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Development and Adaptation of Programs for Advanced Training of Teachers to Develop Information and Communicative Competence

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Abstract: The article discusses approaches to the development and adaptation of advanced training programs for teachers aimed at developing information and communication competence (ICC). Particular attention is paid to the need to implement modern digital technologies and pedagogical practices that promote the effective use of ICT in educational activities. The importance of a flexible modular structure of programs focused on the level of digital literacy of teachers, the specifics of the subject area and the goals of the educational organization is substantiated. A model for constructing programs is proposed taking into account the principles of personalization, practice-orientedness and continuous professional development.

Keywords: Advanced training, teaching staff, information and communication competence, digital literacy, ICT competencies, program adaptation, digital transformation of education, personalized learning.

Introduction: In the context of digital transformation of education and growing importance of electronic resources, knowledge of information and communication technologies is becoming a basic requirement for modern pedagogical activity. Formation and development of information and communication competence (ICC) is an integral part of the professional growth of teachers, ensuring their ability to effectively use ICT in teaching, communication with students, parents and colleagues, as well as in self-education.

However, practice shows that many programs for advanced training of teachers do not fully meet new challenges and do not take into account the level of initial digital training of students, the specifics of academic disciplines and educational platforms. The purpose of this article is to substantiate the methodological and practical foundations for the design and adaptation of programs for advanced training of teachers to form ICC. The article analyzes approaches to structuring educational content, choosing digital tools, as well as methods for diagnosing and assessing the achieved level of ICC in teachers.

METHODS

The modern system of advanced training of teachers is based on conceptual approaches and principles that reflect the strategic trends of additional education, recorded in key documents of the state educational policy. In these materials, institutes for advanced training are designated as the main organizational mechanism for the continuous professional growth of teaching staff - they are the ones who set new standards of education for the industry.

The methodological work of such institutes includes preliminary identification of typical professional difficulties of teachers, determination of the most relevant and advanced information, as well as creation of a set of information, technical and educational-methodological conditions. Application of activity-reflexive technologies and modular structure of courses forms the basis for a personalized system of advanced training, within the framework of which individual trajectories of development of professional competencies of teachers are designed.

Professional success of a teacher in modern research is determined by a number of key criteria. Among them are the ability to independently formulate professional tasks, predict possible ways of their solution, choose the most effective strategies of activity, correlate the achieved results with the planned ones, and also analyze the influence of various factors, including the use of interactive educational tools, on the final result.

The study of the processes of formation of information and communicative competence of teachers in the system of advanced training is based on the integrated application of scientific and methodological approaches. Within the framework of this study, the main ones are: andragogical approach, focused on the specifics of adult education; competence-based, aimed at the formation of key professional skills; activity-based, providing a practical focus for training; as well as acmeological and synergetic approaches, which allow us to consider the development of competence as a purposeful and continuous process, influenced by many interrelated factors.

For the effective development and adaptation of programs for advanced training of teachers in the development of information and communication competence (ICC), it is proposed to use the following set of methods:

1. Diagnostics of the initial level of ICC of teachers

• Questionnaires and self-assessment - allow you to identify the level of ICT proficiency, training needs and motivational attitudes.

• Diagnostic cases and mini-tests - allow you to assess practical skills in working with educational digital platforms, communication services and multimedia resources.

2. Modular principle of program construction

• The program is divided into blocks (for example: "Digital literacy", "Educational platforms", "Electronic interaction", "Cybersecurity in education", etc.), which allows you to individualize training and take into account the professional interests of teachers.

• Each module includes: theory, practical tasks, project mini-tasks, interactive exercises.

3. Using blended learning formats

• Combination of face-to-face and distance learning, webinars, online courses and independent work with digital resources.

• Using LMS systems (e.g. Moodle, Google Classroom) to support learning, assessment and feedback.

4. Case study and project-based learning

• Teachers solve practice-oriented cases based on real pedagogical situations related to the use of ICT.

• Project activities are aimed at developing their own digital products: interactive tasks, media lessons, digital scenarios.

5. Coaching and mentoring

• Inclusion of elements of support for teachers by experienced tutors, consultants or ICT coordinators in the program.

• Mentors help to apply the acquired knowledge in the context of everyday teaching practice.

6. Formative and final assessment of results

• Mini-tests, reflective reports and digital portfolios are regularly conducted during the training.

• Upon completion - defense of mini-projects or passing a certification test confirming the formed ICC.

7. Feedback and adaptation of programs

• After each stream, feedback from participants is collected, the success of mastering is analyzed and the program content is adjusted.

• The continuous improvement model (PDCA: plan - do - check - adjust) is used.

RESULTS

The modern educational environment requires teachers not only to master subject content, but also to have highly developed information and communication competence (ICC), which ensures effective interaction in the digital space, work with electronic resources, distance learning platforms and multimedia tools. In this regard, advanced training programs aimed at the formation and development of ICC are of particular importance.

The development of such programs should take into account the following key principles:

1. Updating the content. Educational modules are built on the basis of an analysis of modern digital trends, regulatory requirements and professional difficulties of teachers. It is important to include topics covering digital literacy, electronic interaction, cybersecurity, media literacy and the use of ICT in subject teaching.

2. Modular structure and flexibility of programs. It is envisaged to be divided into thematic blocks, allowing the content to be adapted to the needs of teachers of different disciplines and levels of digital competence. This approach contributes to the creation of individual educational trajectories.

3. Interactivity and practice-oriented. The course includes assignments aimed at solving real pedagogical cases, completing project assignments, mastering educational platforms (Google Workspace, Microsoft 365, Moodle, Zoom, etc.), as well as working with digital assessment and feedback tools.

4. Use of blended learning formats. Programs are implemented in person and distance or fully online using webinars, educational videos, virtual simulators and forums. This ensures convenience and accessibility, especially for teachers from remote regions.

5. Methodological support and mentoring. The inclusion of tutors and ICT mentors in the learning process contributes to a deeper mastery of digital tools and stimulates the application of new knowledge in educational practice.

6. Assessment and reflection. Formative and final assessment methods are used: digital portfolios, ICC self-assessment, mini-projects, feedback from colleagues and curators. This model increases awareness in learning and consolidates acquired skills.

Thus, the adaptation of advanced training programs for the formation of ICC should be based on a comprehensive, personalized and technologically sound approach. This allows teachers not only to master the necessary digital competencies, but also to confidently integrate ICT into the educational process, contributing to improving the quality of learning and student engagement (figure 1).

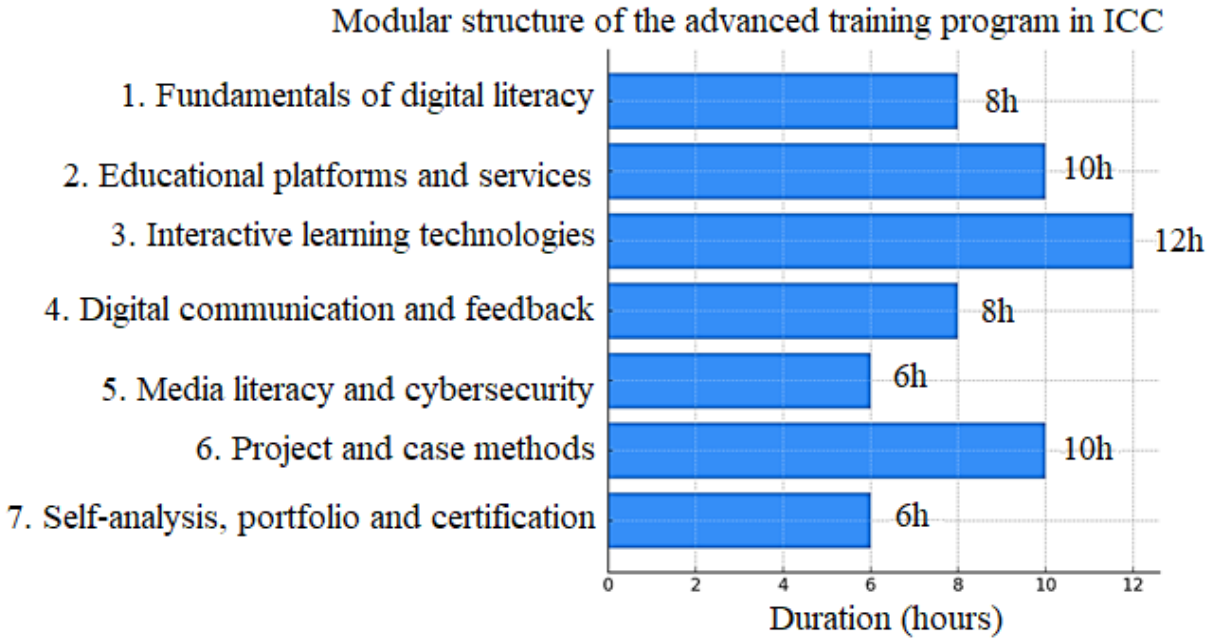

Figure-1. Modular structure of the advanced training program in ICC

The development of effective programs for advanced training of teachers in the field of information and communication competence requires a systematic approach based on the principles of flexibility, personalization and practical focus. The analysis showed that the most effective are programs that combine theoretical knowledge with the active use of digital tools in real educational scenarios.

CONCLUSION

The study examined the adaptation of the program content, which should take into account both the general level of digital literacy of teachers and the specifics of their subject area. The study showed that practice-oriented modules based on real cases and projects contribute to a more sustainable formation of ICC. And monitoring and self-assessment by teachers of the level of their ICT competencies increase awareness and motivation for further professional development. Thus, the proposed methodological recommendations can be used by educational institutions and advanced training centers to create relevant, effective and in-demand programs that contribute to the digital development of teachers and the education system as a whole.

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