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44.	Dubel B., Shtainer T. BASIC REQUIREMENTS FOR THE FORMATION OF INFORMATION CULTURE OF FUTURE TEACHERS OF LABOR TRAINING, TECHNOLOGY AND COMPUTER SCIENCE WHEN USING INFORMATION TECHNOLOGIES	238
45.	Kaharman D. THE ROLE OF ARTIFICIAL INTELLIGENCE IN MODERN SCIENTIFIC RESEARCH	242
46.	Nazhmadinova A. THE EVOLVING LANDSCAPE OF EDUCATION: ADDRESSING THE CHALLENGES OF DIGITAL DISTRACTIONS AND MENTAL HEALTH	247
47.	Shamsutdynova M. LES ORIGINES DE LA TRADITION PÉDAGOGIQUE ISLAMIQUE	252
48.	Trofimchuk V., Shuryn O., Baldych A., Grechko V., Nosalchuk I. USE OF MODERN ACTIVITY-ORIENTED EDUCATIONAL TECHNOLOGIES IN THE SPECIALISED TRAINING OF HIGH SCHOOL STUDENTS	255
49.	Буренко В.О., Григор Д.В., Дем'янчук А.В., Дідоренко О.С., Халаняк Т.В. ДЕЯКІ ОСОБЛИВОСТІ ЗАХИСТУ ПРАВ ЛЮДИНИ ПІД ЧАС ВИВЧЕННЯ ОСВІТНЬОЇ НОРМАТИВНОЇ ДИСЦИПЛІНИ „СОЦІАЛЬНО-ПРАВОВИЙ ЗАХИСТ ОСОБИСТОСТІ”	262
50.	Дубровська Є., Поп С. ОСОБЛИВОСТІ НАВЧАННЯ ГЕОГРАФІЇ ЗА ПІДХОДАМИ НОВОЇ УКРАЇНСЬКОЇ ШКОЛИ	267
51.	Майстренко А., Кравченко Є., Переворська О.І. ФОРМУВАННЯ МАТЕМАТИЧНИХ УМІНЬ ДОШКІЛЬНИКІВ З ПОРУШЕННЯМ ПСИХІЧНОГО РОЗВИТКУ	270
52.	Михальова К.О. ОРГАНІЗАЦІЯ РОБОТИ ВЧИТЕЛЯ З РОЗВИТКУ КОМУНІКАТИВНОЇ АКТИВНОСТІ МОЛОДШИХ ШКОЛЯРІВ ЗАСОБАМИ ГРИ	274

BASIC REQUIREMENTS FOR THE FORMATION OF INFORMATION CULTURE OF FUTURE TEACHERS OF LABOR TRAINING, TECHNOLOGY AND COMPUTER SCIENCE WHEN USING INFORMATION TECHNOLOGIES

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Information culture is an important component of the professional competence of a modern teacher. It encompasses the knowledge, skills and values necessary for the effective use of information technologies (IT) in the educational process and includes the ability to process, store, transmit and analyze information in accordance with ethical norms and rules. In the context of teachers, “Information culture” is the basis for the formation of professional skills and the development of skills to integrate IT into educational activities [6].

Information literacy is defined as “the ability to effectively interact with information flows, critically evaluate data, use digital tools to process them and create new knowledge” [3]. It includes:

Knowledge: basic principles of information systems, fundamentals of cybersecurity, legal aspects of using IT.

Skills: learning to work with digital tools, software, platforms for organizing the educational process.

Values: ethical norms for working with information, compliance with intellectual property rights, digital hygiene [3].

For teachers, information literacy also involves mastering specialized programs such as 3D modeling, computer-aided design systems (AutoCAD, SolidWorks), and distance learning platforms.

Let's reveal the main requirements for the formation of information culture:

1. Theoretical training. The formation of information culture requires thorough knowledge of IT, its capabilities and limitations. The main requirements include:

- understanding the concepts of digital transformation, the principles of functioning of computer systems and networks;
- knowledge of the main legal and ethical aspects of working with information (compliance with copyright, data confidentiality);

- studying the structure and functions of modern information platforms, their application in education.

2. Practical IT skills. An important component of information culture is the ability to apply IT in pedagogical practice [8].

Working with information resources: searching, evaluating and using educational materials.

Using software: text editors, spreadsheets, graphic programs, data analysis tools.

Organizing interactive learning: creating multimedia lessons, using interactive whiteboards, developing webquests.

Mastering specialized tools: CAD systems, 3D printers, platforms for modeling and simulation [1].

3. Developing critical thinking. Information literacy involves the ability to critically evaluate information, analyze its sources and content. This is important for teachers who must teach students to check the reliability of information, work with large amounts of data, and avoid fake news [4].

4. Compliance with ethical norms and rules. Working with IT requires compliance with ethical principles:

- respect intellectual property rights;
- protect the confidentiality of students' personal data;
- develop students' skills in responsible use of information [7].

5. Integration of IT into the educational process. To develop information culture, future teachers must be able to effectively integrate IT into pedagogical activities. The main requirements include:

- use of IT for developing educational materials, organizing distance learning;
- use of virtual laboratories, simulators for explaining complex technical concepts;
- formation of students' skills in working with information: search, analysis, systematization, creation of their own content [2].

6. Developing digital hygiene skills. Future educators should have knowledge about:

- protecting devices from malware;
- setting secure passwords;
- using antivirus programs and regularly updating the system [5].

7. Self-education and professional development. Information technologies are developing rapidly, so teachers must be prepared to constantly improve their knowledge and skills:

- participation in webinars, conferences, advanced training courses;
- familiarization with new digital tools;
- interaction in professional communities to exchange experience [3].

Let us outline the features of the formation of information culture of teachers:

1. For teachers of labor training and technologies. This category of teachers should have:

- Tools for creating technical drawings and 3D models.
- Programs for modeling production processes.
- Skills in working with robotics and automated systems.

2. For computer science teachers. Computer science teachers should be able to:

- Teach the basics of algorithmization and programming.
- Teach students the principles of database operation, cloud computing.
- Develop educational programs using modern programming languages (Python, Java) [7].

The following methods are used in the formation of information culture:

1. Integration of IT into curricula. Inclusion of IT-related disciplines in all stages of teacher training.

2. Use of project-based learning. Organization of educational projects that require work with information resources, creation of digital content.

3. Practical tasks. Development of workshops using IT to solve real pedagogical tasks.

4. Independent work with IT. Future teachers should have the opportunity to experiment with various digital tools [2].

That is, the formation of information culture of future teachers is a complex multifaceted process. The main requirements for this process include providing theoretical training, developing practical skills in working with IT, integrating IT into the educational process and fostering digital culture.

The implementation of these requirements will allow creating a generation of teachers who are able to effectively use IT to improve the quality of education, develop students and adapt to the challenges of the digital age.

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