Development of classification thinking in future teachers: Technologies of reflective discussion

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Abstract

© Authors. The main objective of the research is to create and approbate a new way of reflection formation in future teachers, which would increase the level of classifying thinking to the theoretical one. The "Formation of equivalence groups" technique was modified to conduct the experiment. It was carried out both individually and in collaborative discussions in pairs which involved justification. This made it possible to reveal the degree of the reflection conformity to the norms of scientific thinking in solving classification problems, the main obstacles to the application of these norms and ways to overcome them. Results. As a result the ways of reflection were identified. The experiment resulted in the identification of two ways of substantiating solutions to classification tasks and processes of reflection: reflexive and pseudo-reflexive. The typology of pseudo-reflexive assessments is presented. Evaluation of an intuitively correct solution to a task anticipates a cogent justification of the reflexive process. Underdeveloped reflexive processes can limit the capacity of adults for scientific classification thinking. Existing methods of logic classes study at a higher school context do not provide well-developed scientific theoretical knowledge. Existing methods do not provide its scientific-theoretical level. Reflexive processes corresponding to this type of thinking are to be developed in a classification logic norms study. A wider use of specific sign means will provide an effective differentiation of reflexive and pseudo-reflexive forms. The development and enhancement of reflexive processes in relation to the assessment of educational outcomes can be undertaken with the help of formalized tools. Presented in the article technology of pseudo reflexive forms diagnostics and technology of reflection initiation based on the logic of classes promotes the rise of classification thinking to the theoretical level. The proposed type of tasks is not connected with the content of a certain scientific discipline and can be applied at different levels of education.

Keywords

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