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The Use of Software Tools Based on An Axiological Approach in Developing the Digital Media Competence of Future Teachers

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Abstract: This article examines the pedagogical opportunities of using software tools based on an axiological approach in developing the digital media competence of future teachers. In the context of the digital learning environment, future teachers are required not only to use technological tools effectively but also to critically analyze information, assess the socio-moral impact of media messages, follow the principles of digital ethics, and organize value-oriented communication in the educational process. From this perspective, the article analyzes the content of digital media competence, the pedagogical essence of the axiological approach, the didactic functions of software tools, and the mechanisms for integrating them into the educational process. As a result of the study, a system of value-oriented software tools, assessment criteria, and a methodological model aimed at developing the digital media competence of future teachers are proposed.

Keywords: Digital media competence, axiological approach, future teacher, software tool, digital ethics, media literacy, digital learning environment, pedagogical technology.

Introduction: Today, the digital transformation of the education system imposes new requirements on the process of training pedagogical personnel. The widespread use of digital technologies, social networks, electronic learning platforms, artificial intelligence tools, and media resources requires future teachers to operate freely in the modern information environment, search for, select, analyze, evaluate, and use

information effectively for pedagogical purposes.

Digital media competence is an essential component of the professional training of future teachers. This competence is not limited to a set of technical skills; it also includes critical perception of media information, creation of digital content, compliance with information security requirements, respect for copyright, formation of digital communication culture, and responsible use of information.

The relevance of the topic lies in the fact that future teachers often focus mainly on mastering the technical functions of digital tools, while the moral, cultural, spiritual, and educational impact of information may remain insufficiently understood. Therefore, the use of an axiological approach in developing digital media competence is of particular importance.

The axiological approach regards humanism, responsibility, honesty, justice, information culture, national and universal values, and adherence to digital ethics as priority criteria in the educational process. Software tools developed or selected on the basis of this approach contribute not only to the technological literacy of future teachers but also to the formation of their value-oriented professional position in the digital environment.

The purpose of the study is to identify the pedagogical opportunities of using software tools based on an axiological approach in developing the digital media competence of future teachers and to propose a methodological model for this process.

The objectives of the study are as follows:

To analyze the concept of digital media competence from a scientific and pedagogical perspective.

To justify the role of the axiological approach in the training of future teachers.

To identify the types of software tools that contribute to the development of digital media competence.

To develop a methodological model based on the axiological approach.

To define the criteria and indicators for assessing digital media competence.

METHODS

The study employed theoretical analysis, comparison, generalization, modeling, and pedagogical design methods. Scientific sources related to the topic, international approaches to digital competence, pedagogical views on media literacy, and practices of using software tools in the digital learning environment were examined.

The methodological basis of the study consists of competence-based, axiological, activity-oriented, and

learner-centered approaches. The competence-based approach makes it possible to assess future teachers' knowledge, skills, abilities, and value-oriented professional behavior as an integrated system. The axiological approach serves to define the criteria for responsible, ethical, and culturally appropriate activity in the digital environment. In the study, software tools were analyzed according to the following groups:

electronic learning platforms: Moodle, Google Classroom, Microsoft Teams;

tools for creating interactive tasks: LearningApps, Wordwall, Quizizz, Kahoot;

tools for creating media content: Canva, Genially, Powtoon, CapCut;

collaboration and communication tools: Padlet, Jamboard, Miro, educational, Telegram channels;

assessment and reflection tools: Google Forms, Mentimeter, Socrative, electronic portfolio platforms;

educational resources on information security and digital ethics.

During the research process, the following pedagogical conditions were identified for developing the digital media competence of future teachers:

Taking into account the didactic and educational potential of software tools when selecting them.

Integrating moral, legal, and spiritual values into the content of digital tasks.

Developing students' ability to critically evaluate media messages.

Monitoring students' digital activities step by step through electronic portfolios.

Ensuring compliance with netiquette, copyright, and academic integrity in digital communication.

RESULTS

As a result of the study, an axiological-methodological model aimed at developing the digital media competence of future teachers was developed. The model consists of four main blocks.

1. Target Block. The main purpose of this block is to form future teachers' competence in using digital media resources for pedagogical, ethical, and professional purposes. In this process, students should be able not only to search for, select, analyze, process, create, and use information in the educational process but also to evaluate its value-based impact.

2. Content Block. The content block includes the following areas:

digital media and information literacy;

digital pedagogical design;

digital ethics and academic integrity;
critical analysis of media messages;
use of electronic learning platforms;
creation of digital content;
cybersecurity and protection of personal data;
creation of media resources aligned with national and universal values.

3. Technological Block. The technological block defines the stages of using software tools based on the axiological approach.

Stage 1. Diagnostics. The level of students' digital media competence is determined. Questionnaires, tests, practical assignments, and analysis of electronic portfolios are used at this stage.

Stage 2. Orientation. Students are provided with theoretical knowledge about digital media competence, digital ethics, information security, and critical evaluation of media messages.

Stage 3. Practical Activity. Students create infographics, video lessons, electronic tests, interactive tasks, digital presentations, and media resources using software tools.

Stage 4. Axiological Analysis. The digital products created by students are evaluated in terms of ethicality, cultural relevance, reliability, usefulness, and pedagogical appropriateness.

Monitoring students' developmental dynamics through electronic portfolios.

Strengthening practical activities related to academic integrity, copyright, and personal data protection in the digital environment.

DISCUSSION

The use of software tools in developing digital media competence increases the effectiveness of the educational process. However, software tools themselves do not automatically ensure pedagogical results. Their effectiveness depends on the methodological purpose, content, and value-based criteria according to which they are used by the teacher.

The axiological approach serves as an important methodological foundation in this process. In the digital environment, a future teacher acts not only as a creator of content but also as a promoter of information culture, a facilitator of critical thinking among learners, and a guide to digital ethics.

For example, when creating infographics using Canva or Genially, students should consider not only design elements but also the accuracy of information, reliability of sources, educational impact of visual

materials, and suitability for the target audience. When assigning tasks on Google Classroom or Moodle, academic integrity, transparency of assessment, and protection of students' personal data are of particular importance.

Similarly, when using interactive testing platforms, the content of questions, fairness of answer options, clarity of assessment criteria, and contribution to learners' personal development must be considered. Thus, software tools can comprehensively develop the digital media competence of future teachers only when they are integrated with axiological criteria.

The discussion results indicate that the following areas should be prioritized in preparing future teachers for the digital media environment:

Connecting the use of digital tools with professional and pedagogical tasks.

Including elements of axiological analysis in every digital assignment. Assessing students' digital products not only by technical quality but also by ethical, educational, and cultural value. Monitoring students' developmental dynamics through electronic portfolios. Strengthening practical activities related to academic integrity, copyright, and personal data protection in the digital environment.

CONCLUSION

The development of digital media competence among future teachers is one of the key tasks of modern pedagogical education. The digital learning environment requires teachers to work with media resources, critically analyze information, create content, organize digital communication, and use software tools effectively in the educational process.

The results of the study show that the use of software tools based on an axiological approach contributes to the development of not only technological literacy but also ethical responsibility, media culture, critical thinking, digital security, and professional reflection among future teachers.

The methodological model proposed in the article makes it possible to organize the process of developing digital media competence through target, content, technological, and assessment-outcome blocks. This model can be used in pedagogical higher education institutions in teaching subjects related to informatics, information technologies, pedagogical technologies, media literacy, and digital education.

The following practical recommendations can be proposed:

To develop a special module aimed at improving the digital media competence of future teachers.

To apply digital ethics and axiological assessment criteria when using each software tool.

To systematically assess students' digital products through electronic portfolios.

To increase the number of practical assignments related to analyzing media messages, identifying fake information, and verifying the reliability of sources.

To pay particular attention to academic integrity, copyright, and personal data protection when using digital learning platforms.

Thus, the use of software tools based on an axiological approach is an effective pedagogical factor in developing the digital media competence of future teachers and improving their readiness for professional activity in the modern digital learning environment.

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