s40670-019-00796-0.
[33] The process of quality information support for education and research in the university library: Recommendations for implementing the model. (2020). Retrieved from https://ela.kpi.ua/server/api/core/bitstreams/a408acb6-89d4-473a-9e66-725fd737b64f/content.
[34] Voronkova, V., Kivlyuk, O., & Andryukaitene, R. (2023). Evolution from active responsible citizenship to digital in the context of critical thinking: the experience of EU countries. *Humanities Studies*, 14(91), 23-34. doi:10.32782/hst-2023-14-91-03.
[35] Voskoboynikova-Guzyeva, O.V., & Tereshchenko, N.M. (2021). Value guidelines in the strategic development of libraries of higher education institutions. *Issues of Cultural Studies*, 38, 39-53. doi: 10.31866/2410-1311.38.2021.245578.
[36] Walters, M.G., Gee, D., & Mohammed, S. (2019). A literature review: Digital citizenship and the elementary educator. *International Journal of Technology in Education (IJTE)*, 2(1), 1-21.

[37] Zan, B.U., Çolaklar, H., Altay, A., & Taşkın, N. (2021). A study on digital literacy skills of faculty of letters students: Use of university library. *International Journal of Emerging Technologies in Learning (iJET)*, 16(1), 152-171. doi: 10.3991/ijet.v16i01.16567.

Перспективи реалізації концепції цифрового громадянства в наукових бібліотеках

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Анотація. Актуальність проблеми дослідження зумовлюється активним розвитком цифрового суспільства, що вимагає формування нових форм громадянської участі покоління цифрової доби, і Наукові бібліотеки як провідні інформаційно-комунікаційні установи суспільства відіграють значну роль у формуванні ціннісних засад світосприйняття сучасної молоді як громадян цифрової доби. Метою статті було визначення перспектив реалізації концепції цифрового громадянства у наукових бібліотеках. Методологія дослідження заснована на поєднанні джерелознавчого аналізу, компаративного аналізу, діалектичного, системного та логічного методів наукового дослідження. В результаті проведеного дослідження було зазначено, що представники цифрового покоління в соціально-комунікаційному аспекті – це незалежна, критична, соціально-активна спільність, що сформована завдяки активному використанню Інтернет та соціальних медіа задля отримання інформації і комунікації. До характерних особливостей світосприйняття «цифрової людини» належить вільне володіння цифровими та інформаційно-аналітичними технологіями, швидкість пошуку та сприйняття нової інформації, нетривалість концентрації уваги, надання переваги візуалізованій інформації, лаконічності викладу, «кліповість» сприйняття. Саме постать «цифрової людини» визначає читача вже не майбутнього, а сьогодення, адже покоління 20-30- річних – перше покоління, яке народилося в цифровому світі і вже не може уявити собі життя без мобільного інтернету та різноманітних гаджетів, зумовлює необхідність глобальної трансформації традиційних форм роботи бібліотек у напрямі активного використання цифрових технологій. В роботі підкреслено, що університетські бібліотеки повинні забезпечувати прогресивне навчання на основі розширення та поглиблення цифрових компетентностей користувачів з урахуванням морально-етичних, соціально-правових та психологічних чинників. Впровадження концепції цифрового громадянства зумовлює необхідність активного оцифрування бібліотечних фондів, розширення спектру віртуальних продуктів та послуг, а також активного позиціювання діяльності бібліотеки в соціальних мережах. Практичне значення реалізації концепції цифрового громадянства в наукових бібліотеках сприяє розвитку медійної та цифрової грамотності, забезпеченню доступності та інклюзивності, а також боротьбі з дезінформацією, що є важливими аспектами сучасного інформаційного суспільства

Ключові слова: цифрова людина; цифрове покоління; цифровий читач; наукові бібліотеки закладів вищої освіти; цифрова доба; знаннєве обслуговування