

THE REPUBLIC OF AZERBAIJAN

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**FORMING OF BASED DISCUSSION SKILLS OF
SCHOOLCHILDREN**

Specialty: 5804.01- General pedagogy, pedagogy and education
history

Field of science: Pedagogy

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ABSTRACT

On getting the academic degree of Doctor of Philosophy in
Pedagogical Sciences

NAKHCHIVAN – 2022

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GENERAL CHARACTERISTICS OF THE WORK

The urgency and the use of the problem. The results of the 44-day war against the Armenian invaders, the brilliant victory of our Army, the heroism of our youth and their martyrdom for the freedom of the homeland without the blinking of an eye, vividly proved that the strategically important instructions of the President of Azerbaijan, Supreme Commander-in-Chief Ilham Aliyev were followed at a high level by all educators involved in the education of the people, including the younger generation. The organization of education, training and upbringing at our secondary schools of course is the basis of this work. Therefore, the improvement of subjects in our secondary schools and the raising of the scientific level of the student contingent guided by the strategic instructions¹ of the President, can be realized in several directions. One of the ways of realizing this work is to form the scientific outlook of students, to identify and fundamentally solve new pedagogical problems for the acquisition of knowledge, skills and habits on subjects.

According to these ideas, it is possible to improve the general subject preparation of students in secondary schools in several directions. One of these directions is the difficulty of the pedagogical process in making reasoned judgments in primary education, including the difficulty of substantiating the validity of conclusions or opinions expressed by children through their own judgments.

The system of “Three-component taxonomies” developed by prof. A.A.Alizadeh, which is fully theoretically and practically substantiated is the scientific and psychological basis of the General Concept Education (National Curriculum) in the Republic of Azerbaijan. According to the system the taxonomy should be specified for individual subjects and grades, specific features of subjects should be identified and implemented in terms of age characteristics. Formation of the skills of making reasoned

¹ Aliyev, I.H. Education is a priority issue in the state policy of Azerbaijan / - Baku: “Azerbaijan Muallimi” newspaper, September 19, 2008, № 36.

judgements in young schoolchildren is very relevant in terms of the application of these taxonomies².

The urgency of the problem stems mainly from the challenges facing the primary education. The urgency is also due to the fact that the problem under study is not reflected in the existing literature at the required level and there is a great need to solve the problem in school practice, however, its solution is viewed with skepticism.²

Thus, these arguments, i.e. the difficulty of forming reasoned judgement skills in primary education, the lack of clarity of learning objectives and effective ways for primary school teachers, the lack of scientific and pedagogical literature on solution of this task is enough to say that it is important to put the problem of formation of reasoned judgement in young students as a special didactic problem.

The object and the subject of the research.

The object of the research is forming knowledge and skills of young schoolchildren in primary school.

The subject of the research is the forming of the ability of schoolchildren to make reasoned judgments during the learning process.

The goals and objectives of the research.

The goal of the research work is to identify opportunities, ways and means of developing the reasoning skills in primary schoolchildren and to establish a pedagogical system of this work.

The objectives of the research:

1. To clarify the scientific-theoretical essence of the concept of reasoned judgment, to determine the pedagogical and psychological basis of the problem;
2. To study and analyze the position of the researched problem in the scientific-pedagogical and psychological literature, as well as the situation in school practice, to identify the ideas of theoretical and practical significance and make generalizations,

² Abbasov, A.M. Curriculum Guide: Explanations and Applications. / A.M. Abbasov, I.A. Cavadov, B.O. Ibadova [et al.] - Baku: Science and education, - 2019, p. 243-245

3. To study the state of the problem in school practice, to determine the practical possibilities of its solution;

4. To identify general didactic opportunities for the formation of reasoned judgement skills in primary school students;

5. To identify opportunities and ways for development students' discussion skills through teaching the subjects to build a perfect work system by coordinating them;

6. To examine in a pedagogical experiment the influence of system, related with the possibilities and ways of forming the discussion skills of schoolchildren;

The problem posed in the dissertation had been solved using the following research **methods**: a) Analysis of the literature; b) Studying and generalization of school experience; v) Observation; d) Interview; ğ) Inquiry; d) Pedagogical experiment.

The scientific novelty of the research work is that on the basis of existing subject curricula the issue of training the need for discussion skills of primary schoolchildren has been extensively studied, and the problems arising during the learning process and their causes have been identified for the first time. The content of the work of formation of discussion skills in schoolchildren of tender age was determined based on the content of existing subject curricula and textbooks. During the training, opportunities and ways to develop students' ability to make reasoned judgments were shown. The study also found that it is not only possible to teach young schoolchildren to make argumentation during teaching of individual subjects, but also it is possible and important to make simple syllogistic judgments and make argumentations based on these judgements.

Theoretical significance of the research. The content of the work system on formation of discussion skills of young schoolchildren, its opportunities and ways, the presented scientific provisions will enrich the theory of pedagogy with new ideas, will create favorable conditions for a stronger foundation of secondary school education theory.

Practical significance of the research. The system of work, research materials, main ideas, research results, teaching methods

reflected in the dissertation will be a practical help to class teachers, redesign of subject curricula and textbooks, writing methodological literature during the organization of training with young students at a high scientific level.

Researchers and pedagogues working on didactics, as well as methodist scholars can benefit from the research, the content of the dissertation, its results and recommendations.

Provisions submitted for defense:

1. Simple deductive and inductive debates are the most effective means of developing argumentation skills of young schoolchildren.

2. The pedagogical process has moral-psychological, pedagogical and physiological opportunities in the formation of the ability to make argumentations in young schoolchildren during training.

3. General didactic requirements for the formation of argumentation skills in young schoolchildren ensure the efficiency and quality of secondary school education.

Approbation and application of research. The main content and the basic ideas, scientific results of the research, practical proposals connected with their implementation are published and promoted in different scientific journals,

Including the "Scientific works" of Ganja State University, Azerbaijan Slavic University, Institute of Education and Azerbaijan Girls' University, as well as in scientific-methodical work of Kyrgyzstan.

The various stages of the research and the results obtained were also discussed during the experiment

Introduction to Dissertation - 25500 characters; Chapter I - 100,000 characters, Chapter II - 140,000 characters, Result - 5,000, a total of 270,500 characters.

MAIN CONTENT OF THE STUDY

In the introductory part of the dissertation the relevance of the topic is substantiated, the object, subject, goals and objectives, hypothesis, methodological bases, scientific novelty, practical and theoretical bases of research are clarified, the provisions to be defended are indicated.

The first chapter of the dissertation, entitled **"Theoretical issues of developing the skills of reasoned judgment in young schoolchildren"** consists of 4 paragraphs. The first paragraph of the chapter, entitled **"The concept of reasoned judgment and its scientific-theoretical essence"** clarifies the nature, structure and types of reasoned judgments. In order to clarify this issue, first of all, "reasoning", "reasonable and non-reasonable opinions", "logical judgment", "logical structure of judgment", "self-regulation", "self-criticism", "self-awareness", "self-control" which are directly related to "based reasoning" and underlying the concept of "reasoned judgment" and for this purpose in the "Explanatory dictionary of the Azerbaijani language", "Pedagogical encyclopedia", works of pedagogues and psychologists, including N.M.Kazimov, A. .S. Bayramov, A.A. Alizade, H.M.Ahmadov, A.N.Abbasov, R.I.Aliyev, H.N.Agayev, M.A. Hamzayev, Q.N.Gahramanova, N.E.Zeynalova, A.M.Pishkalo, Y.M.Kolyagin, F.F.Pritulo, V.N.Rudnichskaya, S.L.Rubinstein, B.A.Ananyev, V.A.Krutetsky, A.V.Petrovsky and others are addressed.

It is possible to draw a general conclusion from the researches that on the basis of the concept of "substantiated judgments " stand the complex of opininons formed by means of the conjunction "if ..., then ..." which is directly connected with the logical structure of "proof", "justification", "proof" considerations. Therefore, it is necessary to pay special attention to the complex considerations that are corrected by "if ..., then ..." or "... if, ..." conjunctions. In primary training, complex considerations formed by the conjunction "if ..., then ..." are often expressed more simply by the conjunction "..... if...". For example, a young student may happen to meet and

regularly use throughout the training at mathematics lessons the phrases such as “If the diminution is greater than the subtraction, then the subtraction can be performed” (or simply, “If the diminution is greater than the subtraction, the subtraction can be performed”) and at the lessons of Azerbaijani language If the word "book" comes at the beginning of a sentence then the word "book" is written in capital letters (or simply" the word "book" is written in capital letters if it comes at the beginning of a sentence) .

In the science of logic, complex judgments made with the conjunction "if ..., then ..." are called implications of simple judgments. The simple judgment marked as p and q and their implication is read as "from p comes out q ". The implication of $p \rightarrow q$ is called condition and the judgment q is called the result. In mathematical logic, the implication $p \rightarrow q$ is considered to be false only if the statement p is true and the statement q is false.

Thus, this system of concepts includes the notion of "proof", "substantiation", which is the main component of reasoned judgments (it's important to note that proving the correctness of their training is a key component of doing reasoned judgments (Prof. H.N.Agayev) and making reasoned judgments is the main component of self-education (prof. AS Bayramov) . The term "to prove" is used in logic to mean "judgment." Judgment is to determine the validity of one reason or another.

Summarizing all the arguments, the logical structure of obtaining substantiated conclusions in young schoolchildren by conducting simple deductive judgments can be expressed as follows:

$$[p \wedge (p \rightarrow q)] \rightarrow q$$

This formula also may be called a general expression of judgment and conclusion of reaching the mental and logical argumentation. Here, \wedge is the conjunction of two considerations. And the conjunction of the two considerations p and q is called the judgment $p \wedge q$ (pronounced as p and q), and that assumption is real only if both assumptions are real at the same time.

In the second paragraph of the chapter, entitled "**Psychological basis of the problem**", a lot of psychological and, in part,

physiological literature is involved in research in order to determine the psychological basis for formation of reasoning skills in young schoolchildren. The problem has been discussed in detail at certain times, although indirectly, in many psychological, physiological and didactic studies. All the components of the logical knowledge and skills required to master the basics of science, the types of thinking operations used by young schoolchildren, the types of persuasive judgments and logical argumentations, and the psychological and physiological features of their substantiation are little investigated in these studies. Analysis of subject curricula, textbooks and other teaching materials for primary education shows that many of these concepts are intended to be mastered from the first grade. This has led to various scientific debates. In order to clarify the substantiated content of the knowledge system and the accuracy of the results obtained, as well as the possibility of developing the skills of reasoned judgment in young schoolchildren, first we have analyzed and summarized the scientific achievements of Azerbaijani and foreign researchers studying the pedagogical, psychological and physiological mastering possibilities of all students .

Our initial conclusion was that the ability to make based judgments and to formulate them is a complex process of thinking. This process is based on the conditioned-reflex connections that form in the human cerebral cortex.

Examining the psychological basis of the problem, we also found that it is not appropriate to limit the work of inculcating and completing the skills of reasoned judgment of young schoolchildren to a certain age. Completion of students' ability to make fully reasoned judgments is not just a product of one age or another. It is a direct result of a long and well-organized pedagogical process, especially training and education. Therefore, the need for the ability to make based argumentations of young schoolchildren may arise at different ages. Even preschoolers try to “justify” their opinions with various influences. Often students are inclined to use artificial means (arguments).

This confirms that young schoolchildren have a tendency to

pay attention and control their own judgments and argumentations from an early age. These tendencies are observed especially in students of III-IV grades.

In the course of the research, it was found that as a result of the teacher's purposeful work to develop the skills of based judgment in young schoolchildren, each student not only makes a certain commitment, analyzes his learning activities, but also can also command and control himself and his mental activity. In this process, each student tends to identify their strengths and weaknesses, to assess the strength of their knowledge and skills, and to find appropriate and effective means (arguments) to substantiate the correctness of their judgments.

Psychological analysis has shown that the difficulties faced by young schoolchildren in the process of learning, as well as their ability to feel their mistakes, have a significant psychological impact on the need to make informed judgments. A group of mistakes is directly dependent on the student, is of subjective character, and in this case, the mistakes are directly related to the student's training knowledge and skills. This includes the student's lack of self-confidence, indecision in his thoughts, shyness, lack of independence, indulgence, and other qualities. In this case, The ability of a young schoolchildren to motivate and force himself, to check himself, to overcome his will, not only eliminates these mistakes, in the true sense of the word, but also creates a solid basis for the formation of their ability to make reasoned judgments.

Thus, the analysis of the results of psychological and physiological research so far suggests that if certain psychophysiological conditions are followed in the pedagogical process, young schoolchildren can master more consciously to make debates and successfully applicate during the learning process.

Thus, from the point of view of the applied problem, the results of psychological research can be concluded that it is possible in terms of psychological and physiological development of children to form the ability to make reasoned judgments during the process of teaching subjects to young schoolchildren. The level of development

of children's thinking allows it. At the same time, we determine that based on the analysis of scientific, pedagogical, psychological and physiological literature in terms of the psychological and physiological development of children's thinking and the ability of students to form reasoned judgments, primary schoolchildren have the ability to make reasoned judgments. It is important to reveal the pedagogical conditions of teaching, as well as the essence of the theoretical and pedagogical provisions underlying this process, to substantiate their usefulness and to include them in the scientific system. It should be noted that during the process of primary education the understanding and adherence of class teachers to the rules of reasoning and judgment provides justifications more complete and more argumentative than the accuracy of the ideas put forward by students at all stages of primary education..

The third paragraph of the chapter, entitled "**Analysis of scientific and pedagogical literature on the subject**", states that both Azerbaijani and foreign pedagogues and methodologists approached the solution of the problem, and tried to put forward many valuable minds and ideas that could help solve it and substantiate them scientifically. The following conclusions can be drawn from the generalization of the analysis of these thoughts and ideas:

a) The problem of developing the ability to make reasoned judgments in young schoolchildren has not been specifically studied as an object of research on general pedagogical aspect.

b) The idea of the importance and possibility of inculcating the skills of reasoned judgment in young schoolchildren is unproven in the scientific, pedagogical and methodological literature.

c) Although there are methodological dissertations on teaching proof and proof elements to senior pupils, and research on the problems of mastering the methods of self-control during the teaching of subjects in primary school, none of these studies can solve the problem of formation of based reasoned judgments of younger students.

e) In the scientific and pedagogical literature it is possible to come across scientific-pedagogical and psychological thoughts and ideas that can serve to form the ability of making reasoned judgments in young students, which were also used when writing the dissertation.

In the fourth paragraph of the chapter, entitled "**Analysis of school practice in terms of the problem under investigation**", the study and analysis of school experience (the result of a descriptive experiment) showed that 85.8% of students of lower classes entering school for the first time do not have simple ideas, basic knowledge and skills to substantiate its accuracy, but only minority, 14.2%, have such skills. During the pedagogical process, however, it is not uncommon for young students to be inculcated with the ability to make reasoned judgments. Therefore, primary school students either do not consider it necessary to express their judgments in a based way, or they make judgments in such a way that these judgments consist of a collection of sentences that are not completely connected to each other and do not have a logical continuation of each other. Such a situation has nothing but a negative impact on the process of teaching subjects in primary school and the quality of learning.

Chapter II of the dissertation is entitled "**Opportunities and ways to develop the skills of reasoned judgment in young students.**" The chapter consists of four paragraphs. In the first paragraph of the chapter, entitled "**Didactic opportunities for the formation of reasoned judgment skills in young students**", purposeful comparison is considered as a key tool in the formation of based judgment in young students. It is shown that young people who enter school for the first time do not have any deep and systematic knowledge. They bring to school only some simple ideas, certain skills, and life observation experiences (observing their own actions, behaviors, following the simple sentences they use, the opinions they express in terms of their own judgments, attempts to regulate sentences, etc.). Therefore, it is necessary to provide young students with a mode so that they can be sure of the correctness of their opinions and simple conclusions, as well as their own

judgments. Of course, such a mode: a) should not go beyond the requirements of the subject curriculum; b) scientific concepts should not be distorted; c) more scientifically accurate and precise results should be provided; d) it should be easy for young students to understand; e) this work should have a substantial positive impact on the quality of primary education.

Research has shown that there is such a mode. The inculcation of this mode can be the ability to make judgments based on the mutually valuable compatibility created in a practical way between the two finite groups of objects to be inculcated in subject curricula and scientific and pedagogical literature. In this case, first of all, it is necessary to instill in young students the need to build their opinions and reasoning. In this case, children have doubts about the correctness of their views and opinions, and these doubts are checked by comparison. As a result, it is determined that the ability to make such judgments is the most effective way to verify the accuracy of the results obtained during the quantitative comparison of two finite groups of objects, to prove its accuracy.

Thus, the validity of the judgments made by minors during approximate comparisons is empirically proven by them.

As a basic mathematical concept, mutual value between two sets is taught to young students to formulate their judgments on the basis of mathematical exercises, to substantiate their opinions and as a means of reaching the right mental conclusion shows that comparisons and judgments based on these comparisons are well-understood, proven, and unquestionable. This proves that one of the most effective tools for testing the results of visual comparisons is the ability of young students to create a unambiguous correspondence between a finite group of objects, and the ability to make reasoned judgments based on these skills.

Inculcating in young students the skills of good judgment based on "more", "less" and "equal" ("so much") attitudes, teaching practical comparison as a means of forming reasoned judgments with the help of mutual values, the quality of primary education in several other areas has a positive effect :

a) When young students control their learning activities, their opinions and judgments, and are able to prove the correctness of their simple judgments, they become more confident and conscious in their study of the material and their interest in the subject expands.

b) Younger students are able to monitor and identify errors in their judgments. Such students have a sense of initiative to correct their judgments and correct mistakes.

c) Younger students learn to think creatively, make correct judgments, and justify their opinions. The formation of reasoned judgment skills not only develops the imagination, attention, memory and thinking of young students, but also creates favorable conditions for the formation of such qualities as self-confidence, activism and initiative.

d) Such an approach opens up a wide range of opportunities to improve the quality of learning in primary school, to build learning on a scientific basis and to link it more closely to life.

It became clear from the research that one of the computational techniques related to geometric and algebraic materials can be used as a means of controlling the judgment and its outcome in accordance with the course of another method, and student judgments can be built on this basis. The study also found that younger students are more likely to make such judgments. It is possible to achieve student judgments based on the essence of the concept taught in the formation of skills in accordance with the methods of calculation, the dependence between the judgments made by students during training and the internal components of the mental result. Experience has shown that such an approach is the most optimal and scientific form of student self-monitoring and self-assessment.

Thus, the method of inculcating in young students the ability to substantiate the validity of judgments and argumentations (conclusions) in the performance of arithmetic operations in young students begins with the questioning of the correctness of the mathematical results (judgments) they receive. Doubts are verified by judgments based on the combination of two finite sets and the separation of a part of the finite set from its elements. The result

obtained from the verification process (final judgment) is compared with the dubious result (judgment) and it is determined exactly whether it is true or not. This work continues with the formation of the ability of young students to make judgments based on the order of addition and subtraction, and then on the property of sum displacement, first dividing the numbers into components in the circle of ten, one hundred and one thousand.

In the course of the research, it also became clear that the formation of young students' ability to prove their point of view during the teaching of subjects in primary school, i.e. the formation of the ability to make reasoned judgments in young children in these stages develops their imagination, attention, memory, creative thinking, helps to think creatively, brings the process of teaching subjects closer to modern teaching ideas at mathematics, Azerbaijani language, life skills, reading, etc. in primary school; during the teaching of subjects in the upper grades such qualities of students as self-control, self-assessment, making well-proven argumentations, making judgments, etc. ensures more intensive training of more conscious, firm and correct teaching of proven judgments.

The second paragraph of Chapter II, entitled **"Formation of Cognitive Activity Conditioning Substantiated Judgments of Young Schoolchildren"** states that

-Cognitive activity is a complex integrated quality, aimed at using the potential of the individual and the solution of cognitive problems, characterizing human activity, a certain innovation and importance for the development of personality.

- The analysis of the main publications on the essence of the concept of activation of cognitive activity allows researchers to distinguish two main approaches when looking at the issue. Some authors consider cognitive activity as an activity, others as a process. It seems to us that from both approaches, as the purpose of the activity and the means and results to achieve it, work, we can form a common mind about the sense of activating of cognitive work which ensures the emergence of reasoned judgments. Thus, the activation of cognitive activity, is a process that results by formation of a person

who can solve problems creatively, think independently and critically, develop and defend their views, beliefs, constantly increase their knowledge, update and apply for creative change which ensures the emergence of reasoned judgments.

- Activation of cognitive activity is possible if the system of activation tools provides for the organization of education of young students as a purposeful, self-governing and changing process of activity, and if the system of these means takes into account the methodological conditions relevant to the specific goals of cognitive activity.

- Cognitive activity, which provides the formation of reasoned judgments of young students, manifests itself more clearly in the formation of mathematical imagination, knowledge and skills. By characterizing the dynamics of cognitive activity in the process of acquiring basic mathematical knowledge, it can be claimed that the activity is originated during the cognitive process. This is expressed in the ability to receive information with interest, the desire to deepen and clarify knowledge, the independent search for answers to questions of interest, the manifestation of creative elements, the ability to learn the way of cognition and apply it to other material. The formation of mathematical imagination, knowledge and skills allows to change and deepen the process of repetition, avoiding its stereotypes, activates the cognitive activity of children. Younger students are able to make comparative operations using the facts and classifications obtained, make more argumentative and convincing judgments, and draw bold conclusions independently.

- During the process of formation of mathematical imagination, knowledge and skills, it is necessary to emphasize and describe the pedagogical conditions that affect the activation of young students:

a) development of a structured model of activation of cognitive activity of young schoolchildren, based on an integrative approach to the organization of education in primary education, which provides the emergence of reasoned judgments in the formation of mathematical ideas, knowledge and skills;

b) the interaction of the structural components of the primary education process: planning, direct mathematical teaching activities, training of children and teachers in free activities, the mathematical environment that develops the subject;

c) development of a methodology to increase the cognitive activity of young students based on the integration of developmental, personality-oriented and subject-oriented learning principles, ensuring the emergence of reasoned judgments during the process of teaching mathematics.

The third paragraph of the chapter, entitled "**Developing students' ability to make informed judgments during the learning process**" states that if younger students are used as a means of controlling the validity of judgments from one judgment to another, then younger students tend to make such judgments independently. Such an initiative and its regular implementation make it easier and stronger for young students to grasp the logical connections between judgments.

Mathematical exercises are one of the means of developing students' reasoning skills during the learning process.

A student who doubts the mental result obtained in solving a mathematical sum solves the sum in another way, and when he gets a different result, he is forced to return to the solution of the example in the first way. When the previous answer is received again, the children already suspect that they made a mistake during the test and see the need to return to the second method. In this way, young students again have doubts about the judgment and its final verdict. Such suspicions motivate them to be active. Therefore, children once again carefully check the correctness of the solution step by step and make corrections in their judgments. Finally, in the second method, the children get the same result as in the first method, and at the end of their judgment they come to the conclusion that "we solved the sum correctly, but we did not check it correctly."

Thus, students not only check the correctness of the initial solution of the work and the process of judgment in accordance with

the course of the solution (control their activities), they can also identify and correct the wrong steps in the control process itself.

As a result, students have more confidence in the correctness of their mental activities and judgments accordingly. This is a very important stage in the formation of a well-grounded judgment not only in the teaching of mathematics, but also in the teaching of all subjects in young schoolchildren.

One of the didactic conditions that allows young students to develop the skills of reasoned judgment is the inculcation and interrelationship of the ability to make argumentations based on convincing evidence in the teaching of the Azerbaijani language and life sciences. Research has shown that the development of students' reasoning skills should begin in the first grade, when it is more appropriate to use the possibilities of confrontation and comparison techniques. The exercises used to inculcate spelling skills in spelling training in primary school are more suitable. The exercises worked out by confrontation and comparison techniques, allow students to operate independently on spelling, to think independently, to learn the meaning of each word, how words change as a result of misspelling, to memorize the correct spelling of words, to control their learning activities, to make adjustments when needed. As a result of the research, the causes of defective and weak inculcation of students' ability to control their learning outcomes in the process of spelling training and ways to eliminate them were identified. Taking advantage of these opportunities has allowed students to achieve great success in mastering the skills of reasoned judgment. The cards prepared in the dissertation based on the researches of the scientists dealing with the issues of primary education, their scientific-theoretical and practical ideas, and the "Correct your mistake" fund also played an important role in solving the problem.

The last paragraph of the chapter, entitled "**The pedagogical experimentation of got results**" is designed to test the validity of the research hypothesis and the ability of young schoolchildren to make reasoned judgments. The organization, course and results of the pedagogical experiment conducted to check the usefulness of the

pedagogical system are given. The educational experiment was completed and a test experiment was conducted in the experimental and control classes. The experiment was conducted in the form of a survey. The answers received from the students were analyzed both qualitatively and quantitatively. In order to more accurately determine the level of knowledge of students, the answers were divided into 4 groups in terms of substantiating the correctness of their answers with simple judgments. First of all, each group demonstrates the level of qualitative ability of students to fully explain the correctness of the answers given during the training, to formulate their judgments correctly and argumentatively. The section is based on the principle "The answer is correct, and its justification must be in the form of an argumentative and exhaustive judgment."

The first level group includes answers that are both thoughtful, correct, and the correctness of the answer is fully justified by the student's simple judgments.

The second level group consisted of the answers of students who, although they based their correct answers, but their judgments were logically incomplete and flawed.

In *the third level* of answers, students try to explain the correctness of their ideas, but they fail. The answers of such students consist of meaningless, irrelevant ideas. Students' judgments form a collection of unrelated sentences.

The fourth level covers the answers of students who are completely unresponsive, distracted, unable to give any answers, and do not even try to justify or explain whether their answers are correct. Such students either do not answer the questions at all or give incorrect answers.

Quantitative levels of student responses in the experimental and control classes were also compared, and percentages were derived. In the dissertation, these indicators are shown in 17 tables and 14 graphs on the stages of the experiment.

It is clear from the Table 4.1 that at the beginning of the experience, students' answers of the IV level (46.7%), in the middle-II level (36.7%), and at the end I level (36.7%) prevailed. At the

beginning of the experience, students' 1st and 2nd level answers formed 20.0% ($3.3 + 16.7 = 20.0\%$), in the middle 60.0% ($23.3 + 36.7 = 60.0\%$) and at the end it formed 66.7% ($36.7 + 30.0 = 66.7\%$).

Table 4.2 also shows that in control classes students' answers of the III level at the beginning of the experience (43.3%), in the middle of the experience answers of IV level (40.0%), and at the end of the experience level III answers (29.6%) predominated. Answers of level 1 and level 2 formed 23.4% at the beginning of the experiment ($6.7 + 16.7 = 23.4\%$), 26.7% in the middle ($10.0 + 16.7 = 26.7\%$) and 48.1% ($22.2 + 25.9 = 48.1\%$) at the end of the experiment.

The results of the experiment also showed that the formation of the ability to make reasoned judgments in young students and its implementation in the subjects provides an improvement in the quality of the entire primary education process. Thus, a solid foundation is created for a better organization of general secondary education.

The following general conclusions were drawn from the study:

It is possible to form the ability in young students to make reasoned judgments, to instill in them a sense of responsibility for the correctness of their opinions and judgments during the pedagogical process, especially when teaching of subjects and these skills improve the quality of primary education.

In addition, the following results were obtained at the end of the study:

1. The psychological and physiological level of thinking and perception of young schoolchildren allows them to form more consciously and firmly skills of reasoned judgment, which require serious thinking.

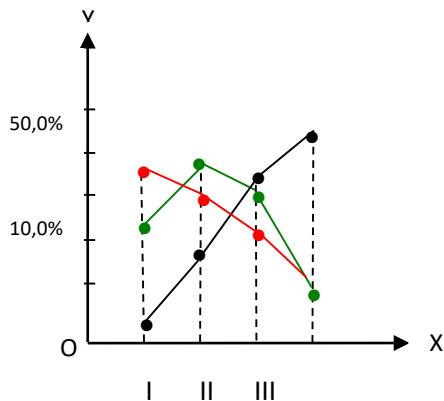
2. The content of the subject curricula and relevant textbooks of primary school allows young students to develop the skills of reasoned judgment and the gradual (step-by-step) formation of these skills. There is a need to increase the amount of work and assignments in textbooks on Azerbaijani language, mathematics, life skills and other subjects, which require students to control the validi-

The results of the experiment at the end of the academic year

I. Experimental classes

Table 4.1

Grades Level	Start	Middle	End
I	1 3,3%	7 23,3%	11 36,7%
II	5 16,7%	11 36,7%	9 30,0%
III	10 33,3%	9 30,0%	7 23,3%
IV	14 46,7%	3 10,0%	3 10,0%
Number of students	30	30	30

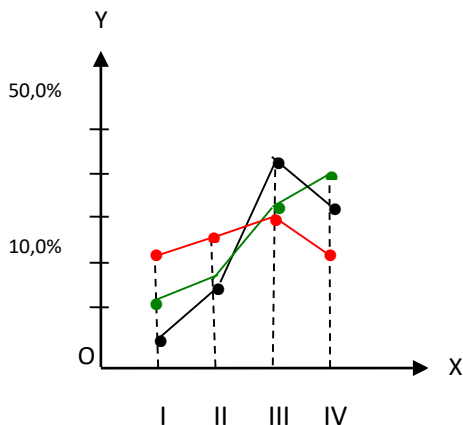


Graph 4.2

II. Control classes

Table 4.1

Grades Level	Start	Middle	End
I	2 6,7%	3 10,0%	6 22,2%
II	5 16,7%	5 16,7%	7 25,9%
III	13 43,3%	10 33,3%	8 29,6%
IV	10 33,3%	12 40,0%	6 22,2%
Number of students	30	30	30



Graph 4.2

ty of simple assumptions (opinions and thoughts) and to substantiate their correctness.

3. The current level of development of reasoning skills in young schoolchildren, as well as the acquisition of the necessary knowledge to prove the veracity of their judgments and their results, does not fully meet the requirements for training in primary school. At the end of the primary education process, the majority of young students do not feel the need to control their speech, their judgments about their actions and attitudes, to justify and prove the correctness of their minds and opinions. The majority of young schoolchildren, who feel the need for this, are unable to justify their views and actions.

4. Methodological literature cannot meet the current needs of our schools in terms of developing the skills of reasoned judgment in young schoolchildren, instilling in students the ability to justify their actions and judgments (final conclusions).

In order to further enrich the theory of pedagogical science and apply it to school practice, the following scientific results are proposed:

1. To include in the general methodology of teaching subjects in the primary grades the developed system of work on educating the need to substantiate the accuracy of the results of their judgments in the process of teaching subjects to young schoolchildren and forming their ability to make reasoned judgments.

2. In the improvement of subject curricula and textbooks, the formation of the ability of young students to make reasoned judgments about learning activities, increase the number and variety of practical and theoretical work from students to correct their daily behavior and actions. For example, the practical exercises should be given immediately after the practical exercises that serve the students' first acquaintance with the basic mathematical concepts and addition and subtraction during the first training period, and in the later stages between the exercises related to the basic computational techniques; Exercises that can serve to develop reasoned judgment skills in younger students should be combined with exercises that serve to develop other learning skills in textbooks. The methodology of

solving such works should be taken into account in the workbook of the relevant classes.

3. To prepare methodical aids on ways of formation of habits of pupils in the organization of educational actions serving training in primary classes, control of their judgments, their correctness and to be able to substantiate it, and to provide for use by teachers;

4. Practical primary school teachers should take into account the methodology of developing the skills of reasoned judgment in young schoolchildren;

5. The issue of inculcating in students the ability to make reasoned judgments within the existing subject curricula in primary school should be widely studied both methodologically and psychologically.

The main content of the dissertation, the main ideas put forward in the research, the results obtained are reflected in the following published works of the author:

1. Scientific - theoretical value of the concept based on science // Science, new technologies and innovations in Kyrgyzstan, 2017, № 9, 196-198 p.

2. Empowering justified judiciary skills of young schoolchildren // Baku Slavic University, Actual problems of studying the humanities, 2018, № 1, 153-157 p.

3. Physiological features of formation of the ability to express reasoned judgments in junior students // Institute of Education of the Republic of Azerbaijan, volume 85, 2018, № 3, 78-81.p.

4. Psychological features of formation of the ability to express reasoned judgments in junior students// Ganja State University, Scientific News, Fundamental, Humanities and Natural Sciences Series, 2018, № 2, 365-369.p.

5. Essential judgments are the strongest psychological product of student thinking // Scientific works of Baku Girls University, 2018, №1, 108-111. p.

6. Logical-psychological aspects of substantiated student judgments // Materials of the republican scientific conference on

“Teacher training as one of the strategic goals” of the Institute of Education of the Republic of Azerbaijan 18 May 2018, 215-216 p.

7. Substantiated student judgments and its psychological aspects // Nakhchivan Teachers' Institute Materials of the scientific-practical conference on "Modern teaching methods and application of new pedagogical technologies during the process of education", May 8, 2018, 63-65 p.

8. Two matters achievedes are basic feature in the formation of learning obstacles in maturated educational initives of schoolchildren // Proceedings of the International Conference held at Ganja State University. Ganja, 2018, 188-190 p.

9. Skills to make reasoned judgments in young schoolchildren // Nakhchivan "University Scientific works № 3 (14) Nakhchivan-2019, 261-267 p.

10. The methodical ways and opportunities of forming the abilities of making well-founded judgments in primary school children // European Research: Innovation in Science, education and technology London, Great Britain, December 8-9, 2019, 88-90 p.

11. Methodological possibilities to develop reasoned judiciary skills in primary students // IV Republican Scientific-Practical Conference of young scientists of GSU Ganja -2019

12. Opportunities for students self-control through the spelling training in the elementary grades // Scientific works of Baku Slavic University № 2, 2019, 30-36 p.

13. Mathematical issues are as the basic methods of formation of skills based on reasoned justified discussion// Az.Education Institute Scientific works volume 87, № 4, 2020, 110-112 p.

The defense of the dissertation will be held on 18 March 2022 ^{11⁰⁰} at the meeting of the FD 2.40 Dissertation Council operating under the Nakhchivan Teachers' Institute.

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The dissertation is available in the library of the Nakhchivan Teachers' Institute.

Electronic versions of the dissertation and abstract are posted on the official website of the Nakhchivan Teachers' Institute (www.nmi.edu.az).

The abstract was sent to the necessary addresses on 17 Feb 2022

Signed: 12.02.2022
Paper format: 60×84.16/1
Volume: 41768
Circulation: 20