

DEVELOPING MODERN INSTRUCTIONAL MODELS IN CHEMISTRY LESSONS THROUGH ACMEO-INTERACTIVE METHODSHagverdiyev K. N., *Ahmadova G. K.*

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This article explores how acmeo-interactive methods can support the development of modern instructional models in secondary chemistry education. Acmeo-interactive practice is understood as a growth-oriented approach that combines purposeful teacher professional development with active, student-centered learning. The paper discusses how inquiry, problem-based tasks, collaborative experimentation, and reflective feedback can be organized into coherent teaching models that strengthen conceptual understanding and learner autonomy. Special attention is given to lesson design principles (motivation–exploration–explanation–application–reflection) and to assessment tools that align interaction with measurable learning outcomes. The proposed perspective positions chemistry learning as a dynamic process where students construct explanations, test ideas, and develop scientific communication skills in meaningful contexts. In contemporary education, chemistry classrooms are expected not only to transmit factual knowledge but also to develop students' reasoning, creativity, communication, and problem-solving competencies. However, traditional content-heavy instruction often limits learner agency and reduces opportunities for deep conceptual engagement. At the same time, teachers face increasing demands to design interactive lessons, differentiate instruction, and use formative assessment effectively. Acmeo-interactive methods respond to these challenges by linking two priorities: (1) the learner's active participation in knowledge construction and (2) the teacher's continuous professional growth through reflective practice. Therefore, integrating acmeo-interactive methods into modern teaching models is relevant for improving learning quality, strengthening motivation, and building sustainable pedagogical innovation in chemistry education. The study outlines the principles and key components of acmeo-interactive chemistry teaching and proposes a flexible lesson model that supports effective instruction across diverse topics and learning contexts [1].

The scientific novelty of this study lies in the integrative conceptualization of acmeo-interactive methods as a unified framework for developing modern instructional models in chemistry education. Unlike traditional interactive approaches that primarily emphasize student activity, the proposed perspective highlights the parallel and interdependent development of both learners and teachers. The article introduces a model in which acmeological principles – such as professional self-improvement, reflective competence, and goal-oriented pedagogical growth – are systematically combined with interactive teaching strategies. This synthesis enables the design of chemistry lessons that are not only learner-centered, but also consciously structured to enhance teachers' methodological maturity and instructional decision-making. The practical significance of the study is reflected in its applicability to real classroom settings and teacher training contexts. The proposed acmeo-interactive instructional model can be directly used by chemistry teachers when planning lessons, selecting interactive tasks, and organizing formative assessment. It provides practical guidance for structuring lesson stages, designing inquiry-based activities, and implementing reflective feedback mechanisms. In addition, the model may serve as a methodological resource for pre-service and in-service teacher education programs, supporting the development of professional competencies required for modern chemistry teaching. Its adaptability allows application across different grade levels and curriculum topics [2].

In conclusion, integrating acmeo-interactive methods into modern chemistry instruction enhances meaningful learning and sustainable pedagogical development. It improves students' understanding, motivation, and collaboration while supporting teachers' reflective practice and professional growth. When aligned with acmeological goals and structured lesson models, this approach strengthens the quality and long-term impact of chemistry education.

References

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