

Developing the Reflective Metacompetence Of Future Primary Education Teachers in The Process of Teaching Pedagogical Subjects

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Abstract: The development of reflective metacompetence in future primary education teachers is one of the important conditions for improving the quality of pedagogical training in higher education. In modern teacher education, professional competence cannot be limited to knowledge of pedagogical theories, methods and technologies. A future primary education teacher must also be able to analyse his or her own activity, evaluate pedagogical decisions, understand the needs of pupils, regulate professional behaviour and consciously improve personal teaching practice. Reflective metacompetence performs an integrative function because it connects cognitive, methodological, communicative, motivational and self-development components of professional readiness. This article examines the development of reflective metacompetence of future primary education teachers in the process of teaching pedagogical subjects. The study is based on theoretical analysis, competence-based methodology, reflective approach and pedagogical generalisation. The results show that pedagogical subjects create favourable didactic opportunities for forming reflection, metacognitive control, self-assessment, professional responsibility and readiness for lifelong learning. The article argues that reflective metacompetence should be developed through problem-based tasks, pedagogical situation analysis, reflective diaries, self-assessment, peer feedback and integration of theory with pedagogical practice.

Keywords: Reflective metacompetence, future primary education teacher, pedagogical subjects, reflection, metacognition, professional competence, self-assessment, teacher education, pedagogical training.

Introduction: The preparation of future primary education teachers is a complex pedagogical process that requires the formation of professional knowledge, methodological skills, communicative culture and personal responsibility. Primary education is the foundation of the entire educational system, because at this stage pupils develop basic learning skills, moral values, communication habits and attitudes toward knowledge. Therefore, the teacher working with young learners must possess not only subject and methodological competence, but also the ability to understand pedagogical situations deeply, analyse personal actions and improve teaching practice consciously.

In contemporary pedagogical theory, reflection is

considered one of the key mechanisms of professional growth. Reflection enables a future teacher to look at his or her own activity from an analytical position, identify strengths and weaknesses, understand the reasons for success or failure and plan further development. Metacompetence, in turn, represents a higher-level ability that regulates the use of different competencies in changing professional situations. When reflection and metacompetence are integrated, reflective metacompetence emerges as a special quality of the future teacher. It allows the specialist to manage personal learning, professional behaviour and pedagogical decision-making on the basis of conscious analysis.

The relevance of developing reflective

metacompetence is connected with the transformation of teacher education. Modern educational practice requires a teacher who can work in uncertain situations, adapt methods to pupils' needs, cooperate with parents and colleagues, use digital resources, assess learning outcomes and continuously develop professional identity. Such abilities cannot be formed only through memorisation of pedagogical concepts. They require reflective comprehension of pedagogical knowledge and its application in real or modelled educational situations.

Pedagogical subjects have a special role in this process. Courses such as general pedagogy, theory of education, didactics, educational technologies, pedagogical mastery and primary education methodology provide future teachers with theoretical foundations of professional activity. However, their effectiveness depends on how they are taught. If pedagogical subjects are presented only as a set of definitions and classifications, students may acquire formal knowledge without developing reflective ability. If these subjects are organised through analysis, discussion, problem-solving and self-evaluation, they become a powerful means of developing reflective metacompetence.

The aim of this article is to analyse the pedagogical and methodological possibilities of developing the reflective metacompetence of future primary education teachers in the process of teaching pedagogical subjects.

The research is based on theoretical and methodological analysis of scientific literature on reflection, metacognition, professional competence, teacher education and pedagogical training. The competence-based approach was used to interpret reflective metacompetence as an integrative quality that unites knowledge, skills, values, self-regulation and professional self-development. The reflective approach was applied to determine the mechanisms through which future teachers analyse their own pedagogical actions and learning experiences. The system approach made it possible to consider reflective metacompetence as a component of the general structure of professional competence.

The study also relied on comparative analysis and pedagogical generalisation. Comparative analysis was used to distinguish traditional reproductive teaching of pedagogical subjects from reflective and activity-

oriented teaching. Pedagogical generalisation helped to identify the didactic conditions under which pedagogical subjects contribute to the formation of reflective metacompetence. The material of the study includes theoretical concepts of reflective practice, metacognition, professional knowledge and teacher development, as well as methodological interpretations of pedagogical subjects in higher education.

Reflective metacompetence of future primary education teachers may be understood as the ability to consciously analyse, regulate and improve one's own professional learning and pedagogical activity. It includes awareness of personal knowledge and limitations, ability to evaluate pedagogical decisions, readiness to receive feedback, capacity for self-correction and orientation toward continuous professional development. This competence is called meta-level because it does not replace other competencies, but manages and integrates them. A future teacher with developed reflective metacompetence can use pedagogical knowledge more flexibly, choose appropriate methods more consciously and adapt behaviour to the needs of pupils and educational situations.

The process of teaching pedagogical subjects creates natural conditions for the development of this quality. Pedagogy as an academic field is directly connected with human development, upbringing, teaching, communication and social responsibility. Every pedagogical concept can become an object of reflection if it is connected with practice and personal experience. For example, the study of didactic principles should not be limited to memorising their names. Students need to analyse how these principles appear in real classroom situations, why a certain method may be effective for one pupil and insufficient for another, and how a teacher's decision influences the emotional and cognitive development of children.

A significant methodological condition is the transformation of pedagogical subjects from reproductive learning into reflective learning. In reproductive learning, students mainly repeat definitions and theoretical statements. In reflective learning, they compare different pedagogical positions, analyse cases, justify decisions and evaluate their own understanding. This does not mean that theoretical knowledge loses importance. On the contrary, theory

becomes more meaningful when it is used as a tool for interpreting pedagogical reality. A future teacher begins to understand that pedagogical concepts are not abstract formulas, but instruments for solving real professional tasks.

Problem-based tasks are especially effective in developing reflective metacompetence. When students are given a pedagogical problem, they must identify the essence of the situation, analyse possible causes, compare alternatives and justify a solution. For instance, a situation involving a pupil's low motivation, conflict in the classroom or difficulty in mastering reading skills requires not only knowledge of pedagogy, but also reflective judgement. Students learn to ask why the problem appeared, what factors influence it, what decision is ethically and pedagogically appropriate, and what consequences may follow. Such tasks develop professional thinking and self-regulation.

The analysis of pedagogical situations is also important because primary education teachers often face complex and emotionally sensitive circumstances. Young learners require attention, patience and individual support. A future teacher must be able to understand the child's behaviour, distinguish between external actions and internal causes, and select methods that do not harm the child's personality. Reflective metacompetence helps the teacher avoid mechanical reactions and make decisions based on pedagogical reasoning. In the process of teaching pedagogical subjects, case analysis may connect theoretical themes with real classroom practice and form students' ability to think professionally.

Reflective diaries are another effective tool. When students regularly describe what they have learned, what difficulties they faced, how their views changed and what questions remain unclear, they develop the habit of self-analysis. A diary is not simply a written report; it is a means of internal dialogue. It helps students see their own progress and understand the relationship between knowledge, experience and professional identity. In pedagogical subjects, reflective diaries may be used after seminars, microteaching sessions, pedagogical practice or discussions of educational theories.

Self-assessment plays a central role in reflective metacompetence. A student who cannot evaluate his or

her own learning and professional readiness remains dependent only on external assessment. Self-assessment teaches future teachers to identify their achievements and limitations independently. It also forms responsibility for personal growth. In pedagogical subjects, self-assessment may be connected with lesson planning, analysis of communication, participation in discussions, preparation of educational projects and performance during pedagogical practice. The main value of self-assessment lies not in giving oneself a mark, but in understanding the reasons behind one's level of performance.

Peer feedback strengthens reflection because it creates a dialogic learning environment. When students evaluate each other's pedagogical ideas, lesson fragments or case solutions, they learn to express arguments, accept criticism and compare different approaches. This process forms communicative and reflective culture. It is important that feedback should be constructive and based on clear criteria. Otherwise, it may become subjective or formal. In the teaching of pedagogical subjects, peer feedback helps future teachers see that professional activity can be interpreted from different perspectives and that pedagogical decisions require justification.

The integration of pedagogical theory with practice is a necessary condition for developing reflective metacompetence. If students study theory separately from practice, their knowledge may remain passive. If they participate in practice without theoretical reflection, their actions may become intuitive and unsystematic. The unity of theory and practice allows students to understand why a particular pedagogical action is effective or ineffective. Microteaching, observation of lessons, modelling of educational situations and analysis of real school experience help future teachers connect pedagogical concepts with professional behaviour.

Metacognitive strategies are closely related to reflective metacompetence. They include planning, monitoring and evaluating one's own learning. In the process of studying pedagogical subjects, students should learn to set learning goals, choose strategies, monitor comprehension and evaluate results. For example, before studying a topic, a student may determine what he or she already knows and what needs to be clarified. During learning, the student

monitors understanding and asks questions. After learning, the student evaluates how the new knowledge can be applied in teaching. Such strategies develop independence and readiness for lifelong learning.

The motivational-value aspect should not be ignored. Reflection becomes professionally meaningful only when students understand the value of teaching and accept responsibility for child development. Pedagogical subjects should therefore develop not only intellectual reflection, but also value reflection. Future teachers need to think about what kind of teacher they want to become, what values should guide interaction with pupils, and how their personal qualities influence the educational environment. In primary education, where the teacher's personality has a strong impact on children, value reflection is especially important.

The development of reflective metacompetence also depends on the teacher educator's role. A university teacher should organise a learning environment where students are encouraged to think, ask questions, express doubts and analyse mistakes. If mistakes are treated only as failure, students may avoid reflection. If mistakes are analysed as learning material, they become a source of professional growth. The teacher educator should model reflective behaviour by explaining pedagogical choices, demonstrating openness to feedback and encouraging students to justify their opinions.

Digital technologies can also support reflective metacompetence when used purposefully. Electronic portfolios, online discussion forums, video analysis of microteaching and digital feedback tools allow students to collect evidence of their progress and analyse learning dynamics. However, technology itself does not guarantee reflection. Its effectiveness depends on pedagogical design. Digital tools should be used to deepen analysis, support feedback and organise individual learning trajectories.

The results of the theoretical analysis show that reflective metacompetence develops gradually. At the initial stage, students learn to describe their learning experiences and identify difficulties. At the next stage, they analyse causes, compare pedagogical alternatives and connect theory with practice. At a higher stage, they independently regulate professional development, predict consequences of pedagogical decisions and

construct personal strategies of growth. This gradual development should be reflected in the content and methodology of pedagogical subjects.

Developing the reflective metacompetence of future primary education teachers in the process of teaching pedagogical subjects is an essential task of modern pedagogical higher education. Reflective metacompetence enables future teachers to analyse their own activity, regulate professional behaviour, evaluate pedagogical decisions and consciously improve practice. It performs an integrative function because it connects pedagogical knowledge, methodological skills, communicative culture, professional values and self-development.

Pedagogical subjects have significant didactic potential for forming this quality. Their effectiveness depends on the use of reflective learning, problem-based tasks, pedagogical situation analysis, reflective diaries, self-assessment, peer feedback, metacognitive strategies and integration of theory with practice. These methods transform pedagogical knowledge into a personal and professional resource.

The development of reflective metacompetence should be organised as a continuous process throughout teacher education. It requires a supportive academic environment, clear assessment criteria, practice-oriented learning and the active role of the teacher educator. As a result, future primary education teachers become more prepared for independent professional growth, responsible pedagogical decision-making and effective work with pupils of primary school age.

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