

## RESUME

**Defense of the thesis for the degree of doctor of philosophy (PhD) on the specialty 6D010200 - "pedagogy and methods of primary education", theme of the dissertation "Pedagogical conditions for the implementation of interdisciplinary communication within the updated content of education» Saurykova Zhuldyz Meyrkhanovna**

**Relevance of the study:** First grades of secondary schools have been teaching according to the updated educational program since 2016. In this regard, learning objectives in primary school curricula requires students to be able to identify and study the most pressing issues. In the period of primary education between the capabilities of the pedagogical process, organized through integration and relationships interdisciplinary connections through the learning materials of individual disciplines, and the current state usage in educational process, for example, relevance for determining the scientific and pedagogical bases of pupils' scientific outlook formation and the demands for the educational needs of the current generation, and the relevance of the definition of scientifically-pedagogical bases of pupils' scientific outlook formation. There are contradictions between the scientific and methodological insufficiency of the introduction of updated educational curricula into pedagogical practice. Therefore, the actual problem of our research work in solving such contradictions is the consideration of scientific-theoretical and methodological approaches to the definition of pedagogical conditions in the formation and development of the scientific worldview of younger students through the implementation of interdisciplinary communication within the content of updated education. The updated education system is a program aimed at the competence approach and quality of primary school students through the formation and development of knowledge, skills and abilities. Taking into account that the problem is not considered in scientific, theoretical and methodological aspects through special research, we consider the theme of our research work "pedagogical conditions for the implementation of interdisciplinary relations within the updated content of education".

**Purpose of research:** Definition of pedagogical conditions, theoretical and methodological foundations of interdisciplinary communication within the updated content of education and its implementation in the educational process.

**Object of research:** Educational process of primary classes at secondary schools.

**Subject of research:** Lessons of interdisciplinary communication in the pedagogical process organized in the system of updated content of education.

**Method of research:** According to the research issue philosophical, psychological, pedagogical and methodical literature on the problems of research, scientific and methodological research, collection, analysis, sorting, questioning, diagnosis, conducting a pedagogical experiment, the selection of its results, conducting their mathematical, statistical processing were carried out.

**the hypothesis of the research:** If pedagogical conditions of implementation of inter-subject communication on the scientific-theoretical and methodical basis within the updated content of primary education are defined in primary classes; in accordance with the classroom stage of primary education identified and used pedagogical aspects of the use of new approaches in the teaching of General topics for educational materials, giving the content of education in the sections of the curriculum and textbooks compatible with the development of students; in interconnected, integrated classes used effective methods and techniques of assimilation of new knowledge by students.; if in modern pedagogical practice the processes of introduction into the educational process were tested on experimental experiment and summed up, it would be possible to create a high level of scientific and cognitive assimilation of the world, the unity of the environment through actions in the development of personal potential of primary schoolchildren.

**Objectives of research:**

- scientific and theoretical justification of the concept of "interdisciplinary communication" by analyzing psychological and pedagogical literature, legal documents devoted to the problems of teaching on the updated content of education and the integration of Sciences;
- determination of the current state and opportunities for organizing and conducting interdisciplinary communication in the transition to the updated content of education in primary classes;
- definition of pedagogical conditions of the interdisciplinary communication organized within the updated content of education at the stage of primary education, drawing up, representation of the structural and substantial sketch;
- to give scientific and methodological recommendations, proving the effectiveness of interdisciplinary relations organized in the pedagogical process of primary classes with an updated system of education content.

**Theoretical and methodological foundations of the research work** are scientific and methodological, philosophical, pedagogical, psychological literature and textbooks, scientifically and pedagogically substantiating the pedagogical conditions for the implementation of interdisciplinary relations within the updated content of education in primary schools, state official documents aimed at the implementation of the "educational policy" of the Republic of Kazakhstan, the works of domestic and foreign researchers.

**Methodological and theoretical foundations of the study:** as part of the updated content of education in primary school identified pedagogical aspects of using teaching methods in accordance with pedagogical conditions of realization of interdisciplinary links based philosophical, psychological, pedagogical concepts about the patterns of perception of the world, taking into account characteristics of students and the theory of knowledge in the formation and development of personality of pupils of initial classes used the peculiarities of their use in modern conditions. Worked out methodical recommendations for the effective use of innovative methods and techniques of pedagogy in the General education system to

those based on the generalization of the training topics and tutorials related to the implementation of interdisciplinary connections in the content of the updated educational program.

**Practical significance of the study:** on the basis of the updated educational program, the implementation of intersubject communication lessons in the educational process was verified, so the set of theoretical and practical knowledge obtained as a result of the research work can be used in the pedagogical process of primary classes, departments and faculties for the preparation of future primary school teachers, institutes for the improvement of teachers ' skills and research work in this direction. After all, the theoretical and practical data collected from the research work are of vital importance.

**Theoretical significance and scientific novelty of the study:**

- scientifically proven theoretical basis of personality development on the basis of formation of scientific Outlook of pupils of initial classes through interdisciplinary connections implemented through educational programs, giving the updated content of education. The definition of the concept "interdisciplinary communication" was given, the description of the nominal phrase" pedagogical phenomenon " was given";

- due to interdisciplinary communication implemented on the basis of the updated content of education the scientific and cognitive activity of students, the course of formation and development of their personal personality, the current state and opportunities were considered.;

- on the basis of updated educational programs developed structural scheme of formation of scientific outlook of learners through the implementation of interdisciplinary connections in the organization of pedagogical process in primary classes, is defined by its parameters, indicators, levels and meaningful, organizational, pedagogical conditions.;

- practical and experimental, scientific and methodological evidence of the effectiveness of the model aimed at developing the personality of students through the updated content of education in the educational process of primary classes.

**Principles suggested for defending:**

- to give a scientific and theoretical basis for the development of personality and actions to form the scientific worldview of primary school students through interdisciplinary connections on the basis of the updated educational program and to give an individual definition of the concept of " interdisciplinary communication»;

- influence of interdisciplinary connections in the updated content of education on the development of personal qualities of students, structural and content schemes of formation of scientific worldview, criteria, levels, indicators, content and pedagogical conditions;

- in order to improve the formation of the scientific worldview of primary school students in the pedagogical process in the program, experimental work was carried out on the system "General sections and General topics", scientific and methodological recommendations were checked and given, the results of research work were summed up.

**The reasonableness and validity of the results of the study** are characterized by the theoretical basis of the dissertation research, the content of the study of scientific apparatus, the integrated use of the necessary methods and techniques in accordance with the set goals and objectives, the sequence of the plan of experimental work, accuracy, consistency, reliability of the results.

**Approbation and implementation of research results:** Approbation of research result was carried out during the pedagogical experiment. The main directions and results of studies published at national and international conferences – two (2), and foreign international conferences – two (2), 4 (four) articles in scientific journals included in the list of scientific editions recommended to publish main results of scientific activities approved by the authority in accordance with subparagraph 16, paragraph 121 of the Regulations on the Ministry of education and science of the Republic of Kazakhstan, approved resolution of the Government of the Republic of Kazakhstan from October 28, 2004 – published in the journal Scopus (Scopus), which is indexed in the database of the international information company.

**Base of research work:** School-gymnasium No. 53 named after Turysov in Taraz city, gymnasium No. 1 named after Bokeikhanov in Taraz, school-gymnasium named after Zhambyl in Moyynkum district of Zhambyl region, as well as primary classes of the gymnasium named after A. Baitursynov Talas district.

**The main stages of the study:**

**On the first stage** (2016-2017y) the analysis of philosophical, pedagogical and psychological, scientific and methodical researches and literature was carried out on the problems of the research. The concepts of the transition to an updated education system and its content structure were analyzed; the conditions for the implementation of interdisciplinary communication on the topic of research on general sections and topics are determined; the scientific apparatus of the study is substantiated.

**On the second stage** (2017-2018 y) continued analysis of the collected materials on the topic of research; explored and studied advanced educational experiences and ideas concerning the formation of scientific Outlook of pupils of initial classes on the basis of interdisciplinary connections; studied as a holistic knowledge of the outside world and the formation of scientific attitudes of students in the context of modern updated education. In the pedagogical process of primary classes, a structural and content scheme of the organization of inter-subject relations was developed, pedagogical conditions were determined.

**On the third stage** (2018-2019 y) experimental work is continued, the results of the study are generalized and systematized. As a result of experiment by means of the updated contents of education rational and effective methods of formation of scientific outlook of pupils of primary classes by means of interdisciplinary communications are defined. The results of the experimental work and collected materials on the research problem are analyzed, summarized and edited.

Under the cognitive process, implemented on the basis of interdisciplinary connections, it should be understood that in accordance with the age characteristics and level of cognitive realities of the student or learner, corresponding to the level of their education and their harmonious assignment to the levels of education. In-depth development of knowledge by primary school students, the formation of a worldview to scientific knowledge of the world and the environment is a natural unity in the field of didactics, which is the basis of innovative approaches (technologies), the implementation of educational and training tasks on the basis of interdisciplinary relations.

Interdisciplinary communication contributes to the integrated use of acquired knowledge. The subject system in the school is not something that comes from each other, so they complement each other by making a connection between the subjects in the process of systematic classes.

Pedagogical conditions of realization of inter-subject communication in pedagogical processes in primary classes with system of the updated contents of education have peculiar character.

*1-iii condition:* The presence of the relationship between academic disciplines-mastery of various scientific fields and taking into account the peculiarities of language communication through the acquisition of new knowledge, education, development /complex type of knowledge-is: the study of the formation of cognitive concepts with a system of different scientific concepts of students in interdisciplinary relationships occurring in the head, mastery of oral and written norms, the ability to use expressive language means in various communication conditions in accordance with the purpose and content of speech. In order to improve literacy speech and vocabulary, determining the objectives, comparison of the recognized image of the logic of philosophy the nature of learning and cognitive activity in system of the Kazakh national ideological worldview as well as knowledge transfer to the students through the native language close to nature.

*2-condition:* Guided by the presence of consistency in the study of all components of the content of education in the knowledge of the world from the point of view of truth and reality is: consistency in learning-a requirement for education and training, which demonstrates that the reading of new educational material is provided by previous training. The implementation of educational requirements ensures the continuity of the learning process. In the presentation of new material, the teacher constantly rely on the knowledge gained by students, activates their work, helps to restore previously read materials and firmly strengthen in the mind of the student. The practical usage of this requirement is manifested in the implementation of the rules of simplicity of learning to complex, close, easy, abstract. Curricula and programs of primary education are developed strictly in accordance with the sequence in learning and consistency in learning is of particular importance in the implementation of inter-subject communication.

*3-condition:* Interdisciplinary communication the implementation of comprehensive cognitive education and education of the presence of common themes for the grouping of individual disciplines is: the processes of scientific

knowledge, skills, attitudes and creative activity, ensuring the assimilation of students' mental and power abilities, worldview, morality, behavior, preparation for social life and work. The source of education and upbringing is an important condition for preparing students for life, through the implementation of the relationship of theory and practice in educational work with the spiral system of activity of the whole variety of culture.

*4-condition:* Application of methodical and innovative system of the organization of interdisciplinary training, assistance to complex implementation by pupils of all areas of educational-cognitive and educational process is a set of practical or theoretically comparable ways and receptions of assimilation of the truth subordinated to the decision of concrete tasks. Development, perception, evaluation, development, management of the process of application of pedagogical innovations and the use of methods, manipulations in the field of teaching individual subjects, the ability to effectively and competently apply on this basis the tasks of teaching and education of students.

*5-condition:* Humanization (humanization) of the processes of education and training and education in interdisciplinary communication is: the dissemination of ideas of spiritual, moral and humanism to the content, forms and methods of education; ensuring the free and comprehensive development of the individual in the educational process, his explicit participation in society. The establishment of a harmonious balance between the cycles of subjects of natural and mathematical, humanitarian and aesthetic education and education in order to develop each student spiritually rich, able to resist technocracy and morality. Formation of value relations to life, ensuring sustainable and harmonious development of the student's personality. The education of honesty, truth, responsibility, etc., capable of giving a high character to the deeds and thoughts of being a disciple.

*6-condition:* The organization of joint collective activity in training and education and development of individual characteristics of each student in interdisciplinary communication is: individual, collective and group work, requiring the participants involved in the implementation of interdisciplinary connections that take place in the pedagogical process, the ability to agree and cooperate, coordinate joint activities, to be able to constantly interact. Socialization, interaction in the educational process, combines personal and scientific and cognitive interests of the student's personality.

*7-condition:* Interdisciplinary communication-organization and activity of creative and pedagogical activity of the teacher is: development and implementation by the teacher of effective and non-standard pedagogical decisions in educational process, in communication with pupils in the conditions of interrelation of educational material of separate disciplines. Deep and comprehensive knowledge of a professional creative teacher, their critical processing and characterization of the presence of semantic understanding; the ability to translate theoretical and methodological principles to pedagogical activity to each other; the ability to self-education and self-education, the acquisition of new techniques, forms, techniques and means and their authentic integration, dialect, variability of systems of activity, the effectiveness of the existing

experience in new conditions; the ability to reflective assessment of their activities and its results.; knowledge and ability to transform based on prior feeling; ability to see ambiguity.

*8-condition:* Definition of educational, developing and educational level of pupils, diagnostics, realization of activity of pupils in inter-subject communications is: the analysis of the phenomenon of inter-subject communication in pedagogy-research by teachers of results, a condition of the educational work, identification of cause-and-effect communications between structures of pedagogical phenomena, ways of improvement of training and education of pupils. Functions of pedagogical analysis: / diagnostic, cognitive, modification, independent knowledge/. A method of accounting for measured learning indicators, providing an objective and comprehensive study of the state of interdisciplinary communication in the pedagogical process; a method of identifying all the changes occurring in the cognitive process. Diagnosis consists of monitoring (verification), evaluation, collection of statistical data, their analysis, determining the dynamics and trends and forecasting future development.

It is natural that in order to determine the strategy for the development of personal potential of learners, it is necessary to be guided by the methodology of studying the trends of its technical, social and economic development while implementing interdisciplinary communication. The "pedagogical phenomenon", which takes place in the transfer of complex knowledge in interdisciplinary communication with students, is effective in the implementation of the system of planning, periodicity, priority (General part and themes, proximity of subject content, etc.), harmony and spiral. The main task of such pedagogical phenomena, which occur in the course of interdisciplinary relations, is the systematization, updating of students ' knowledge about concepts-concepts that they own, or giving the initial knowledge.

Innovative methods and techniques used in the pedagogical process and means of forming a scientific worldview and system of interdisciplinary communication of students with the materials of individual disciplines studied in primary classes, based on common themes, reflect the results of active work of the teacher in the organization and conduct of pedagogical professional activities aimed at the development of thoughts, imagination and creative abilities in their personal communication. The closest interaction of interdisciplinary connections is "vertical" (vertical) (vertical) (vertical) and "horizontal" (horizontal) and rational use in pedagogical practice of educational material in formation of scientific Outlook of younger pupils.

Based on the updated content of education aims and objectives methods of formation of scientific outlook of pupils of initial classes through interdisciplinary connections and develop their personal existence, improvement, development and expansion of students ' knowledge obtained at the lessons of individual disciplines and the formation of the scientific outlook on childbirth, objects and phenomena of the environment; increase of communication of educational process with life, work, art, life experience; development of creative abilities of pupils, feelings, emotional mood, cognitive forces, Outlook, imagination, interest to scientific

knowledge, knowledge of life, responsibility, activity, resourcefulness; depending on aesthetic tastes and needs; promoting knowledge of the native country, the beauty and beauty of nature, people and history through interdisciplinary connections.

1."language and literature", 2."Mathematics and ICT", 3."natural science", 4."man and society", 5."art", 6.give in-depth concepts of General concepts in the cycles of physical culture.

Teachers involved in research work on the topic-42 primary school teachers, including 22 teachers of experimental classes, 20 teachers of control groups. Summing up the research work, we can say that it showed in accordance with the updated content of education in the educational process of the school are widely used interdisciplinary connections increases the performance and quality of knowledge of pupils.

New knowledge on the basis of the content program and in the process of analysis, students have mastered the theory, learned to define and solve the problems of education, on the basis of which they have mastered the forms and methods of the pedagogical process based on interdisciplinary connections. On the basis of determination of pedagogical conditions of implementation of inter-subject communications within the content of education of the updated source, determination of possible efficiency of formation and development of the personality of pupils was carried out in the course of experimental pedagogical work. Structure of pedagogical practice:

- beginning of experimental practice (2016-2017)
- completion of experimental practice (2018-2019)

During the project experiment, 342 pupils from different schools from 1,2,3,4 classes included in the primary education stage took part. Of these, 172 learners made up a group of experimental classes, 170 students made up a group of control classes.

The conducted experimental work includes the following solutions of issue: The system of forms and methods of using materials of interdisciplinary communication in primary school lessons through sections and general topics of the updated content of education; to lay the foundations of scientific ideas of younger students about the materials of interdisciplinary communication; to optimally use effective methods and innovative approaches used to form the scientific outlook of learners.

Based on the goals and objectives of the thesis, scientific forecast, analyzing the information collected during the research work, we draw conclusions.

1. During the research philosophical, pedagogical, psychological, scientific and methodical works were analyzed, scientific and theoretical bases of pedagogical conditions of realization of interdisciplinary communications in system of the updated maintenance of education are defined.

2. In the system of the updated content of education the model of realization of ways of realization of interdisciplinary communication through the General subject based on consolidation of educational materials of sections and textbooks is developed.



3. According to the results of experimental work in the updated system of content of education, the effectiveness of the implementation of interdisciplinary relations in pedagogical practice is proved, methodological conclusions on the main directions and ways are given.

4. The results of the experimental work are confirmed by the forecast of the research work.

5. The use of intersubject communications in the lessons of individual disciplines under common themes, aimed at training orientation and sections implemented on the basis of the updated content of education at the modern stage of primary education, increases motivation and interest of students to education, is revealed and proven their worth as one of the effective ways, contributing to the development of their competencies.

As a result, in modern pedagogical practice, interdisciplinary connections of education are fully covered by programs that implement updated and effective education, and in its implementation-pedagogical phenomena that require a high professional level of personal creative search and scientific and methodological training of the teacher.