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# REFLECTIVE PRACTICE AS A PEDAGOGICAL CONDITION FOR DEVELOPING METACOMPETENCE IN FUTURE PRIMARY SCHOOL TEACHERS

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**Abstract**

The article discusses the role of reflective practice in developing the metacompetence of future primary school teachers. In modern teacher education, professional preparation is not limited to the acquisition of subject knowledge and methodological skills. It also requires the ability to analyse one's own pedagogical actions, regulate learning strategies, make independent decisions and adapt to changing educational contexts. The paper is based on theoretical analysis, comparative pedagogical interpretation and generalisation of recent international studies on self-regulated learning, reflective practice, Lesson Study, digital competence and research competence in teacher education. It is argued that reflective practice acts as a central pedagogical mechanism through which future teachers become able to connect theoretical knowledge with real classroom situations. The paper also outlines practical directions for integrating reflective tasks, case analysis, project-based learning and digital tools into the preparation of future primary school teachers. The findings may be used to improve methodological training in pedagogical higher education institutions.

**Keywords:** Metacompetence, reflective practice, primary education, future teachers, self-regulated learning, teacher education.


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## Introduction

The transformation of modern education has changed the requirements for teacher training. A future primary school teacher is expected not only to know the content of subjects and teaching methods, but also to understand how to plan, analyse, regulate and improve professional activity. This need is especially important in primary education, because the teacher works with children at the stage when their first learning habits, social behaviour, communication culture and cognitive independence are formed. Therefore, teacher education must develop not only professional competence, but also metacompetence.

Metacompetence may be understood as an integrative quality that enables a person to manage knowledge, evaluate personal actions, reflect on experience and transfer acquired skills to new situations. In the context of teacher education, it includes reflective thinking, self-regulation, methodological flexibility, critical analysis, digital awareness and readiness for continuous professional development. Recent studies show that self-regulated learning is one of the key directions in the preparation of pre-service teachers, because it helps them organise their own learning and later support pupils' independent learning in the classroom [1].

The issue is also connected with reflective practice. Reflection allows future teachers to understand why a certain pedagogical decision is effective or ineffective, what problems arise during the lesson and how teaching strategies can be improved. Chaseley and Abercrombie emphasise that scaffolds may support pre-service teachers' reflective practice and help them analyse pedagogical problems more consciously [2]. Similarly, reflective writing is considered an important tool for identifying the depth and quality of teachers' professional thinking [3].




The aim of this paper is to characterise reflective practice as a pedagogical condition for developing the metacompetence of future primary school teachers and to describe possible ways of integrating reflective mechanisms into teacher education.

## Materials and methods

The paper is theoretical and analytical in nature. The methodological basis of the work includes analysis of recent scientific literature, comparative pedagogical interpretation, systematisation and generalisation. The study examines international research published mainly in 2024–2026 and related to self-regulated learning, reflective practice, Lesson Study, project-based learning, digital competence and research competence in pre-service teacher education.

The selection of sources was based on several criteria: relevance to teacher education, connection with metacompetence or its components, publication in recent years, methodological validity and practical significance for the preparation of future primary school teachers. Special attention was paid to studies that describe reflective and metacognitive mechanisms in higher pedagogical education [1; 2; 3; 4; 5]. The study also considered research on digital competence and research competence, because modern teacher metacompetence cannot be separated from digital and evidence-based pedagogical activity [8; 9; 10].

## Results and discussion

The analysis shows that reflective practice is one of the central conditions for developing metacompetence in future primary school teachers. Reflection connects theoretical knowledge with practical action. Without reflection, knowledge often remains formal and does not become a tool for solving

pedagogical problems. A student may know pedagogical concepts, but may not be able to explain why a chosen method works in one classroom situation and does not work in another. Reflective practice helps future teachers understand this connection.

Table 1. Main pedagogical mechanisms for developing metacompetence in future primary school teachers

| Pedagogical mechanism | Main function in teacher training | Component of metacompetence developed | Expected pedagogical result |
|---|---|---|---|
| Reflective diary | Encourages students to analyse their own learning and teaching experience | Reflective component | Future teachers become able to evaluate their methodological decisions |
| Lesson Study | Organises collaborative lesson planning, observation and improvement | Reflective and collaborative components | Students learn to redesign lessons on the basis of classroom evidence |
| Case-study tasks | Presents real or simulated pedagogical problems | Adaptive and analytical components | Students develop decision-making skills in complex classroom situations |
| Project-based learning | Connects theoretical knowledge with practical educational tasks | Metacognitive and research components | Students learn to plan, implement and evaluate pedagogical projects |
| Digital lesson design | Requires the pedagogically justified use of digital tools | Digital-methodological component | Students select digital resources according to learning goals and pupils' age characteristics |
| Small-scale pedagogical research | Involves observation, data collection and interpretation | Research component | Students make evidence-based methodological conclusions |




As shown in Table 1, metacompetence is not formed through a single teaching method. It develops through the integration of reflective, metacognitive, collaborative, digital and research-oriented activities. Reflective diary and Lesson Study mainly strengthen the ability to analyse pedagogical actions, while case-study tasks and project-based learning improve decision-making and methodological flexibility. Digital lesson design and small-scale pedagogical research help future teachers connect modern educational tools with evidence-based pedagogical thinking.

In teacher education, reflective practice may be organised through reflective diaries, lesson analysis, peer discussion, mentor feedback, case-study tasks and microteaching. Lesson Study is especially important in this regard, because it creates a cycle of planning, observation, analysis and improvement. Hummes and Seckel show that Lesson Study can strengthen reflective competence by encouraging teachers to analyse lesson structure and didactic suitability [4]. For future primary school teachers, such an approach is useful because it develops the ability to observe pupils' learning behaviour and improve teaching decisions on the basis of evidence.

Another important component of metacompetence is self-regulated learning. It includes planning, monitoring and evaluating one's own learning activity. Rodríguez-Gómez and co-authors argue that self-regulated learning strategies support sustainable professional development in initial teacher education [5]. In the training of future primary school teachers, this means that students should learn to set professional goals, choose learning strategies, monitor their progress and evaluate their own methodological growth. These skills are later transferred into school practice, where teachers help pupils develop independent learning habits.

Project-based learning also contributes to metacompetence. Payoungkiattikun and co-authors demonstrate that project-based learning may foster metacognitive skills in pre-service teachers [6]. In primary teacher education, project work can be connected with designing lessons, creating didactic materials, analysing real classroom problems and developing small pedagogical research tasks. Such activities form a link between theory and practice and make professional learning more active.

Reflective practice is closely connected with professional identity. Li notes that reflection supports pre-service teachers' professional development by strengthening their critical pedagogical thinking and readiness for improvement [7]. This is important because a future teacher should not only perform methodological tasks, but also understand personal responsibility for pupils' development. In primary education, teacher identity has a strong moral and social dimension, as the teacher influences children's first attitude towards learning, communication and cooperation.

Digital competence is another component of modern metacompetence. Digital tools are not only technical instruments; they also change the organisation of learning, communication and assessment. Zhang, Yang and Zheng show that digital competence is becoming an important factor in sustainable teacher education [8]. Dolezal, Motschnig and Ambros also argue that pre-service teachers' digital competence requires systematic attention in university programmes [9]. For future primary school teachers, digital competence should include the ability to select age-appropriate digital resources, use interactive tasks, support pupils' digital literacy and evaluate the pedagogical value of digital materials.

Research competence is also necessary for metacompetence. Matjašič and Vogrinc emphasise that pre-service teachers' research competence supports their

ability to understand educational problems and make evidence-based decisions [10]. In primary teacher education, this may be developed through observation, small-scale surveys, analysis of pupils' work and preparation of analytical reports. A teacher with research competence does not rely only on intuition; he or she analyses classroom evidence and chooses methods more responsibly.

International experience shows that metacompetence is not formed through one isolated course. It develops through the whole system of teacher education: lectures, seminars, pedagogical practice, digital tasks, project work, assessment and mentoring. OECD materials also underline the importance of formal approaches to developing teachers' digital competences [11]. In Uzbekistan, this issue is connected with the reform of pedagogical education and the need to strengthen the relationship between higher education institutions and schools. The Presidential Decree of 28 April 2025 on improving the system of training pedagogical personnel also supports the modernisation of teacher preparation and the integration of international experience into national practice [12].

For the Uzbek educational context, foreign models should not be copied mechanically. They should be adapted to national pedagogical traditions, institutional possibilities and the real needs of primary education. In this regard, reflective practice can become a practical bridge between international approaches and national teacher training. For example, Lesson Study elements may be introduced during pedagogical practice; reflective diaries may be used after each lesson observation; case-study tasks may be included in methodology classes; digital lesson projects may be evaluated not only technically, but also pedagogically.

The following model may be proposed for developing metacompetence in future primary school teachers: theoretical preparation — practical pedagogical situation — reflective analysis — methodological redesign — self-assessment —

professional development planning. This model makes professional training more consistent, because it does not separate knowledge from action. It also helps students understand that teaching is a continuous process of analysis, correction and improvement.

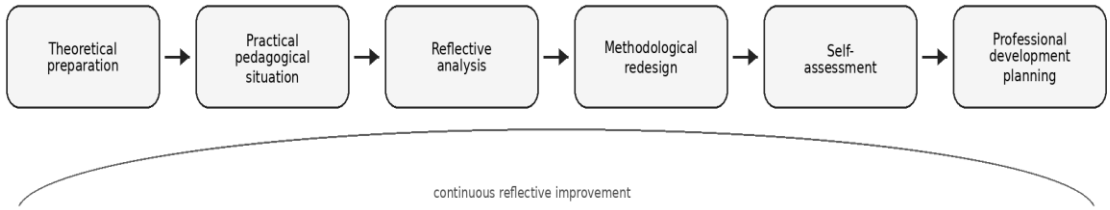


Figure 1. Conceptual model for developing metacompetence in future primary school teachers

The model presented in Figure 1 shows that the development of metacompetence should be organised as a continuous pedagogical cycle. First, students acquire theoretical knowledge in pedagogical and methodological courses. Then they apply this knowledge in practical pedagogical situations. Reflective analysis allows them to identify strengths and weaknesses in their teaching decisions. Methodological redesign helps students improve lesson planning and teaching strategies. Self-assessment develops responsibility for professional growth, while professional development planning supports continuous improvement.

## Conclusion

The analysis confirms that reflective practice is a significant pedagogical condition for developing the metacompetence of future primary school teachers.




It helps students connect theoretical knowledge with practical teaching situations, analyse their own decisions and improve professional behaviour.

Metacompetence includes reflective, metacognitive, digital, research-oriented and adaptive components. These components should be developed together through reflective diaries, lesson analysis, case-study, project-based learning, digital tasks and small-scale pedagogical research.

The preparation of future primary school teachers in Uzbekistan may benefit from selected elements of international experience. However, these elements should be adapted to the national educational context. The integration of reflective practice into pedagogical courses and school practice can strengthen professional and methodological training and contribute to the quality of primary education.

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