



PRACTICAL AND TECHNOLOGICAL ASPECTS OF IMPROVING THE COMPETENCIES OF FUTURE PRIMARY EDUCATION TEACHERS IN THE FIELD OF EDUCATION QUALITY ASSESSMENT

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| Article history: | Abstract: |
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| Received: 20 th November 2025 Accepted: 14 th December 2025 | This article examines the development and improvement of competencies in education quality assessment during the training of future primary school teachers. It discusses the development of competencies in education quality assessment, their in-depth study at the scientific and theoretical level and integration with teaching practice, practical and technological aspects of improving competencies in this area, the possibilities of accurately and objectively assessing a child's level of development in the educational process, as well as sustainable improvements in education quality, the development of a competitive workforce in accordance with international standards, and ensuring the professional training and effectiveness of future primary school teachers. |
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The practical and technological aspects of improving the competencies of future primary education teachers in assessing the quality of education are aimed at creating opportunities for an accurate and objective assessment of the child's development level during the educational process. In this direction, improving the skills of primary education teachers and developing value-based competencies are of great importance. For this, first of all, it is necessary to deeply study the theoretical foundations of assessment and practically organize methodological methods. It is also necessary to introduce criteria and tools that meet international standards for assessing the professional capabilities of teachers. In this process, innovative technologies of the assessment system - observation, portfolio mechanism and performance assessment - are widely used, which allow for the correct assessment of the physical, mental and methodological skills of teachers.

It should be remembered that the process of teacher assessment should always be continuous and provide the necessary conditions for improving their professional skills. This, in turn, is associated with ensuring safe and secure teaching and learning, which contributes to improving pedagogical excellence. In the long term, the integration of technology with methodology, the role of leading pedagogical personnel, and the manuals provided to students affect the success of the assessment process. Therefore, it is important to have clear and practical guidelines for identifying shortcomings in assessment, eliminating errors, and improving skills. This, in turn, is a key tool for improving the professional level of the teacher and improving the quality of education. The process of forming and improving the assessment competence of future primary education teachers requires not only the acquisition of theoretical knowledge, but also the ability to use practical skills and technological tools. In this context, the practical and technological aspects of competency development are implemented in several main areas:

1. Building competence through practical training and microlessons. Practical training and microlessons are important tools for building assessment competence in future teachers. In this process, students actively participate in real pedagogical situations: through case studies, microlessons and simulations, the teacher plays the role of an assessor; through independent analysis of students' work and assessment tasks, analytical thinking skills are developed; and practical assessment competence is strengthened through decision-making practice in real situations. As a result, the student not only acquires theoretical knowledge, but also tests himself as an effective assessor in practical activities and develops a reflective approach.

2. Using digital and technological tools. Today's digital learning environment requires technological approaches to effectively organize the assessment process. Students learn tests and interactive assessment methods on platforms such as Google Forms, Quizizz, Socrative, Mentimeter and Plickers; they acquire the ability to visually present results through automated analysis and graphical indicators; they develop the skills of continuous monitoring of student progress through e-portfolios; they also form the skills of providing feedback and developing individual development

maps using AI technologies. As a result, the student not only uses technological tools, but also has the ability to manage the assessment process in an analytical, transparent and motivational manner.

3. Applying reflective and communicative processes into practice. Assessment competence is not developed solely based on technological tools; it is strengthened through socio-psychological and reflective approaches. Students provide feedback to each other through peer assessment and self-assessment strategies, and also analyze their own activities and exchange ideas with professional communities. In these processes, a culture of constructive feedback is formed in assessment, which develops the student's analytical thinking, reflective and communicative skills and strengthens assessment competence in a comprehensive way.

4. Integrated practical methods. Practical and technological aspects are effectively implemented through integrated methods. In particular, theoretical knowledge is combined with practice using case methodologies and micro-lessons, and continuous monitoring and reflective analysis are carried out through portfolios and logbooks. At the same time, working with assessment rubrics and descriptors serves to combine theoretical and practical skills, forming the student's assessment competence in a comprehensive way.

5. Applying international experiences into practice. The application of international experiences into practice shows that in advanced countries, practical and technological aspects are enriched in various areas. For example, Finland pays great attention to practice in the process of pedagogical training; in Singapore, each teacher undergoes separate courses on assessment literacy during professional development; in Estonia, great emphasis is placed on transparency and automated analysis of assessment using digital platforms. Thus, international experience shows that it is important to combine practice, technology and transparency in the formation of assessment competence.

The practical and technological aspects of improving the competence of future primary education teachers in assessing the quality of education are associated with a system of effective pedagogical mechanisms that integrate theoretical training, practical training, digital technologies and reflective activities. This process serves to form the student not only as a knowledgeable, but also as a competent, reflective and innovative evaluator. Through practical and technological approaches, the teacher develops analytical thinking, a fair and transparent approach, a positive attitude and motivation in the assessment process. At the same time, strategies adapted to the national context based on international experience ensure a high level of competence formation and help prepare teachers who meet modern educational standards.

Recommendations for the effective implementation of practical and technological aspects

1. Step-by-step integration. The process of competence formation is carried out step by step from theoretical training to practical training. Each module is enriched with tasks, micro-lessons, simulations and case-study methods that allow students to apply various aspects of assessment in real pedagogical situations. For example, in the Finnish education system, future primary teachers study each module integrated with practical training during 5 years of training. In micro-lessons, they acquire practical skills in assessing students, creating rubrics and developing tests, which develops their reflective and analytical thinking capacity.

In the Singaporean experience, the practical part of each module is enriched with in-service training courses, where teachers learn strategies for implementing self-assessment and peer assessment. This approach ensures the transition of assessment competence from theoretical knowledge to practical skills and develops the teacher's decision-making and pedagogical innovation skills.

In the Estonian experience, the practical part of the module is implemented on digital platforms: students complete tests and assignments in systems such as eKool and Studium, and the assessment results are automatically analyzed and visualized. Through this, students strengthen their digital literacy, analytical thinking, and individual development monitoring skills.

The advantage of such a step-by-step approach is that it is not limited to imparting knowledge, but also forms practical skills, reflective analysis, the use of innovative methods, a positive pedagogical attitude, and responsibility in the student. As a result, the student develops professional skills such as independent decision-making during the assessment process, providing constructive feedback, and developing rubrics and descriptors. At the same time, the implementation of a step-by-step methodology that integrates international experience into the national education system serves to form teachers' competence at a high level.

2. Widespread use of digital and interactive tools. Modern digital platforms, including Google Forms, Quizizz, ClassMarker, Socrative, Mentimeter, allow not only to make the assessment process interactive and interesting, but also to automatically analyze and visualize the results. For example, the results of tests conducted through Google Forms are immediately visible in the form of graphs and tables, which allows the teacher to determine which questions students are having difficulty with. The Quizizz and Socrative platforms provide the opportunity to monitor students' answers in real time, immediately evaluate them and provide individual recommendations. At the same time, using AI technologies, it is possible to analyze the assessment results and automatically create student development maps, which significantly speeds up pedagogical decision-making.

In addition, the e-portfolio system constantly monitors the individual achievements of each student, their activities in the educational process, and development trends. For example, in the Estonian education system, e-portfolios clearly show the student's achievements and shortcomings in the assessment process, which allows the teacher to formulate personal development strategies. In this way, the integration of digital platforms and e-portfolios expands the opportunities for the teacher to improve assessment competence, develop analytical thinking and an individual approach.

3. Strengthening reflective and communicative activities. Students effectively develop reflective thinking skills through self-assessment and peer assessment. For example, in the process of micro-lessons or case studies, students increase their analytical and critical thinking skills by evaluating their own work and identifying areas for improvement. Peer assessment allows students to provide constructive feedback to each other, identify strengths and weaknesses in the work of their peers, which develops social skills and a spirit of cooperation.

Also, the exchange of ideas with professional communities and mentoring processes enrich the pedagogical experience of the student. For example, in advanced training courses or online pedagogical platforms, students discuss their practices, share experiences and receive constructive feedback from mentors. This process strengthens socio-psychological competence, increases pedagogical responsibility in the teacher and prepares for transparent, fair and effective implementation of assessment activities.

Thus, self-assessment, peer assessment and reflexive processes integrated with the professional community serve to jointly develop not only reflective thinking, but also socio-psychological, pedagogical and communicative competencies of the student.

4. Combining cognitive-motivational approaches. The formation of a positive attitude towards assessment, responsibility and motivation is an integral part of the pedagogical process. In the preparation of future teachers, this aspect ensures that students understand the educational and developmental role of assessment. For example, in micro-lessons or practical exercises, students manage the assessment process themselves, strengthening their responsibility through self-assessment and peer assessment.

Also, strategies for reducing assessment stress and implementing a fair approach provide students with a psychologically comfortable environment. For example, by transparently displaying anonymous peer assessment or test results, students feel free and develop a positive attitude towards assessment. At the same time, a motivational approach is used in the assessment process, encouraging student achievement and development, which increases their interest in pedagogical activity.

As a result, the formation of a positive attitude to assessment, responsibility and motivation not only increases the quality of competence, but also strengthens the ethical, fair and reflective approach in the future teacher, significantly increasing the effectiveness of the pedagogical process.

5. Adapting international experiences to practice. The experience of Finland, Singapore and Estonia is recognized as an effective mechanism for building the assessment competence of future primary education teachers. In the Finnish education system, future teachers undergo 5 years of practice-oriented training, during which they develop practical skills through micro-lessons, case studies and simulations, along with the theoretical foundations of assessment. In Singapore, each teacher undergoes a special module on assessment literacy in their in-service training courses, which allows teachers to understand assessment criteria, create rubrics and conduct diagnostic analysis of the learning process.

Estonia, on the other hand, pays great attention to the use of digital platforms. Here, teachers conduct assessments in systems such as eKool and Studium, the results are automatically analyzed, and transparent indicators are provided to students and parents. At the same time, feedback, individual development maps and rapid diagnostics are developed using AI tools.

Adapting these international experiences to the national educational context and integrating them into curricula ensures the continuous development of competence. As a result, the future teacher will be ready to effectively conduct the process of assessing the quality of education, combining theoretical knowledge, practical skills, digital literacy and a reflective approach. In this way, international experience supports the innovative, digitalized and quality-oriented development strategy of the national education system.

The process of forming the competence of future primary education teachers to assess the quality of education will be effective through a comprehensive pedagogical system enriched with practical and technological aspects. Competence includes not only knowledge and skills, but also reflective thinking, analytical approach, digital literacy, fair assessment and motivation. Practical and technological approaches serve to prepare the student as a competent, innovative and international standard-compliant teacher. At the same time, assessment practices carried out in real pedagogical situations and on digital platforms strengthens the student's individual development, pedagogical social skills, and professional ethics.

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