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# PRINCIPLES, PRIORITIES AND FEATURES OF INFORMATION AND ANALYTICAL ACTIVITIES OF A MODERN LIBRARY

***The purpose of the article*** *is to analyse the principles, priorities, and features of the information and analytical activities of modern libraries in the context of the digital transformation of society and to determine the role of the library as an information and analytical hub.* ***The research methodology*** *is based on a combination of general scientific and specialised methods, including analysis and synthesis to generalise theoretical approaches; the comparative method to compare practices of organising information and analytical activities in different types of libraries; systemic and structural-functional approaches to consider information and analytical activity as an integrated component of the library system; as well as heuristic methods to forecast prospects for its development under conditions of digital change.* ***The scientific novelty*** *of the study lies in substantiating the conceptual foundations and priority directions of the information and analytical activities of the modern library as an integrative process that combines traditional library functions with innovative digital services, analytical technologies, and new forms of communication with users.* ***Conclusions.*** *It is demonstrated that information and analytical activity is a key factor in transforming libraries into multifunctional information and communication centres capable of producing analytical products, supporting scholarly communication, and facilitating managerial decision-making. It is established that the effectiveness of this activity should be based on the principles of systematisation, innovation, and user orientation, while key priorities include the development of electronic resources, the creation of information and analytical products for science, education, and management, and the integration of libraries into the global information space. Emphasis is placed on the growing role of information and analytical centres and national analytical resources in shaping the digital landscape and supporting knowledge-based societies.*

***Keywords:*** *knowledge management, digital transformation, electronic resources, analytical products, information services.*

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# ЗАСАДИ, ПЕРЕВАГИ ТА ОСОБЛИВОСТІ ІНФОРМАЦІЙНО-АНАЛІТИЧНОЇ ДІЯЛЬНОСТІ СУЧАСНОЇ БІБЛІОТЕКИ

***Мета статті*** *полягає в аналізі принципів, пріоритетів та особливостей інформаційно-аналітичної діяльності сучасних бібліотек у контексті цифрової трансформації суспільства й визначенні ролі бібліотеки як інформаційно-аналітичного хабу.* ***Методологія дослідження*** *базується на поєднанні загальнонаукових і спеціальних методів, зокрема аналізу та синтезу для узагальнення теоретичних підходів, порівняльного методу – для зіставлення практик організації інформаційно-аналітичної діяльності в різних типах бібліотек, системного та структурно-функціонального підходів – для розгляду інформаційно-аналітичної діяльності як інтегрованої складової бібліотечної системи, а також евристичних методів прогнозування перспектив її розвитку в умовах цифрових змін.* ***Наукова новизна*** *дослідження полягає в обґрунтуванні концептуальних засад і пріоритетних напрямів інформаційно-аналітичної діяльності сучасної бібліотеки як інтегративного процесу, що поєднує традиційні бібліотечні функції з інноваційними цифровими сервісами, аналітичними технологіями та новими формами комунікації з користувачами.* ***Висновки.*** *Доведено, що інформаційно-аналітична діяльність є ключовим чинником трансформації бібліотек у багатофункціональні інформаційно-комунікаційні центри, здатні продукувати аналітичні продукти, підтримувати наукову комунікацію та прийняття управлінських рішень. Визначено, що ефективність цієї діяльності має ґрунтуватися на принципах системності, інноваційності та орієнтації на потреби користувачів, а пріоритетами виступають розвиток електронних ресурсів, створення інформаційно-аналітичних продуктів для науки, освіти й управління та інтеграція бібліотек у глобальний інформаційний простір. Наголошено на зростаючій ролі інформаційно-аналітичних центрів і національних аналітичних ресурсів у формуванні цифрового ландшафту та підтримці суспільства, заснованого на знаннях.*

***Ключові слова:*** *управління знаннями, цифрова трансформація, електронні ресурси, аналітичні продукти, інформаційні послуги.*

Relevance of the research topic. The research relevance was determined by the need to define the foundations and priorities of information and analytical activity of libraries in the digital era. The modern library had evolved from a repository of documents into a multifunctional information and communication centre, offering high-quality resources, services, and analytics. In the context of knowledge globalisation and societal digitalisation, the information and analytical activities of libraries have gained strategic role. These activities not only ensure access to information but also systematise, evaluate, and present it in ways that effectively meet the needs of diverse users, supporting decision-making in science, education, culture, and governance. Libraries were central in supporting social processes and integrating Ukraine into the global information space.

Analysis of research and publications. O. Kobieliev et al. (2022) [1] analysed the organisational structure of information and analytical activities in Ukrainian national libraries and argued that establishing dedicated analytical departments was a promising direction. V. Horovyi (2024) [2] stated that scientific-information and information-analytical activities of Ukrainian libraries were gaining increasing importance. A significant number of libraries, both in terms of the professional qualifications of their staff and the technological level of their infrastructure, were capable of monitoring the content of hostile information attacks in the modern information space and preparing information-analytical and analytical products to counteract hostile propaganda. A. Guraliuk (2024a) [3] considered the activities of a modern library as providers of information-analytical products and services, emphasising the need for digital transformation. M. Pinto et al. (2024) [4] examined how academic libraries assessed and developed competencies of readers in information, media, and data literacy in the context of analytical activity development. P. Roy (2024) [5] conducted a study on the factors influencing the adoption of data analytics in Australian university libraries, while in a subsequent study, P. Roy (2025) [6] analysed how Big Data analytics can transform decision-making processes in libraries. N. Tara et al. (2024) [7] provided an analytical review of the role of Big Data in academic library operations, exploring whether such technologies bring tangible benefits.

K. Shahzad & S.A. Khan (2024) [8] investigated various factors affecting the implementation of big-data processing technologies in libraries. O. Klymenko & O. Sokur (2024) [9] noted that digitalisation processes have led to a new trend of transforming libraries into information hubs for the comprehensive processing of all types of information flows. According to A. Guraliuk (2024b) [10], the role of libraries required reconsideration, as it should become systemic aggregators of scientific knowledge and active participants in information-analytical activities – supporting education, verifying

data, presenting information in user-friendly formats, and providing expert consulting on various issues. N. Ivanova (2024) [11] explored how information and analytical activities were organised in a state-level library during martial law – identifying priorities, altered approaches, and modern challenges. The study aimed to analyse the priority directions of the information and analytical activities of the modern library in the context of digital transformation. The scientific novelty of the study was determined by substantiation of the conceptual foundations and priority areas of information and analytical activity of the modern library as an integrative process that combined traditional functions with innovative digital services in the context of digital transformation.

The purpose of the article is to analyse the principles, priorities, and features of the information and analytical activities of modern libraries in the context of the digital transformation of society and to determine the role of the library as an information and analytical hub.

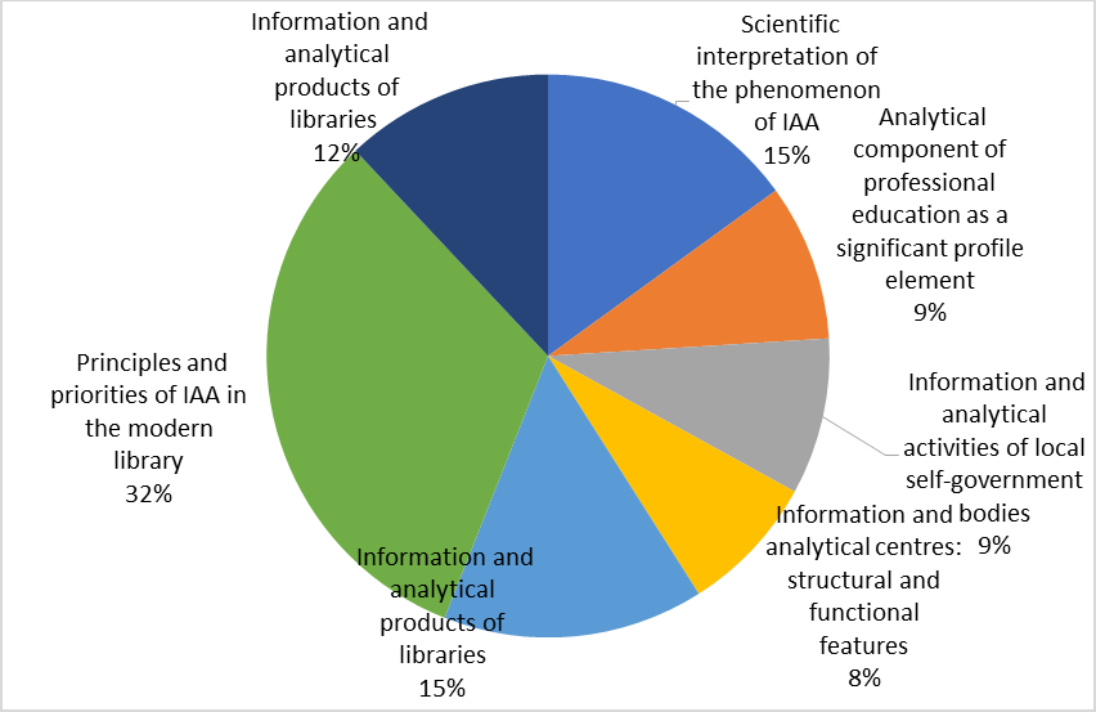


*Figure 1.* ***Thematic distribution of publications***

*Source: developed by the authors*

Presentation of the main material. The materials of the study included scientific publications in the fields of library science, information and social communications, and analytical technologies, as well as strategic documents and regulatory acts governing the activities of libraries in the digital environment, such as the Draft Law of Ministry of Culture of Ukraine (2015) [12] and the Law of Ukraine No. 2807-IX (2022) [13]. The total number of scientific publications in various periodicals and serial editions, which served as the source base for the research, as well as their distribution over the years 2018-2024, indicated permanent scholarly and practical interest in the topic. For instance, in 2018 the topic was represented by 13 publications, in 2019 by 19, in 2020 by 14, in 2021 by 16, and in 2022 by 19. Thematically, the largest number of publications was concentrated in the subject "Foundations, priorities, and features of information and analytical activity of the modern library", which reflected the priorities of scientific research (Fig. 1).

Thus, information and analytical activity, in the context of social resonance and significance for the improvement and development of professional practice, required further research. Furthermore, the study analysed the experience of modern Ukrainian libraries that implemented information and analytical services, electronic catalogues, and digital user service platforms, such as Vernadsky National Library of Ukraine (n.d.b), Yaroslav Mudryi National Library of Ukraine (n.d.), Lviv Polytechnic National University Scientific and Technical Library (n.d.), Kharkiv State Scientific Library named after V.H. Korolenko (n.d.), as well as foreign institution Library of Congress (n.d.). A set of methods was applied in the study, including general scientific methods of analysis and synthesis for the systematisation of scientific approaches to definition of the essence of information and analytical activities, comparative analysis to identify similarities and

differences in the practice of organising information and analytical processes in different types of libraries – national, public and special, a systems approach to consider information and analytical activities as an integrated component of the library system, the structural-functional method for analysing the priority areas and features of organising information and analytical processes, as well as heuristic methods to forecast possible directions for the development of analytical functions of libraries under digital transformation. These methods were used to comprehensively characterise the principles, priorities, and features of information and analytical activities of libraries, identify problem areas, and determine promising vectors of development.

Information and analytical activity (IAA) is a crucial component of libraries in the modern information society. It emphasised not only access to information but also data processing and analysis to create high-quality information products and services. Modern libraries performed functions related to the professional collection, systematisation, and analysis of information flows, creating a system of information products. Librarians analyse user information needs and establish priorities for strategic communication systems and professional activities. The use of electronic resources, databases, and search systems ensured effective information retrieval and analysis, rapid responses to user requests, and the provision of reliable information. The development of information of librarians and analytical competencies and the application of advanced technologies enhance service quality, optimise resource use, and underline the role of libraries as an information and analytical centre.

The concept of IAA was not defined in 2025, therefore researchers proposed perspectives on the notion of "information and analytical activity". In regulatory and legislative documents, IAA was interpreted as "methods and tools for collecting, processing, and analysing data based on information, a certain set of actions and measures grounded in normative and methodological materials" (Order of the Ministry of Digital Transformation of Ukraine No. 34, 2023) [14]. This approach emphasised the practical nature of the activity, oriented toward management processes. In educational and scientific works, the multifunctionality was highlighted. For instance, the textbook by V. Varenko (2014) [15] highlighted the managerial, diagnostic, preventive, and cognitive-mental functions of IAA in public administration. The study considered the library as "a universal form of information mediation", while information and analytical efforts were defined as "a process of creative thinking". I. Zakharova & L. Filipova (2013) [16] defined IAA as "a set of information processes (collection, search, processing) necessary for effective management". Notably, the authors emphasised that only those processes of collecting, processing, and analysing materials that result in a system of information products can be considered IAA.

In terminological publications, IAA was interpreted as the process of semantic data processing and a set of measures aimed at compiling analytical reports for decision-making (Savchenko & Yahupov, 2014) [17]. Similar positions were found in the study by O. Nesterenko (2020) [18], defining IAA as the process of acquiring new knowledge through the creative consolidation of information. The study highlighted the role of professionalism, socio-professional motivation, communication with colleagues, and mastery of the instrumental and modelling base. Researcher also emphasised the primacy of knowledge-seeking as the quintessence of the information process and the importance of knowledge management in administrative governance. IAA was substantial in bibliographic and methodological resources. In summary, scholars highlighted several key points: IAA was a component of the structure of information activity; the technology of analytical work was aimed at generating new knowledge. Thus, IAA was a type of information technology that ensured the transformation of information resources into information products, which can be defined as a professional activity focused on searching, collecting, systematising, processing, and analysing information with the aim of acquiring new knowledge, preparing information products, and supporting informed decision-making processes. In a broader sense, information and analytical work encompassed a set of processes including monitoring and selecting information resources; critical analysis and interpretation of data; summarising results in the form of reference notes, reviews, reports, forecasts; and transforming information into knowledge. In the library and information field, this type of activity was considered a component of the information function of a library, providing the creation of analytical products (reviews, abstracts, digests, analytical reports) to meet user needs and support decision-making in various domains.

In multifunctional information centres, such as modern libraries, information and analytical technologies (IAT) were substantial. They ensured high-quality information services for users, supporting scientific research, and facilitated communication processes. With IAT, libraries could not only to accumulate resources but also to create information products of an analytical nature. Among the main areas of implementation of such technologies in library practice were the use of Big Data and machine learning algorithms for analysing information flows, the integration of business intelligence systems for resource management and

strategic planning, the development of information retrieval systems with filtering and personalisation capabilities, and the use of web analytics to assess user activity and improve electronic library services. These tools increased the efficiency of managerial decision-making, improved interaction with users, ensured the creation of relevant information products, and expanded the range of services in the digital environment. This, in turn, contributed to the formation of intelligent services capable of tracking scientific trends and offering personalised information solutions. At the same time, the introduction of information and analytical technologies was accompanied by challenges, including a lack of qualified personnel, limited funding, the need for a more developed legal framework, and compliance with ethical standards, particularly in the field of personal data protection. Information and analytical technologies were crucial in the modernisation of libraries, facilitating their integration into the global information ecosystem, addressing the evolving demands of users, and reinforcing their position as central institutions in the knowledge society. These developments promoted advanced analytics and management capabilities, necessitating the development of new competencies for professionals, particularly in operating intelligent systems and integrating both traditional and advanced analytics.

V. Varenko (2019) [19] emphasised the value of development of efficient protection methods, improving the legal framework, and regulating information processes due to the growing risk of data misuse. The study highlighted the significance of systems analysis methods, such as structural and functional system analysis, which improved modelling of complex systems and optimised processes, especially for big data processing. The study proposed a five-stage methodology for information and analytical activities: problem diagnosis, information collection, data systematisation, problem analysis, and solution search. These methods increased the efficiency and validity of analytical processes, with the choice of methods depending on research objectives and context. The study also highlighted the strategic role of libraries, especially specialised and scientific libraries. The future of this field includes the establishment of specialised information centres, the expansion of training and professional development systems for staff, and the building of partnerships between libraries and government structures to strengthen communication processes at the regional level.

The establishment of information and analytical centres (IACs) in libraries was a natural stage in their transformation into multipurpose information hub institutions. The main goal of creating IACs was to provide the academic community, government bodies, business, and the public with reliable, verified, and analytically processed information. In libraries, IACs were usually organised as specialised units with their internal information resources, technical infrastructure, and professional staff. Their structure typically included departments of information resources, analytical divisions, and user service units. This combined the functions of collection and preservation of information with critical analysis and practical application in the form of information and analytical products. The operation of IACs relied on advanced information technologies, such as database management systems, automated information retrieval platforms, business intelligence tools, machine learning techniques, and web analytics. Figure 4 demonstrated architecture of IAC.

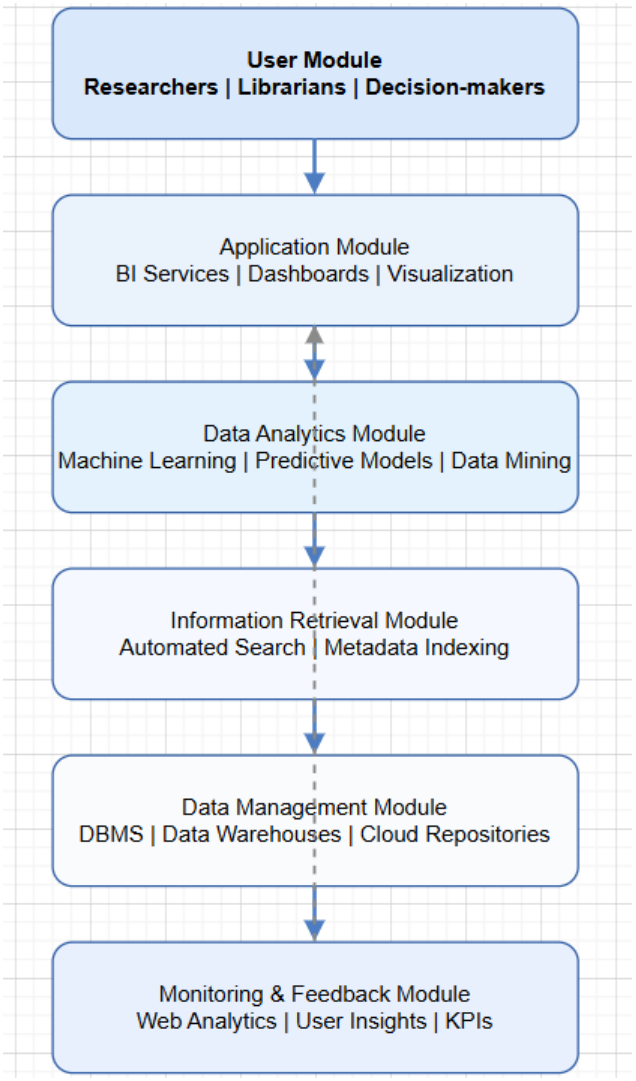


*Figure 2.* ***Architecture of information and analytical centres***
*Source: developed by the authors*

These made it possible not only to process large volumes of data but also to ensure their structuring, visualisation, and forecasting. Further development of library IACs involved integration into international information networks, use of innovative technologies (Big Data, cloud services, blockchain), expansion of the range of information, analytical products, services, and the strengthening of the communicative function of libraries. The specific features of establishment of IACs in libraries incorporate their multifunctional structure, technological orientation, high requirements for human resources, and constant adaptation to new informational and social challenges. Central to their activities were departments of information resources, responsible for the collection, organisation, and maintenance of databases, electronic journals, and book collections. A substantial subdivision was the analytical (or research) department, which conducted in-depth information processing and prepared analytical reports. Alongside them, user service departments provided consultations, conduct training activities, and assist users in mastering information resources. The study emphasised that IAC were evolving into multifunctional institutions that not only accumulate data but also convert it into applied information products. In the modern context, IACs have become essential components of the regional information and research infrastructure.

According to V. Horovyi et al. (2024) [20] the activities of the Centre for Information and Analytical Support (CIAS) were aimed both at addressing current tasks and at preparing the groundwork for promptly responding to new requests that arise in the process of political communication – a substantial component of the modern information and communication environment. This environment was multifaceted and, accordingly, created a plurality of scientific approaches to interpreting the concept of "political communication", which constituted the theoretical foundation for the analytical work of CIAS researchers, prioritising high-quality socio-political information for government authorities and society. O. Zhelai (2022) [21] analysed the experience of the Special Information and Analytical Service (SIAZ) of the Vernadsky National Library of Ukraine and confirmed their significant role in providing information based on analytical processing of sources. Libraries were able to provide information and analytical services for government bodies and regional institutions, which contributed to the development of strategic communications. In practice, such cooperation improved the quality of decisions, optimised information flows, and supported the development of regional communication policies. The development of analytical structures in national libraries drawn on the experience of the Congressional Research Service of the U.S. Library of Congress (n.d.) [22] and the analytical divisions of the Vernadsky National Library of Ukraine [23].

Vernadsky National Library of Ukraine served as an example of establishing effective analytical structures to meet users' information needs, enhance trust in the library as a key information centre, and ensure interaction with other library departments. In particular, the SIAZ and the Centre for Analysis and Forecasting of Socio-Political Processes operated within the library, providing analytical reports, information reviews, and expert assessments for government institutions, research organisations, and regional administrations. The development of such analytical structures in national libraries was strategic for providing high-quality information required for public administration and research activities. Regional information and analytical centres act as key institutions in the system of information support for regional development. According to S. Palii & V. Medvedieva (2019) [24], their creation was determined by the need to support research activities, stimulate innovation, and enhance the educational environment of regions. It served as integration hubs that provided access to relevant research resources and information services. S. Palii (2020) [25] considered limited financial resources reduce the ability to modernise infrastructure and support information systems.

Content analysis of websites of Ukrainian IACs revealed several key development trends. The analysis of the website of the Vernadsky National Library of Ukraine [26] (n.d.b) revealed an expansion in the volume and variety of information resources. The analysis of the Yaroslav Mudryi National Library of Ukraine (n.d.) [27] highlighted the active implementation of advanced technologies, such as Artificial Intelligence, machine learning, and data analytics, aimed at improving the quality of information retrieval and organisation. The data analysis of the Kharkiv State Scientific Library named after V.G. Korolenko (n.d.) [28] demonstrated the dynamic development of electronic libraries and digital archives, which ensured the preservation and dissemination of scientific knowledge. Thus, modern Ukrainian information and analytical centres showed a trend of adaptation and improvement in response to the challenges of the digital age. The trend included active expansion of the range of their services, improvement of digital platforms and communication with users through social networks. This reflected their growing role in disseminating knowledge and shaping the information environment of contemporary society.

The functioning of information and analytical centres contributed to the effective creation and dissemination of information and analytical products, which were the practical embodiment of their activities. These products determined the efficiency of the centres by providing relevant information for decision-making for government bodies, the academic community, and society. Therefore, a logical continuation of the analysis of the structural and functional characteristics of IACs was the examination of the spectrum of information and analytical products they generate. These products were not only the result of the efforts of the centres but also a key tool for the development of scholarly communication, educational practices, and the information support of management processes. V. Bondarenko (2015) [29] believed that library information and analytical products contributed to the improvement of remote Internet services, as it provided information from various sources in a convenient format. This ensured prompt access to up-to-date data disseminated across various information resources. S. Harahulia et al. (2022) [30] noted that the advanced analytical tools integrated into most global data aggregation platforms of abstract and citation resources can be used for in-depth content analysis of scientific publications. These systems uncovered hidden semantic relationships among scholarly texts, generated impact coefficients and bibliometric rankings based on citation data, and identified networks of co-authorship. The application of semantic technologies in abstract databases was particularly promising, since nearly all information contained in an abstract – except for functional parts of speech – constituted a set of keywords, making the abstract text highly semantic and exceptionally rich in informational content. A substantial information and analytical product of Vernadsky National Library of Ukraine was the abstract database "Ukrainica Scientific" (Fig. 3).

According to Yu. Eysmont (2021) [31], this specialised electronic resource was created for the collection, systematisation, and dissemination of scientific information about Ukraine. It was created in several stages aimed at ensuring the quality and scholarly significance of information: selection of materials from scientific journals, monographs, and conference publications; evaluation of the content's relevance to the database's scope; editing and structuring texts; preparation of abstract records. Abstract information was characterised by a concise and concentrated presentation of publication content. To facilitate retrieval, mandatory metadata, author, title, keywords, year of publication, source, index terms were included as search options, ensuring fast and convenient user access to the required information. The resource was maintained through constant updates and content renewal. The project team monitors new publications, engaged additional sources, and covered changes in the scientific environment and user feedback, which enhanced the quality of the resource. As a result, "Ukrainica Scientific" had become an essential tool for researchers, lecturers, students, and all those interested in accessing Ukrainian scholarly achievements.

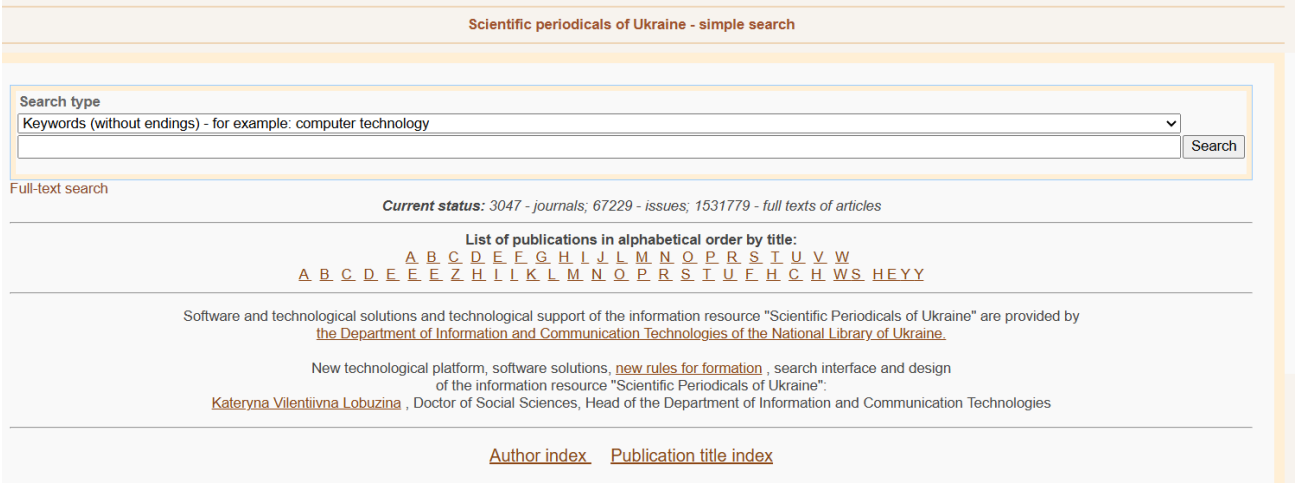


*Figure 3.* ***Database "Ukrainica Scientific"***
*Source: Vernadsky National Library of Ukraine (n.d.a) [23]*

An abstract database was a structured collection of bibliographic records with concise summaries of scientific documents, such as journal articles, dissertations, reports, and conference proceedings. It was a vital component of the information support system for science and education, providing crucial information regarding publication without the need to read the full text. Records included key metadata – bibliographic descriptions, identifiers (DOI, ORCID, ISSN), keywords, classification indexes, and links to full texts when available. Abstract databases in library information

and analytical efforts can be used for monitoring of thematic developments in research, tracking trends in specific fields, and preparing scientific reviews and analytical reports. These databases were the foundation for creation of analytical products such as literature digests, bibliometric reports, and briefing documents for researchers or management. Modern content analysis tools are used by librarians to identify new topics, map co-authorship networks, assess research activity, and compared publication performance across scientific fields. Abstract information was substantial in scientometric and bibliometric studies, used for citation analysis, impact indices, and identifying relationships among publications. In library analytics, it helped evaluate research effectiveness, create rankings, and identify leading areas of scientific advancement. The creation of abstract databases involved automated collection, processing, and organisation of abstract data, ensuring timely updates and relevance.

Abstract databases were increasingly integrated with other library resources, such as electronic catalogues, repositories, and scientometric platforms. It supported data exchange through standardised protocols (e.g., OAI-PMH, OpenURL) and metadata formats (e.g., Dublin Core, MARC 21, JATS). This integration enabled librarians to build analytical dashboards, visualise research activity, and provide quick user access to relevant information. The example of the abstract database "Ukrainica Scientific" confirmed the high value of national electronic resources for consolidating, updating, and disseminating research information. Overall, abstract databases and other analytical resources have become central for scholarly communication and scientometric evaluation, enhancing the visibility of research and the integration of Ukrainian scholarship into the global knowledge space. Further advancement of such products required technological modernisation, standardisation of metadata, and the adoption of innovative digital tools to ensure the quality and sustainability of information support systems.

The information and analytical products represented the practical outcome of the activities of libraries and information and analytical centres, determining their role in scientific communication and the educational process. However, to fully determine the significance of these products, it was necessary to analyse the conditions, under which it was created and function. New challenges arising from quarantine restrictions and wartime conditions pose complex tasks for library information and analytical structures, requiring the reorganisation of their continuous operation. According to O. Zhelai (2022) [23], this was relevant for national and parliamentary libraries serving public institutions. The methodology of providing users with information and analytical products and services was based on close cooperation with foreign partners (such as the Centre for Policy Research – CPR, the Research Library and Reference Bureau – RLRB), specialising in research and analytics, as well as on the introduction of professional analytical technologies and webinar formats. In this context, it was necessary to define the key criteria for adaptive mechanisms of library functioning during crisis periods (pandemic, war). The growing importance of their activities was linked to the need to apply crisis management principles and to develop special initiatives for the creation of information products with a specific target purpose.

I. Tereshchenko (2014) [32] believed that the use of social networks was a substantial factor in the effectiveness of information and analytical activity of libraries. Their potential in promoting information and analytical products and in communicating with users was particularly significant. Social networks provided interactivity, feedback monitoring, and involved users in the creation of new information products. The use of social networks required comprehensive strategies that included creative approaches to content, active audience interaction, promotional campaigns, and cooperation with organisations and opinion leaders. The analysis of user responses in social networks forms the basis for improving libraries' information and analytical services, enhancing their relevance and effectiveness. Therefore, the presence of libraries on social networks was viewed as a necessary condition for their activity in the modern information environment, significantly strengthening their capabilities in advertising, dissemination, and adaptation of information and analytical products. The systemic integration of social networks into library activities created a new level of advertising and communication strategies, contributed to the promotion of innovative information products.

In the information society, the quality of information and analytical activity directly depended on the level of professional training of specialists, ensuring the creation, processing, and dissemination of information products. The constant growth of data volumes, the dynamics of digital technology development, and the need to provide reliable information support for managerial decision-making form the demand for a new generation of professionals. These specialists must combine profound theoretical knowledge with practical skills in handling large volumes of information, business analytics methods, Artificial Intelligence, and forecasting tools. The training of professional analysts became a strategic task for the system of higher education, since the competencies of such specialists determined not only the effectiveness of individual organisations but also the development of

the information infrastructure of society. Therefore, the issue of training analyst specialists deserved separate consideration, including modern challenges and trends that shape new approaches to education and professional development.

As noted by T. Lysenko (2022) [33], a key condition for the successful functioning of information and analytical centres was the analytical competence of employees. This competence encompassed cognitive, professional, and socio-communicative components, which in synergy form the ability to perform effectively. Among the main components were knowledge of data analysis methods, the ability to apply models and machine learning algorithms, and mastery of modern tools. Support and development of analytical skills should be based both on the individual responsibility of employees and on systemic organisational support (training, professional development, participation in seminars, exchange of experience). L. Filipova & I. Zakharova (2009) [34] emphasised that in the context of business analytics development, leading trends in the use of systems for data collection, analysis, and application were identified. The growing significance was related to the need for informed managerial decision-making in the context of rapidly increasing information flows. Artificial Intelligence, machine learning, and Big Data analytics were substantial. The main elements of business analytics systems included data collection and preparation, analysis, visualisation, and dissemination of results. Training specialists in the field of business analytics was crucial, as further development required mastery of modern data analysis methods and the constant improvement of professional skills. The continuous updating of business analytics tools and the active involvement of specialists in this process were essential. In the library sphere, such systems should be applied to planning, managing institutional activities, and improving communication with users, thereby enhancing competitiveness and service quality.

Among the main challenges were a shortage of qualified staff, the absence of standardised training programmes, insufficient funding for educational institutions, and declining quality of teaching specialised disciplines. Improvements included updating training standards for specialists in information analysis, engaging more lecturers with practical experience, and increasing higher education funding through sponsorship programmes and research projects. Implementation of these measures will contribute not only to raising the professional competence of library specialists but also to meeting the needs of modern society in analytical information products. As noted by A. Zlenko & A. Ivashchenko (2021) [35], research into the historical aspects of training specialists in the field of documentation support for management and information activities highlighted the close connection with socio-political conditions. At the same time, modern educational programmes do not always meet labour market needs. To address this issue, it was advisable to systematically update curricula, integrate modern information technologies with traditional approaches, and thereby improve practical training and digital environment handling skills among students. Information and analytical competence involved developing the ability to analyse, process, and interpret information to support managerial decision-making. O. Kobieliev (2018) [36] stated that particular the formation of such competencies among students specialising in international relations should be emphasised due to the need to process information from international sources, study regional specificities and ensure effective communication in the intergovernmental context. Thus, the training of analyst specialists in Ukraine must be based on a combination of historical experience and modern educational approaches, the integration of innovative technologies into the learning process, and the development of a system of professional competencies that corresponded to the challenges of the modern information society. N. Yakunina (2022) [37] believed that the rapid growth of the needs of university library users in information support had affected the entire activity of libraries. Moreover, studies confirmed that libraries were central in the development of digital literacy and in supporting educational and research processes (IFLA, n.d.). C. Tenopir et al. (2012) [38] addressed the implementation of information technologies and electronic resources, which had become the foundation for developing new forms of analytical activity. Yu. Horban et al. (2024) [39] noted that libraries were increasingly integrating into national and global information systems, providing information and analytical support for educational and cultural initiatives. Yu. Mostova & O. Karakoz (2023) [40] revealed that the process of expanded production of information resources had become one of the most noticeable and significant features of the modern civilisation, starting from the middle of the 20$^{th}$ century. This integration involved the creation of analytical products based on data systematisation, the generalisation of information flows, and the development of new services for users.

The scientific novelty of the study lies in a systematic conceptual rethinking of the information and analytical activities of the modern library in the context of the digital transformation of society, which makes it possible to consider these activities not as an auxiliary function but as an integrative strategic process aimed at producing analytical knowledge and supporting managerial and scholarly decision-making.

In contrast to previous studies, the article:

Clarifies and expands the content of the concept of "information and analytical activity of the library", substantiating it as a multilevel system of

processes (monitoring, critical analysis, interpretation, generalisation, and transformation of information into knowledge), rather than merely a set of information services or bibliographic practices.

Proposes an integrative approach to organising information and analytical activities that combines traditional library functions with innovative digital technologies (Big Data analytics, business analytics, semantic and abstract databases, and web analytics), which had previously been addressed fragmentarily in library and information science research.

Substantiates the role of the library as an information and analytical hub capable not only of providing access to resources but also of producing analytical products for science, education, culture, and public administration, thereby shifting the emphasis from a service-oriented library model to a knowledge-production model.

Systematises the principles and priorities of the information and analytical activities of modern libraries (systematicity, innovativeness, user orientation, and integration into the global information space), which makes it possible to form a coherent methodological basis for further applied and theoretical research in this field.

For the first time, provides a generalised analysis of the functioning of library information and analytical centres as structural elements of the national information infrastructure and demonstrates their significance for the formation of analytical resources and the support of a knowledge-based society.

Emphasises abstract and national analytical resources (in particular, the "Ukrainica Scientifica" database) as key instruments of contemporary library analytics, which combine traditional editorial preparation with automated metadata processing and analytical content analysis.

Thus, the scientific novelty of the article consists in the formation of a holistic concept of the library's information and analytical activities as a strategic resource of the digital society, which creates a theoretical foundation for the further development of formalised models, intelligent analytical services, and the integration of library systems with artificial intelligence and big data technologies.

Conclusions. The study demonstrated that information and analytical activities were a strategic component of modern library development, central in transforming libraries into multifunctional information and communication hubs. Efficient analytical operations required the integration of traditional library functions with advanced digital technologies. An analysis of both Ukrainian and international practices revealed that information and analytical centres within libraries were essential for the collection, organisation, and interpretation of information, thereby improving scientific communication and supporting decision-making in areas such as education, culture, and governance. The study identified "Ukrainica Scientific" as a key instrument for the accumulation, processing, and dissemination of scientific information about Ukraine. The database combined traditional editorial methods with automated metadata processing and content analysis technologies, ensuring high-quality, up-to-date abstracts. It facilitated the identification of modern research trends, supported bibliometric evaluations, and enhanced the international visibility of Ukrainian science.

The findings highlighted a growing demand for reliable, systematically processed, and analytically interpreted information products among researchers, educators, and policymakers. This demand underscored the increasing importance of libraries as producers of analytical resources that supported informed decision-making and scientific foresight. The research further suggested that libraries should establish specialised information and analytical departments, equipped with skilled personnel and modern technological infrastructure, to expand their analytical capabilities and maintain continuous monitoring of knowledge. In conclusion, abstract databases and information and analytical centres formed the backbone of Ukrainian scientific and information infrastructure, reinforcing the essential role of libraries in the modern information landscape. A promising direction for further research is the development of formalised models for integrating library information and analytical services with artificial intelligence tools and big data processing to support managerial and scientific decision-making in the digital environment.

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