



Practical Organizational Forms And Methods In The Formation Of Reflective Competences

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Abstract

This article outlines the directions of practical and organizational methods for developing reflective competences in the modern educational system.

Keywords

Reflection, training, subject, differential approach, cross-debate, start-stop discussion, mentoring system, interactive models.

Introduction

The formation of reflective competences is one of the key priorities of the modern education system, aimed at developing the learner's personality as an active subject. Metacognitive skills such as reflective thinking, argumentation, decision-making, and self-assessment are effectively shaped precisely through practical activities. From this perspective, training-based organizational forms for reflection, including master classes, workshops, and laboratory sessions, stand out for their high methodological and didactic potential.

Master classes usually involve a highly qualified specialist delivering a live demonstration of a lesson or pedagogical practice, followed by a reflective process. This format is doubly beneficial in developing reflective competences: the teacher reinforces methodological approaches, while the learner deepens knowledge through active analysis. In particular, the use of problem situations, controversial questions, and case-based solutions enriches the content of the master class from a reflective perspective.

The workshop format, on the other hand, requires a more interactive and group-based approach in reflective education. Here, participants work in small teams, combining their knowledge and experiences to address specific problems. In this way, a collaborative form of reflective thinking is cultivated, where personal reflection is harmonized with collective reasoning. Moreover, mutual questioning, critical exchanges of opinion, and final discussions enable the integration of individual reflection with social reflection.

Laboratory classes, especially in the natural sciences—chemistry, physics, and biology—create wide opportunities for developing reflective competences. In chemistry, for instance, asking questions based on an experiment, analyzing observations, reflecting on uncertainties, and evaluating conclusions all encourage learners toward creative and critical thinking. Post-experiment written analyses, answers to questions such as "What did I understand?", and the use of the "inner dialogue" technique all bring out higher levels of reflective assimilation.

At the end of such sessions, learners should be given written or oral reflection tasks. These should include personal questions such as: "What did this activity give me?", "What will I change in the future?", "At which stage did I face difficulties?" The answers provide an opportunity to

determine the learner's level of reflective maturity. This approach contributes to self-awareness, self-management, and the development of independent thinking and behavior.

Practical forms of developing reflective competences not only foster reflective culture in learners but also enhance professional reflection among teachers. For this reason, integrating these training methods into the educational process is an urgent pedagogical task.

In the process of forming reflective competences, it is essential to take into account learners' individual psychological characteristics, level of cognitive preparedness, and socio-emotional state. From this perspective, combining collective, individual, and differential approaches in education becomes a crucial tool for advancing reflective thinking.

The collective approach helps shape reflection within the framework of social interaction. Group discussions, debates, and joint analysis of problem situations develop the communicative components of reflective competence. For example, through methods such as the "circle of ideas," "cross-debate," and "start-stop discussion," learners analyze each other's positions and strive to substantiate their own viewpoints.

At the same time, this approach also creates opportunities for students who express their ideas but struggle with social communication, enabling them to articulate themselves more freely.

The individual approach is aimed at developing personal, conscious, and internal forms of reflection. By assigning each student individualized reflective tasks, such as essays, the inner dialogue technique, or portfolio maintenance, they are encouraged to reconsider their ideas, identify gaps in their knowledge, and work to eliminate them. This approach is particularly suitable and effective for students with introverted personalities, as they gain self-understanding through independent thinking, written expression, and deep analysis.

The differential approach, in turn, presupposes the development of reflective competences among students with different levels of preparedness and abilities on the basis of individualized methods. For example, students with higher levels of reflective readiness may be assigned complex analytical tasks, while less active students can be given reflective tasks based on visuals, diagrams, or guiding questions. This ensures that each student's abilities are taken into account, allowing them to develop their thinking on equal grounds.

Modern reflective approaches demonstrate that the adaptive use of individual, group, and differential methods constitutes the fundamental condition for shaping a multifaceted, active, and success-oriented personality. As a result of integrating these approaches, each learner understands and reconsiders their knowledge and gains the ability to apply it in real-life situations.

Organizational and methodological models play a crucial role in developing reflective competences. They allow for the effective organization of the educational process, ensure individualized approaches, and encourage active participation of learners. In this regard, the cluster approach, mentoring system, and small-group-based interactive models stand out with their reflective potential.

The cluster model is based on structuring educational content and grouping interrelated knowledge, competences, and skills. In forming reflective competences, this model enables learners to recognize internal connections between knowledge, conduct logical analysis, and make generalizations. In cluster-based tasks, learners independently organize information, seek out interrelations, and thus activate their thinking processes.



References

1. A. Mursalov. Refleksiya va uni o'rganishning zamonaviy psixologik yondoshuvlari. "Pedagogika va psixologiya" ilmiy jurnali, 2020, №3.
2. Salikhov, M.X. (2018). Kimyo o'qitish metodikasi va zamonaviy texnologiyalar. Toshkent: TDPU nashriyoti.
3. Eriksson, G. & Rundgren, S.N.C. (2016). The role of written reflections in chemistry education: A Swedish case study. *International Journal of Science Education*, 38(10), 1757–1773.
4. Oganessian, L.A. (2020). Metakognitiv kompetensiyalar va ularni baholash metodlari. Rossiya Pedagogika Akademiyasi axborotnomasi, №1.
5. Yuldasheva, Z.S. (2021). Kimyo fanida o'quvchilarning mustaqil fikrlashini rivojlantirish yo'llari. "Fan va ta'lim" ilmiy-amaliy jurnali, №2.
6. Mavlonova, R. (2019). "Kimyo darslarida mustaqil fikrlash va refleksiya elementlarini uyg'unlashtirish". Oliy ta'limda innovatsiyalar, №4.
7. Schneider, M., & Precht, H. (2021). Reflective thinking in science education: Empirical approaches and teaching strategies. *Chemistry Education Research and Practice*, 22(1), 45–59.
8. Leclercq, K. (2017). *Réflexivité et apprentissage autonome: Approche pédagogique*. Paris: L'Harmattan.

