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VIRTUAL READING ROOM AS A TRANSDISCIPLINARY COMPONENT OF THE DIGITAL INFORMATION AND ANALYTICAL ENVIRONMENT OF A SCIENTIFIC AND EDUCATIONAL LIBRARY

Civilizational progress has led to a revision of the concept of the functioning of the scientific and educational library (SEL) in terms of providing information and analytical support (IAS) for education and pedagogy in a distance format. It is important to substantiate and design new concepts of IAS to create comfortable conditions for a wide range of consumers of digital SEL services. In addition, to develop an structural and substantive information and educational component - a Virtual Reading Room of a SEL.

The purpose of the virtual reading room of SEL is to provide information-analytical, information-library, information-bibliographic support to the subjects of the scientific and educational environment with adaptive tools and high-quality content to meet user needs for specific virtual information in certain fields of science. The author substantiate the necessity of applying the methodology of systemic and synergistic approaches to the creation and functioning of virtual reading rooms on the example of the V. Sukhomlynskyi State Scientific and Educational Library of Ukraine. The effectiveness of establishing research work involving the services of virtual reading rooms is enhanced by the introduction of the latest information technologies and modern information and analytical support based on ontological modeling.

The author have established that conceptually grounded approaches, methods, principles and means of designing and functioning of virtual reading rooms in the digital ecoenvironment of a scientific and educational library and adequate information and analytical support of these processes have a qualitative impact on the indicators of information, educational, international internal research activities of subjects of distance library communications. It is noted that the digital transformation of education in conditions of extreme danger requires taking into account the general trends in the development of scientific and educational library structures in the vector of globalization and European integration processes.

Keywords: *Open Science, EcoEnvironment, Virtual Reading Room, Digital Library, Distance Education.*

Віртуальний читальний зал як трансдисциплінарна складова цифрового інформаційно-аналітичного середовища науково-педагогічної бібліотеки.
Як результат цивілізаційного прогресу постала потреба в перегляді концепції функціонування науково-педагогічної бібліотеки (далі – НПБ) в частині інформаційно-аналітичного забезпечення (далі – ІАС) освіти і педагогіки в дистанційному форматі. Важливими є обґрунтування та розроблення нових концепцій ІАС у створенні комфортних умов для широкого кола споживачів

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цифрових послуг НПБ. Крім того, потребує розроблення структурно-змістова інформаційно-освітня складова – віртуальний читальний зал НПБ.

Метою віртуального читального залу НПБ є забезпечення інформаційно-аналітичної, інформаційно-бібліотечної, інформаційно-бібліографічної підтримки суб'єктів науково-освітнього середовища адаптивними засобами та якісним контентом для задоволення потреб користувачів у специфічній віртуальній інформації з певної галузі науки. Автор обґрунтовує необхідність застосування методології системного та синергетичного підходів до створення та функціонування віртуальних читальних залів на прикладі Державної науково-педагогічної бібліотеки України імені В. О. Сухомлинського.

Ефективність налагодження науково-дослідної роботи із залученням послуг віртуальних читальних залів підвищується впровадженням новітніх інформаційних технологій та сучасного інформаційно-аналітичного забезпечення на основі онтологічного моделювання.

Автором встановлено, що саме впливає на показники інформаційної, освітньої, міжнародної та внутрішньої наукової діяльності суб'єктів дистанційних бібліотечних комунікацій. Зазначено, що цифрова трансформація освіти в умовах надзвичайної небезпеки потребує врахування загальних тенденцій розвитку науково-освітніх бібліотечних структур у векторі глобалізаційних та євроінтеграційних процесів.

***Ключові слова:** відкрита наука, віртуальний читальний зал, екосередовище, цифрова бібліотека, дистанційна освіта.*

Context. Civilizational progress has historically led to a revision of the concept of the functioning of the scientific and educational library (SEL) in terms of information and analytical support (IAS) for education and pedagogy in a distance format. In this context, it is important to substantiate and design new concepts of IAS to create comfortable conditions for a wide range of consumers of digital SEL services. In addition, to develop an effective structural and substantive information and educational component that focuses on meeting of stakeholders in the key of an open scientific and educational ecosystem – a virtual reading room of a SEL.

Purpose or Goal. The global digital transformation of society, the challenges of today, provoked by the extreme danger of force majeure (quarantine restrictions due to the Covid-19 pandemic, military actions that cover the entire civilized information space of the world, etc.) and the requirements of the Industrial Revolution 4.0 (development of information technologies, application of artificial intelligence elements, etc.). In open science situation, using the proposed culture-organizing ecoenvironment of the SEL, the concept of designing and functioning of its virtual reading room is a fundamental component of effective IAS of education and pedagogy in distance learning conditions.

The purpose of the virtual reading room of SEL is to provide information-analytical, informationlibrary, information-bibliographic support to the subjects of the scientific and educational environment with adaptive tools and high-quality content to meet user needs for specific virtual information in certain fields of science, in

particular, education and pedagogy. And its implementation is based on the fundamentalization of ideas, taking into account the practical methodologies of systemic, transdisciplinary and synergistic approaches.

Approach. The author propose the concept of designing and functioning of a virtual reading room of a SEL, which reveals:

- methodological aspect – system-synergetic construction of the main construct for solving technical and technological (engineering, semantic technologies, ontological modeling) and socially conditioned relationships of the subjects of virtual interaction (psychological, pedagogical, andragogical, professional relationships);

- theoretical aspect – logical definition of the structural and semantic apparatus in the system of basic concepts and principles that outline the significance of the technology of the virtual reading room of a SEL in the organization of information and information-analytical processes of searching for the necessary data, resource arrays on education and pedagogy;

- methodic aspect – multifunctional development and description of the functioning of the transdisciplinary ecoenvironment of virtual reading rooms of the V. Sukhomlynskyi State Scientific and Educational Library of Ukraine (V. Sukhomlynskyi SEL) in the conditions of digital transformation of education and force majeure circumstances of the turbulent present.

The results of the scientific search obtained by the make it possible to assert that at the systemic level of organization of the virtual reading room, taking into account the concept and provisions of open science and open education, its technical, technological, logical and sociopsychological significance is made possible (methods, regularities and principles of functioning are established, adaptive processes are ensured and appropriate interaction tools are selected); at the synergistic level, comfortable conditions are created for the development of the scientific and educational potential of users of information resources and the semantics of concepts in the basic terminology of research on educational and pedagogical innovation is substantiated by organizing a transdisciplinary space of virtual interaction (knowledge management, knowledge transfer, development of digital competence of consumers of educational services, etc.).

Actual or Anticipated Outcomes. Actual or Anticipated Outcomes. The author substantiate the necessity of applying the methodology of systemic and synergistic approaches to the creation and functioning of virtual reading rooms on the example of the V. Sukhomlynskyi State Scientific and Educational Library of Ukraine – the Virtual Reading Room of the V. Sukhomlynskyi Foundation, the Virtual Reading Room of the Library Science Cabinet, the Virtual room-museum of rare books, the Virtual Reading Room of Education (VRRE).

Methodological approaches to VRRE functioning on the adaptive basis of cooperation between the subjects of the dynamic eco-environment of the library's digital space are developed; it is determined that the implementation of the VRRE attracts a large number of consumers-researchers to its use, as evidenced by the rating indicators of their visits. The effectiveness of establishing research work involving the services of virtual reading rooms is enhanced by the introduction of the latest information technologies and modern information and analytical support based on ontological modeling of both the hall's ecological environment and its individual structural and content elements, which is confirmed by the results of site testing and user surveys.

Conclusions/Recommendations. The author have established that conceptually grounded approaches, methods, principles and means of designing and functioning of virtual reading rooms in the digital eco-environment of a scientific and educational library and adequate information and analytical support of these processes have a qualitative impact on the indicators of information, educational, international internal research activities of subjects of distance library communications, including in the field of education and pedagogy in general. It is noted that the digital transformation of education in conditions of extreme danger requires taking into account the general trends in the development of scientific and educational library structures in the vector of globalization and European integration processes (scientific orientation, transdisciplinarity of pedagogy as such, adherence to the principles of open science, principles of advanced development of education, theory and practice of blended and distance education, etc.
