

SECTION 2. EDUCATION

2.1 Formation of creative potential of the future teacher of the New Ukrainian School in higher education institutions

In connection with the integration of Ukraine into the European educational space, urgent measures are envisaged to ensure the functioning and development of education in Ukraine, in particular, support and encouragement of intellectually and creatively gifted children and youth, self-realization of creative personality in modern society. The basic principle of reforming the content of education is the independence and creative activity of the individual in the acquisition of knowledge.

Numerous psychological and pedagogical studies deal with the problem of training a creative teacher. The works of A.Aleksyuk, V.Kozykov, K.Makogon, P.Pidkasisty and others are devoted to the issue of creative formation of a student in the process of performing independent work of creative - search character. L. Bazhenova, S. Elkanov, O. Kyrychuk and others consider in their publications the creative bases of self-improvement and self-realization of the future teacher. Modern researchers are actively developing methodological and theoretical principles of creative teacher training, which, however, require specific implementation in the content of certain disciplines of the psychological and pedagogical cycle [36].

The purpose of this publication: to reveal the experience of organizing the creative activities of students majoring in "Primary Education" in the process of studying the discipline "Methods of teaching mathematics in primary school. (System of exercises, tasks with logical load)».

The program of the discipline "Methods of teaching mathematics in primary school. (System of exercises, tasks with logical load) » ensures creative character of work of students and considers it as an integral part of mastering by them of educational material of a course. Practical classes in this discipline are built so that students can understand the basic methodological requirements for studying certain sections of the program, learn to work independently with methodological literature, be able to prepare a meaningful report, abstract, analyze speeches, form a clear concise

conclusion, select literature for individual sections of the course “Methods of teaching mathematics in primary school”, write an abstract, annotation, make a synopsis.

The purpose of the discipline - the formation of professional competence of future primary school teachers in the field of studying the theoretical foundations of logical and mathematical training in the educational process of primary school; increasing knowledge and improving students' skills in organization of educational and creative activities of students in mathematics lessons and extracurricular work.

Particular attention in working with students is paid to solving a system of problems with a logical load. Questions of methods of work on problems with logical problems in the course of mathematics in primary school were considered by M.A. Bitova, M.V.Bogdanovich, N.B. Istomina, O.Ya.Mytnyk. Methodists' works are devoted to guiding pupils' activities in solving problems, activating pupils' mental activity, etc. According to M.V. Bogdanovich, the types of logical problems should include: problems-jokes; tasks - puzzles; statement tasks; problems to prove; tasks on the method of sequential extraction; tasks on the method of sequential testing; tasks to determine all possible versions; tasks, where solving should take into account the spatial arrangement of objects; tasks to search regularities and find out the reasons for their violation [36].

O.Ya.Mytnyk [38] refers to tasks with a logical load such tasks, where the connections between the data and the object of search are unclear. Therefore, in the process of work it is necessary to find and establish existing connections. Successful solution of these problems depends on the ability to build complex judgments – reasoning with conjunctions: and, or, if, ... then.

These are the following types of problems with a logical load: problems that are solved beginning from the end; tasks for finding the mass of objects; tasks for the rightful distribution of objects; problems for finding components at known values of sum, difference; combined tasks with logical load.

The greatest creative activity of students is caused by tasks that contribute to the formation of pupils' ability to analyze, compare, classify mathematical objects. As a

result of joint work, students singled out the operations that were part of the classification and formed a rule – a guideline for its implementation.

1. Determine the properties of objects for classification (analysis).
2. Compare objects by general or special features (comparison and contrast).
3. Choose a basis for classification.
4. Divide objects into classes according to the basis of classification.
5. Name each class of objects [38].

Among the creative tasks a special place was occupied by exercises to find patterns. After solving them, students determined that the elements of patterns could be numbers, geometric shapes, words, letters, identified types of tasks (definition of a common feature or property of these elements; continuation of series of elements of regularity from the given elements; exclusion of unnecessary element of regularity).

During the study of geometric figures, students used logical tasks that were to clarify children's ideas about figures, considered different types of figures, compared and constructed them. Performing such tasks is very useful: stable ideas about geometric shapes are formed, spatial thinking, design skills, logical thinking and attention are developed.

Logical exercises with the use of geometric material provide an opportunity to deepen the formation of logical and probabilistic thinking throughout the period of study in primary school. Pupils get acquainted with such geometric conceptions as point, line, curve, segment, angle, triangle, quadrilateral, pentagon, polygon, right angle, circle, rectangle, square. They learn to recognize any figures in pictures, models and surrounding objects. They master basic graphic skills, acquire practical skills in solving problems of computational and measuring nature (finding the length of the segment, the area of the figure, the perimeter of the polygon).

The exercises listed below involve manipulative activities with basic geometric shapes, promote the development of combinatorial ideas of primary school students.

1. Write down all the angles shown in Fig.
2. Write down all the triangles shown in Fig.

3. Which figures are shown in Fig. How many of them are: a) triangles; b) quadrilaterals; c) rectangles; d) squares?
4. How many hexagons, quadrilaterals are shown in Fig.?
5. How many triangles are shown in Fig.?
7. Write down the names of the polygons
8. Write down the names of geometric shapes
9. Finish on the right according to the sample. How many rectangles in the picture?

Draw the house on the right like this.

Students in practice appreciated the benefits of solving logical problems in different arithmetic ways, because it contributed to the achievement of many goals of educational work with pupils. In this activity there are great opportunities to improve mathematics education (development of intelligence, logical thinking).

Suggestions and requirements for solving logical problems in different ways are contained in existing textbooks in mathematics, in numerous methodological developments for teachers, but, in our opinion, the work should be even more advanced and systematic. After all, it teaches the individual to put forward hypotheses and test them, compare results, draw conclusions, that is, teaches to think. In addition, developing the habit of looking for another solution is very important for future creative, in particular scientific activities, namely, the ability of the performer to find nontype ways to solve the problem, ensures success in professional activities.

It is necessary to focus on the use of binary lessons as a means of forming mathematical competence of primary school students, because one of the key components of the New Ukrainian School formula is a new content of education based on the formation of competencies necessary for successful self-realization.

Binary lesson is a specially organized lesson, the purpose of which can be achieved only by combining knowledge from different subjects, aimed at consideration and solution of any problem, which allows to achieve by pupils a holistic, synthesized perception of the researched question, which represents harmonic combination of various sciences methods and has a practical orientation [38].

Binary lesson is one of the forms of realization of interdisciplinary connections and integration of subjects. This is a non-traditional type of lesson. The lesson is taught by two or more subject teachers. A binary lesson is by its nature a form of project. Such lessons allow to integrate knowledge from different areas to solve one problem, give the opportunity to apply the acquired knowledge in practice.

Binary lessons in mathematics and computer science are of great interest for pupils. The use of computers in education allows to create an information environment in the classroom, which stimulates the interest and curiosity of the child, promotes motivation for self-educational activities, the development of information competence. The computer becomes an electronic intermediary between teacher and student. It allows to intensify the learning process, makes it brighter and clearer.

The practical significance of binary lessons is great both for students (application of knowledge of several subjects) and for the teacher – it is the practice of using modern technologies.

Objectives (for teachers):

- study of subjects on the principle of systematic knowledge;
- establishing interdisciplinary links and integration of subjects;
- more rational use of study time;
- increase motivation to study subjects;
- opportunity for personal and professional growth;
- development of teacher cooperation.

Goals (for students):

- belief in the coherence of objects, in the integrity of the world;
- the content of the lesson helps to reveal not only the issues of a particular subject, but also to see the inextricable link between subjects;
- development of creative thinking of students, the ability to apply the acquired knowledge in a new situation;

As a result of conducting binary lessons, the following results are expected to be achieved:

- creation of own methodical treasury;

- improving the quality of education through the use of modern technologies;
- use of integrated technology in the educational process;
- acquaintance with resources, with the sources of this issue;
- development of interdisciplinary links;
- formation of interdisciplinary skills for pupils.

The effectiveness of binary lessons lies in combination of pedagogical efforts and skills of two teachers. The creative potentials of the student and the teacher are actively involved. The lesson becomes dynamic, activities change. There is an increase in motivation and interest of students, students' attention is maintained throughout the whole lesson. This is an unconventional approach to the study of educational material, non-standard and exciting form of the lesson, saving study time.

Usually binary lessons are conducted at the stage of creative application of the studied material. Such lessons solve interesting, practically significant and accessible problems on the basis of intercultural interaction. The results of the study are presented in the form of diagrams, tables, videos of practical value, which, in the future, can be used as didactic material. The purpose of the binary lesson is to create conditions for motivated practical application of knowledge, skills and abilities, to give students the opportunity to see the results of their work and get joy and pleasure from it. Binary lessons require a lot of training, both teachers and students, so they cannot be conducted often. But such a lesson, conducted not for the sake of external effect, but for the systematization of knowledge, the formation of beliefs in the coherence of objects and the integrity of the world, is an important step in shaping the worldview, the development of thinking. As one of the forms of the project, binary lessons are means of increasing the motivation to study mathematics, as they create conditions for the practical application of knowledge, develop students' skills of self-education. It is possible to prepare for the lesson on your own and in extracurricular activities. Binary lessons develop analytical skills and ingenuity, have great educational potential. Binary lessons transfer skills to new areas that have not been studied before, which helps students make decisions in creative situations. Such lessons are interesting not only for

students but also for teachers. They unite the teaching staff, change relationship between teachers and in addition, expand horizons and spheres of influence.

The problem of formation of pedagogical creativity of future specialists has always been and will remain one of the most pressing problems of the theory and practice of pedagogical science. The modern stage of market transformations in Ukraine in all sectors of the national economy leads to a change in the paradigm of the relations between the state and a person, where the central element of this system becomes a personality. A person in the modern world does not play transformative functions, but acts as a subject of the management process of socio – economic systems [42]. Its activities are based on the functions of planning, organization, motivation, analysis, control, coordination and more. Just these circumstances determine the urgency of the problem of forming the creative abilities of the individual and, accordingly, the interest of scientists and practitioners in various scientific fields: philosophy, pedagogy, psychology, sociology and more.

The analysis of world trends in the field of education, in particular vocational education, shows the need to put higher and higher requirements for the personality of a professional teacher, teacher – creator [42].

Analysis of conceptual state documents, namely: the Law “On Education”, “On Higher Education”, the Concept of Development of National Higher Education, the State National Program “Education (Ukraine of the XXI Century)”, the National Doctrine of Education Development, the Concept of New Ukrainian School, which regulate the strategy of development of general and higher education in Ukraine, allows to determine the general requirements for teachers, responsibilities of teachers in self-education, raising their creative professional level, pedagogical skills, general culture: "Teachers should be the main driving force of revival and creation of a qualitatively new national education system. In this regard, the main attention should be focused on training a new generation of creative, professionally competent teachers "[44].

Problems of formation of pedagogical creativity of teachers have multifaceted treatment. Namely, this problem was considered by V. Andreev, V. Kan-Kalyk, M. Nikandrov, M. Potashnyk, S. Sysoyeva and many others. Pedagogical creativity is

interpreted as an activity that generates new original solutions in the pedagogical interaction of teachers and students [43]. Pedagogical creativity of primary school teachers is carried out and manifested during lessons, competitions, screenwriting, educational activities and more. But in the process of professional training of students in higher education, the learning process is traditional. Upon graduation, after becoming certified professionals, students have difficulty in performing their professional duties as a primary school teacher [45]. Therefore, even within the walls of the university it is necessary to use certain tools to reveal the pedagogical creativity of future professionals.

The purpose of the study is to characterize the expediency of using didactic games in the process of forming a pedagogical creativity of future primary school teachers.

Analysis of modern psychological and pedagogical literature highlights a large number of definitions of "pedagogical creativity of the teacher". Most researchers (D. Bogoyavlenskaya, S. Novosyolov, S. Sysoeva) consider it as the realization and self-realization of the teacher in the educational space, as the optimal implementation of advanced constructions of models of pedagogical activity; others - as the search for the optimal pedagogical solution in a particular situation (M. Potashnyk, V. Zagvyazynsky); as co-creation in pedagogical activity of subjects of educational process (V. Kan-Kalik, M. Nikandrov). But they all agree on one thing: that pedagogical creativity of a teacher is a type of his activity, distinguished by new approaches to the organization of the educational process, the use of non-standard (original) means of cooperation with students and the result is the formation of highly developed, creative personality [47].

Pedagogical creativity of primary school teachers is characterized by those differences that lie in the plane of specific tasks of primary education. We consider the pedagogical work of future primary school teachers as a set of special knowledge, skills, motivational attitudes to creative pedagogical activities, aimed at non-standard solution of the main tasks of teaching and educating students [42].

In order for future primary school teachers to be able not only to conduct a lesson, but also to arouse interest, it is necessary still in the process of studying in higher education institutions to involve them in conducting various creative games for the formation of pedagogical creativity.

A modern teacher must be a creative person, a creative teacher, and his pedagogical creativity is a necessary condition for the movement to pedagogical mastery. The teacher achieves a high level of mastery not only due to the presence of a certain level of pedagogical creativity, but also due to the formation and development of professionally significant personal qualities such as honesty, perseverance, diligence, overcoming difficulties, transforming skills into practice, i.e. due to accumulation of his own life and pedagogical experience [42].

Therefore, the course of pedagogical skills in higher pedagogical school, in our opinion, should be more focused not on the theoretical training of future teachers, but on the formation of pedagogical creativity, the development of creative potential of personality [43]. We offer to train a creative primary school teacher in a higher education institution by means of reforming the state and conditions of teaching the course "Fundamentals of Pedagogical Skills" through the use of didactic games.

In order to improve the quality of higher education, we support the idea of P. Scherban, who proposes to address all the best that has been accumulated over several tens of years: to expand the courses "Fundamentals of Pedagogical Skills", "Introduction to the specialty" and not as students choose but as prerequisite for obtaining the profession of teacher. It depends on the teacher whether students will be interested in learning something new, how well they will learn this new, creatively use the wealth of knowledge in practical life. Therefore, the subject "Fundamentals of pedagogical skills", which we consider as an integrative course of professional and pedagogical training of future primary school teachers should become a core, providing for the formation of creatively active teachers [44].

The educational process should take into account trends in socio-economic development of society, the psychology of youth, and implement in practice methods and forms of learning: the principles of initiative, individualization, independence,

competition, creativity in knowledge mastering. Students must strive without enforcement for systematic, fruitful educational and creative activities. It has been experimentally established that competitions in most cases give a much greater effect in increasing the creative activity of students than their external motivation. Therefore, to implement these requirements, a significant place in the pedagogical activities of the teacher should be occupied by didactic game teaching methods.

The game method is characterized by three main features: 1) determines the purpose aimed at the content of education to be mastered; 2) provides a type of educational and cognitive activities; 3) determines the nature of the interaction between teacher and students [43].

If we analyze the activities of man from the standpoint of modern science, it turns out that the game in it occupies a leading place and is one of the needs of man. At the biogenic level, it is the need for movement activity, at the psychophysiological level, it is the need for emotional saturation, and at the creative level, it is the need for overcoming, to express one's will. The educational process, built on the basis of game didactic forms, helps to significantly enhance the cognitive activity of students, to implement the creative components of personality development. A. Makarenko noted: "... in the game the person actively acts, thinks, builds, combines, models human relationships". Under these conditions, a person performs various roles in the game: organizer, performer, creator, finds the conditions to identify human abilities and life activities [47].

Compared to other forms of learning, game methods have the following positive aspects: high efficiency in the acquisition of knowledge and the formation of skills and abilities; formation of the ability to cooperate; formation of learning motives; development of well-wishing relations between students; development of educational and creative activities (planning, reflection, control, self-control). In the didactic game, learning tasks are indirect, which ensures their effectiveness. K. Ushinsky wrote: "... in the game all aspects of the human soul are formed: its intellect, its heart and will" [47].

Didactic game is a way of interaction between teacher and students, caused by the game situation, which leads to the implementation of didactic tasks and learning objectives. The purpose of didactic games is to intensify the process of cognition of the student audience, to delve into the content of the discipline being studied; to develop skills of collective interaction, to gain experience of creative activity, and also to define a level of competence of future teachers of primary classes.

We implemented the idea of using world-famous intellectual games ("KVN Competition", "Brain Ring", "What? Where? When?", etc.) in the educational process as a separate element of educational and creative activities of students in the current, intermediate or final control of knowledge in the study of the discipline "Fundamentals of pedagogical skills", used different types of didactic games.

Didactic games are designed taking into account the socio-psychological conditions of the pedagogical process and didactic principles.

Modeling of didactic game in accordance with its purpose lies in the development of algorithms, rules, methodological and organizational and technical support. This work is carried out by combining a phased control system and modular-rating learning technology, which provides not only the orientation of students to professional training, but also the development of their creative abilities and skills of research activity [44].

Analysis of the experience of practical implementation of this conceptual idea in the educational process shows that the most effective and efficient is the system that promotes the maximum manifestation of student abilities, self-realization, when professional skills and skills of creative research work are formed on the basis of professional knowledge.

Let us consider the example of organizing and conducting a didactic game "Brain Ring".

"Brain Ring" – a didactic game-contest in the form of intellectual competition between teams of students of the academic group on the priority and correctness of reply to educational, scientific and educational problems of primary school.

Didactic game "Brain Ring" is a form of encouraging students to intensify educational and creative activities in the intermediate or final control of knowledge on the subject of the discipline "Fundamentals of pedagogical skills". This form of intermediate control should be used in the training system with a preliminary determination of motivational conditions for the rating program.

General rules of didactic game

1. "Brain-ring" is realized in the form of competition of teams on the priority and correctness of answers the leader's questions.

2. Before the game the order of priority is determined by means of drawing cards with serial numbers of performances.

3. The game consists of three rounds, in which each team must meet once with each opponent.

4. Each game tour is provided with an individual card of problematic issues. Each card has 10 questions, which are formed on the subject of the discipline "Fundamentals of pedagogical skills" and require the use of creative elements in the answer.

6. A limit of 30 seconds is assigned to discuss the leader's questions.

7. The team that answered the question first must press the button on the electronic device and present the answer.

If the team gives the wrong answer, the opposing team has 15 seconds. to answer the same question.

8. For the correct answer the team receives 2 rating points. If the answer is incorrect - 0 points. The results of the score are recorded by the secretary and displayed on the board.

9. If both teams did not answer the question, the next question is rated 1 point higher.

10. The team that scored the highest number of rating points in the game round is considered the winner of the round. The place of the defeated team is taken by the next draw.

11. Evaluation and motivation of educational and creative activities of students.

According to the results of the performances, the teams are awarded rating points in accordance with the number they received in three game rounds. Additionally, students can receive up to 5 rating points in time-outs, performing various types of educational and creative activities (presentation, poetry, staging, etc.) on the subject of the discipline. The scores obtained by students are summed with their overall rating.

Here are the types of didactic games (story-role, problem game situations), which were used by students during the "Brain Ring". These games promote a complex process of all mental abilities of the person, stimulate development of attention, imagination, memory.

Here are samples of didactic games that were held in the first grade of primary school.

Didactic game "Beauty Contest"

It was necessary to evaluate each other: children worked in pairs, exchanged notebooks. They were asked to choose "Beauty" (the best written word) and "put on" (draw over it) crown and "Cinderella" (the worst written word) and put only a dot over it. And then it was necessary to turn "Cinderella" into a beautiful princess, writing the best possible words. Competition in rows: each student came up with a sentence with "beauty" and "Cinderella". The winner was the row that completed the task faster.

In speech development lessons, which required students to create verbal descriptions, enrich and expand the vocabulary, was used the problem game "Cup", which is based on the method of word analysis, proposed by Sh. Amonashvili [37, p. 200]. This game was held so that the accumulation of epithets does not turn into their automatic memorization, but helps to develop students' thinking. Thus the teacher deliberately "made mistakes" in the analysis. The children's task was to "catch" the teacher's definitions in the hand palms, composed as a "cup" and in a second to confirm his opinion or refute, enduring an "intellectual battle". The theme of our lesson was "Golden Autumn", so we created the necessary emotional mood. A colorful autumn leaf was placed on each desk, and a bouquet of autumn leaves stood on the teacher's table. A hedgehog visited the class, and on his needles were drawings of various leaves.

The children "caught" the teacher's definition in the "cups" of their palms, then repeated the proposed definition in chorus.

And then, after solving the problem situation, the lesson began with a didactic game "From which tree is a leaf?"

Didactic game "From which tree is a leaf?"

The children's knowledge of the size and shape of birch, oak, maple, and linden leaves was tested. The children had to tell which trees these leaves belonged to and describe them, divide the leaves into 2 groups: coniferous and deciduous. The teacher handed out autumn leaves and the "student leaves" ran around the class. The teacher gave the command: "Leafy – to me!" or "Needles - to me!". The children ran up. Then the game was repeated once more.

The children were especially interested in the problem staging "Guess Who I Am", which we conducted in the lessons of acquaintance with the environment.

Problem staging "Guess Who I Am?"

(in lessons of acquaintance with the world around)

Host: A cat catches mice, a seagull eats fish, a flytrap eats flies.

Mysterious Beast: Guess Who I Am? I eat beetles and ants.

Host: You are a woodpecker.

Mysterious beast: But you did not guess! I also ate wasps and bumblebees.

Host: Yeah! You are a bird – bee-eater.

Mysterious beast: No! I also eat caterpillars and larvae.

Host: Thrushes eat caterpillars and larvae.

Mysterious beast: And I'm not a thrush! I also gnaw the horns dropped by moose.

Host: Then you're probably a forest mouse.

Mysterious beast: And not a mouse. Sometimes I eat mice myself.

Host: Mice? Then you are, of course, a cat.

Mysterious beast: It's a mouse, it's a cat! And you did not guess again! Do you give up?

Host: Maybe you're a heron?

Mysterious beast: Not a heron, but I eat also buds, seeds of firs and pines, berries and mushrooms.

Host: You are a wild boar.

Mysterious beast: You didn't guess again! I'll help you: I'm a squirrel.

Host: Remember, friends: cats don't just eat only mice. And squirrels gnaw not only nuts.

When the students were studying the daily routine, the fairy-tale hero Periwinkle came to their class and asked: "Can I follow the daily routine with a live clock?" The children were surprised to hear about such a watch for the first time. There was a problematic game situation "Live Clock".

Problematic game situation "Live Clock"

in the lesson of acquaintance with the world around

Periwinkle explained that live clocks are flowers. If you plant them in a certain sequence, according to the timing of their opening, you can determine when comes morning, afternoon, evening.

At three o'clock in the morning the yellow goat begins to open its wreaths, at four o'clock – chicory, at six o'clock dandelion flowers open, then: St. John's wort, marigold, water lily. At ten o'clock the trumpets of the mallows abound in all their glory, at eleven o'clock it is time for the bunch, and at twelve o'clock the purslane.

Until 17 o'clock all flowers bloom, except nocturnal, and then their place is taken by evening beauties - fragrant tobacco, smolyanka, viholka, later - stock. Certain alteration makes the weather: on cloudy days the flowers bloom later. At the end of the story, Periwinkle offered a practical task.

If you take care of the seeds in advance, then try to create such clock. It will be both a surprise and a wonderful gift for your parents.

The teacher asked the children problematic questions:

1. Fruit and flower boasted to each other about their features. Guess which ones? What can a flower not boast of before a fruit, and a fruit before a flower?

2. Look at the fruits: raspberries, cucumber, apple and hazelnut. Pay attention to the size, color, shape; touch – are they hard or soft, tap each fruit on the table and

determine whose sound is louder. See fruit seeds: color, size, quantity. Think about why the little raspberry took a cucumber and an apple for its relatives, and not a hazelnut?

3. Twigs of willow, currants were put in water on the window and in the cupboard, where sunlight does not penetrate.

– Why did the leaves on the window develop best?

– Why are the leaves on the branches standing in the cupboard pale, weak?

Then Periwinkle invited the Sun to class. It told a fairy tale, and students, in order to find out the level of knowledge about the role of plants and animals in nature and the importance of sunlight, energy for all living things on Earth, using cards depicting the sun, various plants and animals, made the simplest food chain according to materials of the didactic game "Chain".

Didactic game "Feeding chain"

Purpose: formation of a holistic view of nature; ability to observe, analyze, compare, draw conclusions.

The course of the game

Build feeding chains (what eats) on the model:

Mushrooms ← squirrel ← marten

1) Jay, acorn, hawk.

2) Woodpecker, oak, bark beetle, black grouse.

3) Wolf, acorns, wild boar.

4) Roots of oak, mouse, fox.

5) Pine, aphid, nutmeg, ladybug, spider.

Competition in rows: come up with an interesting story with these words. The row that composes the story faster will win.

Considering the different types of problem-solving tasks in mathematics lessons, we came to the conclusion that the greatest impact on the development of cognitive activity of students have exercises: 1) logical content; 2) combinatorial; 3) with elements of research; 4) for intelligence. Here are their samples.

1) Two boys played the guitar and one played the balalaika. What instrument did Yurko play if Mykhailyk and Petryk and Petryk and Yurko played different instruments?

2) In Tatiana's bag there are two lined notebooks and two squared. She takes 1 notebook at random. What can he be like?

Answer: either lined or squared.

If a girl takes 2 notebooks at random, what can they be?

Answer: one lined and one squared, or two lined, or two squared.

When she takes 3 notebooks at random, what can they be?

Answer: two squared and one lined, or two lined and one squared, or three squared or three lined.

3) How many parts will the segment be divided into if one point is placed on it? 2 (3, 4, etc.) points?

How many points do you need to place on a segment to divide it into 2 (3, 4, etc.) parts?

In performing this task, students came to the conclusion that the parts will be one more than the number of points. They were no longer confused by the more complex research exercises.

4) Children made figures according to samples (*game "Tangram"*).

We used a problematic presentation of the material, which was combined with a heuristic conversation. Thus, the monologue form was combined with the dialogic one. Our research showed that the problematic presentation of the material kept the attention of younger students 5-6 minutes. In the heuristic conversation, the students, under the guidance of the teacher, solved the problem task in parts, stages, and a chain of questions that logically followed one another helped the students to do it.

Conclusions. Thus, the use of didactic games in the study of the discipline "Fundamentals of pedagogical skills" not only stimulates, encourages students to acquire knowledge in the process of such activities, but also forms the pedagogical creativity of future primary school teachers.

The use of the game method in the educational process, which is the main at all stages of the input, current, intermediate, final control of knowledge has a very effective impact on the formation of pedagogical creativity of future primary school teachers. Implementation of the training system involves the maximum expansion of creative elements in activity of future professionals through the use of game forms of control (didactic games), the implementation of the principles of individualization, competition, pedagogy of cooperation.

Further research is expected to be conducted in the direction of studying other problems of formation of pedagogical creativity of future primary school teachers by using didactic games.

Mathematical competence - the culture of logical and algorithmic thinking; ability to apply mathematical (numerical and geometric) methods to solve applied problems in various fields; ability to understand and use simple mathematical models; ability to build such models to solve problems.

The process of mastering mathematical knowledge, which is presented as a well-organized system of interconnected elements, forms a systematic and structured thinking. The process of solving mathematical problems requires constant analysis, comparison and synthesis of information. Working with mathematical concepts reveals the processes of generalization and classification. The study of geometric objects allows to develop spatial representations and imagination. Thus, mathematics forms the universal properties of thinking: systematization, structurization, generalization, and others.

The formation of mathematical competence of students in the classroom is performed through mastery of new knowledge, skills and abilities in the study of mathematics. The main task of a primary school teacher in mathematics lessons in a secondary school is the development of mathematical abilities and skills of students, increasing the prestige of knowledge, the formation of not only mathematical, but also key and interdisciplinary competencies.

Is suggested the system of organization of creative work of students in the discipline "Methods of teaching mathematics in primary school". The system of

exercises, tasks “with a logical load” is based on the psychological foundations of creative personality development, which gives the opportunity to master the material, activates cognitive interest, stimulates teaching, research and creative activity.