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SUPPORT FOR THE DEVELOPMENT OF TEACHING STAFF THROUGH INFORMATION AND ANALYTICAL HUBS OF OPEN EDUCATION

The paper provides a theoretical generalization of the role of information and analytical hubs of open education as a tool for ensuring the continuous professional development of teaching staff. Their structural and functional organization is characterized, involving the integration of digital resources, analytical tools, and professional interaction services. The potential of such systems for shaping personalized learning trajectories based on data analysis and individual professional needs of educators is substantiated.

Keywords: information and analytical hub, open education, professional development of teachers, digitalization of education, individual learning trajectory, open educational resources.

Підтримка розвитку педагогічного персоналу засобами інформаційно-аналітичних хабів відкритої освіти. Автором здійснено теоретичне узагальнення ролі інформаційно-аналітичних хабів відкритої освіти як інструменту забезпечення безперервного професійного розвитку педагогічного персоналу. Охарактеризовано їх структурно-функціональну організацію, що передбачає інтеграцію цифрових ресурсів, аналітичних інструментів і сервісів професійної взаємодії. Обґрунтовано можливості таких систем у формуванні персоналізованих освітніх траєкторій на основі аналізу даних та індивідуальних професійних запитів педагогів.

Ключові слова: інформаційно-аналітичний хаб, відкрита освіта, професійний розвиток педагогів, цифровізація освіти, індивідуальна освітня траєкторія, відкриті освітні ресурси.

Introduction. Transformational processes in education driven by digitalization and societal challenges are reshaping the requirements for the content and forms of teachers' professional activity [3]. Existing professional development models based on regulated courses with fixed periodicity fail to ensure timely updating of competencies.

Teachers' professional activity is accompanied by significant information flows, which complicates the selection of high-quality and methodologically appropriate resources. Under these conditions, the need arises to organize continuous professional development oriented toward openness, adaptability, and individualization of learning. Information and analytical hubs of open education are considered as a tool capable of

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integrating resources, analytics, and professional communication within a unified digital environment.

Purpose. The study aims to provide a theoretical substantiation of the functional potential of information and analytical hubs of open education in ensuring systematic support for teachers' professional development, as well as to determine the role of data analytics in shaping and adjusting individual learning trajectories.

Main Content. An information and analytical hub of open education is interpreted as an integrated digital environment that combines educational resources of various types (electronic libraries, open educational resources, scientific databases, online courses) with tools for their intelligent processing [2]. Its functioning is aimed at structuring information flows and adapting content to users' needs.

The hub structure involves the interaction of several modules:

- a resource module providing access to verified educational materials;
- an analytical module focused on processing data on users' educational activity;
- a diagnostic module enabling assessment of the level of professional competencies;
- a communication module supporting professional interaction and collaborative knowledge creation.

This combination forms a comprehensive ecosystem capable of providing both informational support and analytical guidance for teacher development.

The application of recommendation algorithms enables the creation of individualized sets of learning materials according to users' experience, professional interests, and self-assessment results. This reduces the time required to search for relevant information and increases the efficiency of acquiring new knowledge and skills.

Information and analytical hubs ensure the recording and analysis of indicators of teachers' professional activity, including participation in the creation of educational content, the level of digital competence, and engagement in professional communities [1]. The obtained data are presented in the form of interactive visualizations, facilitating reflection and adjustment of individual development strategies.

The functional capabilities of hubs include the organization of professional communication through communities of practice, webinars, and joint projects. This creates conditions for experience exchange, testing new methodological approaches, and developing collective solutions within the professional environment.

Conclusions. Information and analytical hubs of open education enable a transition to a model of continuous professional development for teachers characterized by adaptability, individualization, and analytical support. Their implementation contributes to improving the quality of the educational process, optimizing resource use, and strengthening professional communities.

The practical significance of such systems lies in providing access to structured content, enhancing the effectiveness of personnel development management, and creating conditions for informed decision-making.

Prospects for further research include the development of standards for the integration of educational platforms, as well as the study of ethical aspects of using analytical tools and artificial intelligence technologies in the educational environment.

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