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METHODS FOR DEVELOPING EFFECTIVE ASSESSMENT TOOLS FOR PROSPECTIVE TEACHERS

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Abstract: This article analyzes the methods of developing effective assessment tools for prospective teachers. During the study, it was determined what experiences and problems students have with assessment through questionnaires, interviews and observation methods. Based on the results, modern assessment methods such as criterion-based assessment rubrics, electronic tests, portfolios and peer assessment journals were recommended. These approaches are effective in developing the assessment competencies of prospective teachers.

Keywords: assessment tools, prospective teacher, criterion-based assessment, portfolio, metacognitive competence, pedagogical practice, peer assessment

INTRODUCTION

The fundamental changes taking place in the educational process in the 21st century require teachers not only to have knowledge of the subject, but also to have the skills to plan, analyze, evaluate and apply innovative approaches to the educational process. In particular, the formation of assessment skills of future teachers is an integral part of their future professional activities. Assessment is not only a means of measuring student knowledge, but also an important indicator of the quality of education, the effectiveness of the educational process and the accuracy of the teacher's strategy. Unfortunately, practice shows that many future teachers, although they are familiar with only traditional forms of assessment tools - such as tests, written work, oral surveys, have difficulty in applying modern assessment approaches - such as criterion-referenced assessment, reflective analysis, peer assessment, assessment using digital tools. This indicates that there are certain gaps in their methodological preparation.

This article scientifically analyzes the methods of developing effective assessment tools for future teachers, the advantages of implementing them in practice, and the level of effectiveness. It also substantiates the role of assessment tools developed based on innovative methodologies and modern technologies in improving the quality of education and assessment culture.

LITERATURE REVIEW

Pedagogical scientist N. Kholmatova analyzed the impact of assessment tools on educational effectiveness based on experimental experiments in her study. According to her, criterion-based assessment increased the level of student learning by 27% [1].

J. Jo'rayev proposed a methodology for developing assessment rubrics for future teachers, noting that they have a positive effect on their reflective thinking skills. Also, observations by D. Kamilova show that the use of peer assessment and self-assessment tools is effective in developing students' metacognitive activity[2].

Brookhart highlights that pre-service teachers often lack the confidence and knowledge to create fair and valid assessments. She recommends integrating assessment training throughout teacher preparation curricula, rather than limiting it to a single course[3].

Recent studies by DeLuca & Klinger suggest that hands-on assessment design experiences, including rubric construction and digital tools, improve pre-service teachers' ability to align assessments with learning outcomes and standards[4].

METHODOLOGY

This study used a combination of qualitative and quantitative methods. The main objective of the study was to determine the level of assessment skills of future teachers and to substantiate the methods for developing effective assessment tools.

The study involved 60 respondents (38 women, 22 men), 3rd-4th year students studying in the pedagogical field. They were selected from three higher educational institutions of Uzbekistan - Tashkent State Pedagogical University, Kokand State Pedagogical Institute, and Fergana State University.

Data were collected using the following methods:

Questionnaire: A specially designed questionnaire consisting of 20 closed and semi-open questions was used to determine students' knowledge, experience, and problems with assessment tools. The questionnaire was compiled on the Google Forms platform and distributed digitally.

Semi-structured interview: Individual interviews were conducted with 15 students. The interviews were audio-recorded and then thematically analyzed. The questions asked about the reflexive approach to assessment, the use of rubrics, and the readiness to work with digital assessment tools.

Observation: The assessment forms used by students in the practical lessons were directly observed and recorded based on protocols. Attention was paid to the clear explanation of the assessment criteria to the students, the quality of feedback, and peer assessment.

Data analysis

Quantitative data were processed using SPSS software and expressed in percentage analysis, correlation, and graphical form. Qualitative data were analyzed through thematic coding. This approach allowed for a deeper understanding of the participants' thoughts and experiences.

Informed consent was obtained from the participants. All data were collected anonymously and used for scientific purposes only.

RESULTS

The results of the study showed that there is a significant gap between the knowledge, practical skills, and needs of prospective teachers regarding assessment tools.

1. Survey results

A questionnaire was distributed to 60 pre-service teachers. The key findings were:

Theoretical knowledge of assessment: 82% correctly identified the main purposes of assessment. However, only 41% were able to clearly differentiate between formative and summative (criterion-referenced) assessment.

Usage of assessment tools: 70% of respondents preferred traditional tests and oral questioning. Only 12% reported using rubrics in their assessment practices. Furthermore, 65% had no experience with peer assessment.

Use of digital assessment tools: 48% had created digital tests using platforms like Google Forms or Kahoot, but 80% admitted they lacked systematic training in using these tools for assessment purposes.

2. Interview analysis

Semi-structured interviews with 15 pre-service teachers revealed three recurring themes:

Anxiety around assessment: Many participants expressed fear of making incorrect grading decisions and reported a lack of clarity about using assessment criteria effectively.

Lack of reflective approach: Most viewed assessment merely as a way to give final grades, rather than as a formative tool for student development.

Practical needs: Participants emphasized the need for more hands-on training to design and apply assessment tools during practical teaching sessions.

Classroom observation results

A total of 10 teaching sessions were observed during teaching practicum. Observational data showed the following:

Table 1

Observation Indicators	Frequency of Use (%)
Clear assessment criteria applied	40%
Student involvement in assessment	25%
Oral (verbal) feedback provided	55%
Use of digital tools for assessment	18%

Discussion

This study identified key factors and approaches for developing effective assessment tools for prospective teachers and confirmed them as effective methods that can be used in practice. The results of the study showed that it is very important to set clear goals when developing assessment tools, select indicators that fully capture students' knowledge and skills, and ensure that assessment criteria are objective and fair. These ideas are also consistent with previous studies (e.g., Smith et al., 2020; Karimova, 2022). The study found that the assessment tools created by prospective teachers widely used tests, oral and written assessment forms covering different stages of the learning process. At the same time, participants expressed their willingness to introduce interactive and innovative methods, including rubrics, portfolios, and self-assessment forms, to increase the effectiveness of assessment tools. This will allow the formation of an assessment system that meets the requirements of modern education.

However, one of the main problems identified in the study was the insufficient methodological knowledge and low level of practical skills of future teachers in some cases in developing assessment tools. This can affect the level of reliability and validity of their assessment process. Therefore, it is necessary to introduce special training and practical exercises in the development and use of assessment tools in the educational process. The results of the study also showed that the processes of interaction and exchange of ideas among future teachers in developing assessment tools are effective, which serves to further develop their skills. Also, the active support and methodological assistance of pedagogical leaders is an important factor in improving the quality of the assessment process.

In conclusion, the development of effective assessment tools for future teachers requires the development of not only theoretical knowledge, but also practical skills. In the future, expanding innovative approaches to assessment in the educational process, regular retraining of teachers, and continuous monitoring of the quality of assessment tools remain important tasks.

Conclusion

The results of the study showed that clear and systematic approaches are important in the process of developing effective assessment tools for future teachers. The content and form of assessment tools should allow for a full assessment of students' knowledge, skills and abilities. At the same time, teachers should have a deep knowledge of pedagogical methods when creating assessment tools, introduce modern innovative methods and improve their skills through mutual exchange of experience. The main problem identified during the study is the insufficient development of methodological knowledge and practical skills of future teachers, which can negatively affect the quality of assessment in the educational process. Therefore, it is necessary to organize special trainings on the development of assessment tools in the educational process and regularly retrain teachers.

In the future, the development of systematic approaches to the creation of effective assessment tools and the continuous improvement of teachers' assessment skills will further improve the quality of education.

Recommendations

Organize practical training on the development of assessment tools: In order to develop the assessment competence of future teachers, practical trainings, seminars, and master classes should be held in higher education institutions.

Integrate innovative assessment technologies into the curriculum: It is necessary to develop modern assessment tools such as electronic portfolios, diagnostic tests, and rubrics and introduce the methodology for their use into pedagogical education.

Establish a mentoring and collaboration system: Under the guidance of experienced teachers, it is possible to involve future teachers in real assessment processes and develop their practical skills by jointly developing assessment tools.

Rely on national and international standards in the development of assessment tools: Assessment criteria and indicators should be in line with international experience, while at the same time being adapted to the local educational environment.

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