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DEVELOPING CRITICAL THINKING COMPETENCE IN MASTER'S STUDENTS SPECIALIZING IN PEDAGOGY THROUGH AN INTERDISCIPLINARY APPROACH

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Abstract: This article examines the theoretical and methodological foundations, pedagogical potential, and methodological mechanisms for developing critical thinking competence among master's students specializing in pedagogy through an interdisciplinary approach. It discusses the role of interdisciplinarity in master's education and the opportunities for comprehensive analysis of pedagogical problems through the integration of knowledge and methods from different disciplines. The constituent components of critical thinking competence are specified, and interdisciplinary assignments, problem situations, and ways of organizing reflective activities aimed at developing these components are described. Organizational and methodological stages and assessment criteria intended to support the development of master's students' critical thinking competence are also proposed.

Keywords: interdisciplinary approach, critical thinking, master's education, pedagogical competence, interdisciplinary integration, analytical thinking, reflection, problem situation, scientific argumentation, professional preparation.

In higher pedagogical education, developing future specialists' professional competencies, improving their scientific and pedagogical thinking, and preparing them to make independent, well-founded decisions in complex pedagogical situations are among the most pressing tasks. In particular, the professional preparation of master's students specializing in pedagogy requires not only acquiring theoretical knowledge but also analyzing that knowledge, comparing different scientific approaches, explaining the nature of pedagogical phenomena, and developing evidence-based solutions to problems.

At the master's level, the deepening of pedagogical knowledge and the expansion of research activities make it necessary to move beyond organizing education within the boundaries of individual disciplines. Pedagogical problems are often closely related to psychological, social, philosophical, and methodological factors, making them difficult to explain fully from the perspective of a single discipline. In this regard, an interdisciplinary approach has considerable methodological significance for improving master's students' professional preparation.

An interdisciplinary approach involves combining theoretical perspectives, concepts, research methods, and scientific findings from different disciplines to address a shared problem. Education organized on this basis enables master's students to evaluate pedagogical phenomena from different perspectives, assess the reliability of scientific information, analyze conflicting views, and draw independent conclusions.

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Critical thinking competence emerges as an important outcome of this process. It means not merely accepting available information but analyzing its content, verifying evidence, identifying logical relationships, and making reasoned judgments.

The aim of the study is to examine the theoretical and methodological foundations for developing critical thinking competence among master's students specializing in pedagogy through an interdisciplinary approach and to develop a methodological mechanism for organizing this process.

This study is theoretical and methodological in nature. It employs analysis of pedagogical and psychological literature, comparative examination, generalization, systematization, and pedagogical modeling.

The methodological foundation of the study consists of scientific perspectives on interdisciplinary integration, the competency-based approach, problem-based learning, and reflective activity.

J. Dewey's views on reflective thinking, R. Ennis's conceptual approach to critical thinking, and J. T. Klein's theory of interdisciplinarity serve as theoretical foundations for explaining the problem scientifically.[1]

An interdisciplinary approach in education is based on integrating the theoretical content and methodological resources of two or more disciplines to solve a specific scientific or practical problem. Connections between disciplines are determined not merely by similarities between topics but by the contribution of different bodies of knowledge to explaining a single problem.[2]

The significance of an interdisciplinary approach for master's students specializing in pedagogy stems from the multifactorial nature of pedagogical phenomena. For example, when examining learners' low engagement in learning activities, the didactic principles of pedagogy, motivational theories in psychology, sociological perspectives on the social environment, and practical possibilities offered by teaching methodology can be analyzed together.

In this process, master's students do more than simply combine information from different disciplines. They identify consistencies among sources, assess differences between scientific perspectives, compare evidence, and formulate conclusions appropriate to a particular pedagogical situation.

From this perspective, an interdisciplinary approach can be regarded as a methodological means of developing critical thinking competence.

J. Dewey's ideas about reflective thinking are important for explaining the essence of critical thinking. In his approach, justifying ideas, examining available evidence, and considering the consequences of conclusions are essential features of thinking.

In R. Ennis's work, critical thinking is understood as thinking directed toward making reasoned decisions about what to believe or how to act.[3]

Applying these perspectives to the professional preparation of master's students specializing in pedagogy makes it possible to define critical thinking as follows:

1J. Dewey, How We Think (Boston: D. C. Heath & Co., 1910).
2J. T. Klein, Interdisciplinarity: History, Theory, and Practice (Detroit: Wayne State University Press, 1990).
3R. H. Ennis, "A Taxonomy of Critical Thinking Dispositions and Abilities," in Teaching Thinking Skills: Theory and Practice, ed. J. B. Baron and R. J. Sternberg (New York: W. H. Freeman, 1987), 9–26.

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The critical thinking competence of a master's student specializing in pedagogy is an integrated set of knowledge, skills, attitudes, and reflective experience that enables the student to analyze information about pedagogical phenomena and processes through different scientific approaches, assess the reliability of evidence, compare alternative views, and make scientifically grounded professional decisions.

This definition combines the analytical, evaluative, argumentative, and reflective dimensions of critical thinking.

Clarifying the structure of critical thinking competence is methodologically important for its development among master's students specializing in pedagogy.

It is proposed that this competence be described through four interconnected components.

The cognitive-analytical component refers to a master's student's ability to understand the nature of pedagogical problems, explain scientific concepts, compare knowledge from different disciplines, and identify logical connections between them.

The integrative-evaluative component involves assessing the potential of different scientific approaches to a pedagogical problem, verifying the reliability of evidence, and developing alternative conclusions based on interdisciplinary knowledge.

The argumentative-communicative component is reflected in a master's student's ability to express views using scientific evidence, defend positions in discussions, respond to opposing views with reasoned arguments, and draw logical conclusions.

The reflective-corrective component refers to a master's student's ability to evaluate their own thinking, examine how well their decisions are justified, address identified shortcomings, and reconsider initial views in light of new evidence.

The interrelationship among these components allows critical thinking competence to be understood not as a collection of separate intellectual skills but as a holistic competence oriented toward professional pedagogical activity.

To develop critical thinking competence among master's students specializing in pedagogy through an interdisciplinary approach, it is advisable to organize learning activities in successive stages.

The following four-stage methodological mechanism is proposed for this process.

1. Problem-analytical stage

Identifying a pedagogical problem and analyzing it from the perspectives of different disciplines

2. Integrative-research stage

Integrating interdisciplinary knowledge and comparing and evaluating scientific evidence

3. Argumentative-practical stage

Developing alternative solutions, engaging in discussion, and justifying decisions

4. Reflective-evaluative stage

Reassessing conclusions, identifying shortcomings in reasoning, and correcting them

Expected outcome

Development of master's students' critical thinking competence

Figure 1. Proposed methodological mechanism for developing critical thinking competence through an interdisciplinary approach.

At the first stage, master's students are introduced to a problematic pedagogical situation and guided to identify its underlying causes. At the second stage, knowledge from pedagogy, psychology,

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philosophy, and research methodology is integrated. At the third stage, students develop alternative solutions to the identified problem and substantiate them with scientific evidence. At the fourth stage, the outcomes of their intellectual activity are assessed reflectively.

A distinctive feature of this mechanism is that the integration of interdisciplinary knowledge is directly linked to each constituent component of critical thinking.

Assignments given to master's students in the process of developing critical thinking competence should focus not on reproducing ready-made knowledge but on explaining scientific problems, examining evidence, and developing justified conclusions.

For example, an interdisciplinary assignment may be organized around the problem of "Increasing learners' independent thinking activity."

In this assignment, master's students apply teaching methods and didactic principles from pedagogy, theories of thinking processes and motivational mechanisms from psychology, epistemological perspectives from philosophy, and methods for verifying evidence and justifying conclusions from research methodology.

As the final outcome of the assignment, students are expected to identify the factors underlying the problem, compare alternative pedagogical solutions, and select the most appropriate approach on the basis of evidence.

Methods such as case studies, academic debates, problem-based seminars, concept mapping, and reflective essays may be used in these activities.

Academic debates, in particular, are intended to develop master's students' abilities to compare opposing perspectives, identify the strengths and weaknesses of evidence, and substantiate their views.

References

1. J. Dewey, How We Think (Boston: D. C. Heath & Co., 1910).
2. R. H. Ennis, "A Taxonomy of Critical Thinking Dispositions and Abilities," in Teaching Thinking Skills: Theory and Practice, ed. J. B. Baron and R. J. Sternberg (New York: W. H. Freeman, 1987), 9–26.
3. J. T. Klein, Interdisciplinarity: History, Theory, and Practice (Detroit: Wayne State University Press, 1990).