

ABSTRACT

The dissertation by Karlygash Zhapsarbaevna Almenbetova titled «Training Future Primary School Teachers to Develop Students' Mathematical Abilities» is submitted for the degree of Doctor of Philosophy (PhD) in the field 6D010200 — Pedagogy and Methods of Primary Education.

Research topic: preparation of future primary school teachers for the development of students' mathematical abilities. The purpose of the study is to develop a theoretically grounded structural and substantive model for the preparation of future primary school teachers for the development of students' mathematical abilities.

The objectives of the research work are: - to clarify the content of the concepts of "ability" and "mathematical ability" and to provide a theoretical justification for the preparation of future primary school teachers for the development of students' mathematical abilities; – to determine the pedagogical conditions for the development of mathematical abilities of elementary school students; – development of a structural and substantive model for the preparation of future primary school teachers for the development of students' mathematical abilities; – conducting practical and experimental verification of the research problem and providing scientifically sound recommendations.

Research methods: – theoretical methods: generalization, content analysis, structuring, comparison, generalization, study of regulatory documents, accumulation of experience, modeling, refinement; – empirical methods: conducting surveys, interviews, testing, training and diagnostics, pedagogical experiment, verification, observation, processing of research results using mathematical and statistical methods.

The basic principles recommended for protection are:

1. The theoretical and methodological foundations of the preparation of future primary school teachers for the development of students' mathematical abilities have been determined. The peculiarities of the student's training as a future primary school teacher are the predominance of professional and qualitative values in its structure (child orientation), the breadth and depth of professional knowledge, the high degree of importance of pedagogical skills and personal qualities in the content of education.

2. The content of the preparation of future primary school teachers for the development of students' mathematical abilities is comprehended and realized on the basis of a content-structural model. 3. The effectiveness of the methodology of preparing future primary school teachers for the development of students' mathematical abilities (elective course program, textbook) and the results of practical experiments, scientific and methodological recommendations is presented. 4. Testing and implementation of the research results: the main provisions of the research were presented in the form of scientific reports at international scientific and practical conferences, in journals recommended by the

Committee for Monitoring Education and Science, as well as in scientific journals included in the Scopus database.

Description of the main research results: The content of the concepts of "ability" and "mathematical ability" has been clarified, the scientific and theoretical foundations of the preparation of future primary school teachers for the development of students' mathematical abilities have been determined.; The pedagogical conditions for the development of mathematical abilities of elementary school students have been determined. A structural and substantive model of training future primary school teachers to develop students' mathematical abilities has been developed; A methodological system for preparing future primary school teachers for the development of students' mathematical abilities has been developed and experimentally tested.

Substantiation of the novelty and significance of the results obtained: The content of the concepts of "ability" and "mathematical ability" has been clarified, the scientific and theoretical foundations of the preparation of future primary school teachers for the development of students' mathematical abilities have been determined.; The pedagogical conditions for the development of mathematical abilities of elementary school students have been determined. A structural and substantive model of training future primary school teachers to develop students' mathematical abilities has been developed.

The practical significance of the research work is formed by the program of two elective courses "Methods of developing mathematical abilities of students" and "Development of intellectual and creative abilities of primary school students", as well as the textbook "Development of mathematical abilities of primary school students". The methodological package for preparing future primary school teachers for the development of students' mathematical abilities can be used in higher and secondary specialized pedagogical educational institutions, at the Institute for advanced training and retraining of primary school teachers, primary school teachers, as well as students of educational programs of primary education.

Compliance of research work with the directions of science development or state programs: the following state regulatory documents on the development of education in our country are considered: the Law of the Republic of Kazakhstan "On Education", the State Mandatory Standard of Higher Education of the Republic of Kazakhstan (higher professional education), "The State Program for the development of Education and Science in the Republic of Kazakhstan for 2023-2029 years", the Law "On the status of a teacher", in which the main tasks are the development of competitiveness and professional training of future specialists, improving the content of education.

2 elective course programs "Methods of developing mathematical abilities of students" and "Development of intellectual and creative abilities of primary school students", the textbook "Development of mathematical abilities of primary school students" corresponds to the trends in the development of primary education and science.

Description of the doctoral student's contribution to the preparation of each publication: based on the research results, 23 scientific papers have been published.

Including 1 article in journals included in the Scopus information base; 3 articles in publications recommended by the Committee for Quality Assurance in Science and Higher Education of the Ministry of Education and Science of the Republic of Kazakhstan; 6 articles in the proceedings of the international scientific conference; 6 articles in the proceedings of the conference of the far and near abroad; 2 articles in the proceedings of the republican conference; 4 articles in scientific journals; 1 textbook.

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