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THE PSYCHOLOGICAL BASIS OF SHAPING THE MATHEMATICAL COMPETENCES OF STUDENTS (9TH GRADE) IN EDUCATION UKRAINIAN LANGUAGE

INTRODUCTION

The formation of a competent personality in language education is being transformed. The modern model of purposeful interaction between the teacher and students acquires a research orientation. All-round development of students during the learning of the Ukrainian language takes place through the identification of their gifts, talents and abilities necessary for successful socialization in society. In the methodology, the issue of integration of key competences in the linguistic and literary field is actualized. Accordingly, the attention of scientists is focused on an in-depth analysis of the psychological basis of the system of students' cognitive actions, directed at the assimilation of their knowledge and the formation of the ability to apply the acquired skills throughout life.

What is new in the education system is the combination of mathematical creativity and norms of the modern Ukrainian literary language. The ability of applicants to establish cause-and-effect relationships, to separate main and secondary information, to formulate definitions, to logically justify the expressed opinion, to transform information from one form to another (text, graph, table, diagram) (Kabinet Ministriv Ukrayiny, 2020) to solve communicative tasks will contribute achieving successful results not only in the assimilation of language material, but also in the development of mathematical abilities.

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The research is aimed at an in-depth analysis of the mental processes, phenomena and states of ninth-graders, the selection of appropriate methods and means for the development of their knowledge, skills, experience, values and attitudes in the formation of mathematical competence while learning the Ukrainian language.

MATERIALS AND METHODS

The definition of psychological factors in the development of students' mathematical competence in Ukrainian language lessons is based on the works of Ukrainian and foreign scientists (Z. Bakum, V. Voloshyna, O. Horoshkina, D. Diuy, L. Dolynska, S. Karaman, O. Kopus, H. Kostiuk, S. Kuranova, M. Labashchuk, S. Maksymenko, M. Naidyonov, A. Nikitina, L. Omelchenko, M. Pentylyuk, O. Polozenko, S. Rubinshtein, S. Stavytska, O. Stoliarenko, O. Temruk, G. Shelekhova, S. Yashnyk, etc.).

RESULTS

The effectiveness of the formation of students' mathematical competence in the process of learning the Ukrainian language depends primarily on a professionally motivated teacher, who takes into account the age and psychological characteristics of the pupils, and uses modern pedagogical technologies and methods during the lesson. Adolescence is psychologically defined as contradictory, since the present feeling of adulthood characterizes the student's position, which has not actually been achieved. The main aspiration of the child is social and personal self-expression, which is primarily manifested in his activities, the generator of which is directly motivated by motives. After all, a motive in psychological literature acts as a driving force that prompts a person to act (Maksymenko, 2004, p. 356).

Ninth graders face the choice of their future profession and their place in the adult world. Every student should clearly understand the importance of education and be ready to make efforts to achieve the goals. In adolescence, motivation is the subject of purposeful systematic work, since success in learning knowledge, abilities and skills largely depends on the awareness of the purpose of learning and the root causes that guide the child. Therefore, it is important for

a teacher during education and for parents in education to direct children to the right and desirable choice through positive life experience.

H. Kostiuk believed that it is important for the development of acquirers (1968, p. 32), has primarily the education in them of positive motives for learning, interests and love for knowledge, for future activities, a sense of responsibility for the fulfillment of their educational and other duties, perseverance for the fulfillment of their educational and other duties, perseverance and diligence in their performance. According to the psychologist, the following motives are of particular importance in the process of mental activity of students: the need to understand, curiosity, interest in science, love of knowledge, of books, awareness of the need to thoroughly acquire knowledge from various subjects, a sense of responsibility for their acquisition, the need to share your knowledge with other people. The motive, as a component of any type of activity, notes the followers of the activity approach (Z. Bakum, O. Horoshkina, S. Karaman, O. Karaman, A. Nikitina, M. Pentylyuk, etc.) (Pentylyuk et al., 2011), G. Shelekhova (2013), creates a dialectical connection with the need of the individual. However, recently there has been a decrease in the interest of education seekers in mastering mathematical skills. First of all, such a reason is the internal attitude of students to the very process of acquiring knowledge and skills. Loss of desire to study the subject may be associated with lack of confidence, passivity in applying effort, inability to overcome difficulties, support and communication with the teacher and parents, etc. Most often, interest in solving certain tasks disappears due to free access to ready-made information on the Internet. In order to encourage pupils at the age of resistance to learning, teachers have to choose new and interesting forms of conducting the lesson, use different methods and techniques.

The development of mathematical competence in Ukrainian language lessons, at first glance, does not cause difficulties, but such a process turns out to be difficult due to the lack of a child's internal motivation to act, objective and subjective needs to achieve goals. When the student is optimally developed, the mechanism of mathematical creativity joins the work independently. But due to other auxiliary gadgets, which are so skillfully used by recruiters, the need to think independently and find an answer to the given condition is reduced. Therefore, a difficulty arises when the task that the child is forced to solve becomes unclear. A feeling of discomfort appears, which interferes with further mental activity. Please note: a positive evaluation of the completed work, as well as approval by the entire class team and the teacher, pushes the winner to motivation and further fruitful work. Psychological confidence as a result of a developed motivational component means that the student is in a friendly

educational environment built in such a way as to help him achieve at least a satisfactory level of development of all components of mathematical competence. At the same time, the acquirer is sure that he will not be cut off from the process of learning by misunderstanding at some stage of learning. Accordingly, a satisfactory psychological state of the student is the favorable basis on which only an interested and effective knowledge of the subject being studied is possible. In some places, students strive for independence in learning, if the process itself interests them or the teacher is guided by the necessary methods for motivation. The presence of such reasons contributes to the growth of cognitive interest and the achievement of desired results. Accordingly, schoolchildren acquire knowledge better and develop more successfully. According to A. Maslow, the desire to fully realize one's abilities, self-confidence, the ability to feel one's competence is an important motive that makes us want to work hard and develop (Stoliarenko, 2012, p. 241).

Among the factors that are of vital importance for ninth-graders and affect the formation of their mathematical competence is the development of types of thinking, ways of knowing, building the structure of statements and arguments. At one time, the philosopher B. Spinoza proved that knowledge is obtained through research through reasoning and logic, and thinking through various states (reason, joy, imagination, etc.) helps to explain, imagine, remember things (Drako, 1999, p. 218). According to modern scientists Z. Bakum, O. Horoshkina, S. Karaman, O. Karaman, A. Nikitina, M. Pentylyuk, etc., ways of thinking actively ensure the assimilation of linguistic phenomena and categories (Pentylyuk et al., 2011). We believe that the teacher during the learning of the Ukrainian language needs to choose tasks aimed at the development of logical thinking, in the process of which the student creates judgments with the help of linguistic constructions, concepts, and symbols.

The results of research in the field of psychology based on the theoretical-experimental analysis of communication and the dynamics of individual thinking showed that a problem situation is the basis of a productive creative thinking process, and productivity encourages new knowledge (Naidenov, 1989, p. 23). The design of the modern technology of problem-based learning in the lessons contributes to the joint effective cooperation of the teacher and students, during which the lexicographer directs the cognitive process of the pupils to the intensive mastery of knowledge to solve problem tasks, the development of communication skills, monitoring and evaluating their own activities. The teacher, analyzing the students' answers, explains the new material with problematic questions. Students' independent search for the correct answers has

a positive effect on thinking about clarifying the connections between the new and the previously learned. The mental process takes place in generalizations expressed in concepts – the specific content of thinking. S. Rubinshtein emphasized that mental operations are performed during the meaningful solution of any practical task (2002, pp. 396–397). At first, a problematic situation is realized, caused by surprise, which made an impression of emergency. Problem solving, according to Rubinshtein, is an act of thinking that requires extensive and complex intellectual work. To formulate a question means to understand what is known, and to understand a task or problem means at least to decide on a direction for clarifying the situation, that is, to find a method that will lead to a solution. So, the first sign of a thinking child is the ability to see problems. From the awareness of a number of concepts that require resolution, thought moves to its settlement. Criticality is an essential property of a well-formed mind that evaluates all the given facts and disagreements of its hypotheses and subjects them to comprehensive verification. Then the thinking process moves to formulating a final judgment that solves the problem. There is a practical test of the obtained result by improving, detailing, correcting or changing the balanced solution of the problem.

Critical thinking is a skill that needs to be developed and improved through study and practice. This is an important process of analysis and evaluation, requiring an understanding of what is said or written, as well as the ability to evaluate the truthfulness, reliability and significance of information. It should be noted that the main aspect of critical thinking is the ability to ask questions, conduct research, use logic and find alternative solutions.

Students should be taught to think independently, search for solutions to problematic problems, and express their opinions. Unfortunately, children find easier ways to overcome difficult issues without using their own potential. We agree with Kari Sahan, Rifat Kamashak, and Heath Rose (2023) that reliance on the Internet for quick answers hinders students' critical thinking skills. Therefore, it is advisable to use different technologies and teaching methods in the classroom to develop critical thinking.

For an orderly and consistent process of forming students' critical thinking, it is advisable to apply an algorithm of actions consisting of the following main stages:

1) information analysis, which involves understanding the content, context and goals of the information;

2) assessment of the evidence on which the information provided is based and its relevance to the objectives and context as a whole;

3) solving a problem involving the use of logic and understanding the content of information;

4) creation of one's own opinion based on the analysis and evaluation of relevant information;

5) communications, covering the ability to express one's point of view and prove a statement during communication.

To implement this strategy for the development of critical thinking of 9th grade students during the teaching of the Ukrainian language, you can use such methods and techniques as:

– analysis of texts with complex sentences (formulation of a topic, main idea, idea, problems raised; syntactic analysis of complex sentences in texts; comparison of complex sentences, connections and relationships between their parts; creation of questions to the text in general and complex sentences in particular; argumentation and formulation of conclusions);

– comparison of texts (discussion of the structure of texts of various types of speech (common and distinctive features); identification of main ideas and key words; exchange of views on the problems and consequences raised; creation of questions to insufficiently explained details and answers using complex sentences; detailed analysis of statements; clarification the meaning of complex sentences for the structure and content of the corresponding texts);

– creative tasks (construction of texts of different styles, genres and types of speech based on life situations, using complex sentences of various types; creating arguments for certain statements using complex sentences to prove one's own opinion; discussion of put forward ideas and views, etc.).

Such exercises will help students develop the ability to analyze and evaluate the information presented in texts, statements, statements; increase understanding of what types of complex sentences it is advisable to use in certain texts in order to convey the necessary information to the reader.

Scientists in the field of psychology (Voloshyna, Dolynska, Stavytska & Temruk, 2005, Diuy, 1997, Rubinshtein, 2002) proved that cognitive activity is carried out with the help of analysis, synthesis, comparison, abstraction, concretization. During the study of the Ukrainian language, the range of definitions with which the learner operates, acquiring new knowledge, expands. Things are first understood through comparison, which is at the same time an elementary form of cognition. By revealing the common and the different when comparing properties, features, etc., the comparison turns into a classification. Any judgment is analytical (involves recognition, separation of small from important, insignificant from what leads to a conclusion), and synthetic (leaves in the mind an awareness

of the position in which selected facts are placed). Analysis leads to synthesis, while synthesis improves analysis (Diuy, 1997, p. 54). There is a transition from concrete to abstract concepts, their content is enriched, knowledge about properties, signs, connections between objects and phenomena is expanded. According to D. Diuy, an individual should be freed from a strictly specific direction, during which curiosity and inclination to intellectual problems disappear (1997, p. 68).

We believe that the ability to manipulate abstract concepts to build a certain model of judgments develops logical, algorithmic techniques of mathematical thinking (Artemenko, 2021, p. 177). In order to single out or isolate a sign, property from a phenomenon or object during the learning of the Ukrainian language, it is worth using abstraction. This way of thinking trains the brain, develops the imagination and creative abilities of the acquirers. Combining objects into groups based on similar features, which are highlighted during abstraction, is carried out by another essential operation – generalization. The process of generalization takes place mainly as an activity mediated by learning to master concepts and common ideas fixed in a word or term (Rubinshtein, 2002, p. 402). Any consistent change in cognition takes place in a double movement of thought: abstract and concrete. Concretization is responsible for giving an objective, visual character to an abstractly generalized thought, concept, rule, or law.

So, cognitive ability is a key link to improve the ability to learn. Therefore, in the lesson it is necessary to apply a number of cognitive methods that involve analysis, synthesis, comparison, abstraction, concretization. Effective assimilation of linguistic concepts, their connections is possible with the help of such methods as: 1) heuristic questions (self-finding of the answer contributes to the understanding and analysis of syntactic units); 2) analogy (designing a complex sentence by analogy with mathematical problems "Find X if Y is (an example of a part of a complex structure), as well as searching for a similar sentence structure in other texts, determining the type of a complex sentence, the relationship between its parts, etc. students to master not only mathematical skills, but also positively influence the creative search for innovative ways to use verbal means to enhance the content of a complex sentence); 3) research (a universal method that combines all the necessary skills for life, since it directs the activity of applicants to the study of relationships and relationships between mathematical and syntactic objects, analysis and synthesis of information, search for algorithms for solving problematic issues, applying the necessary methods, using analytical and research skills, critical thinking); 4) modeling (on the basis of the presented sample or scheme, the construction of one's own

model of judgment in general and a complex sentence in particular is improved; collective discussion of composite syntactic structures contributes to the systematization and generalization of the acquired knowledge, skills and abilities in relation to syntactic units); 5) creating diagrams (turning sentences into graphic images concretizes the understanding of the structure of a complex structure and the relationships between its parts); 6) forecasting (foreseeing the continuation of a sentence based on the proposed part develops intuition and the ability to analyze syntactic units).

Accordingly, for the formation of mathematical competence during the learning of the Ukrainian language, it is important to teach students to maneuver the specified operations. After all, the ability to think logically is the ability of students to formulate statements, to prove judgments built during solving a problem situation or a certain task. Therefore, in the lessons of the Ukrainian language, exercises for the mental activity of learners should be used, with the help of which it is possible to identify, distinguish and combine the essential features of the objects being studied, that is, to direct learning to the development of mathematical creativity for meaningful, accurate, concise, correct presentation of thought. One of the ways of logical thinking of 9th grade students while learning the syntax of the Ukrainian language is solving logical problems to establish connections and relationships between parts of a complex sentence, determining and applying the necessary type of connection to convey a certain meaning in a complex sentence; the location of the correct sequence between these sentences to restore the logical content of the corresponding text; building a logical diagram for complex sentences; drawing up a statement on a specific topic, confirmed by a number of logically given arguments; reproduction of incomplete complex sentences with the establishment of their type; development of an algorithm of actions to prove a certain statement; creation of argumentation on the presented thesis; editing complex sentences of various types, etc. Such exercises develop the ability to analyze and determine the logical connections between parts of the text and a complex sentence in particular, form the ability and skills of students to express themselves accurately, logically and consistently.

Mathematical competence is based on the ability to think mathematically, form concepts, justify opinions and make decisions both independently and collectively. In the psychological sense, cognitive activity is carried out through the sensation and perception of new material, the analysis of information in order to highlight the essential features of the concept, the imagination of cause-and-effect relationships, logical thinking, the reproduction of acquired knowledge in memory,

attention to individual elements. Such mental processes are interconnected and closely function. Auditory sensations form the basis of a person's ability to master a language, with the help of hearing, control of one's own and another's language is carried out (Polozenko et al., 2009). Thanks to visual aids in Ukrainian language lessons, the applicant can analyze or construct sentences with the help of a scheme. The use of colors by the teacher during the task or organizational stage of the lesson contributes to the emotional state of the students. Accordingly, sensations form the basis of perception.

The solution of any task by the student is carried out thanks to efforts to use the knowledge that is in his memory; information that perceives; using visual images to recreate the object; depict an event, situation, subject. The very principle of action is explained by psychologists (Polozenko et al., 2009) as follows: thinking enables connections and relations between objects, and feeling and perception mainly reveal individual properties of objects, objects and phenomena. Accordingly, thinking expands the circle of understanding and, on the basis of reflexive information, contributes to the implementation of certain theoretical and practical conclusions. So, thanks to thinking, the acquirer becomes more aware of reality. However, such a cognitive process is related to perception, sensation, imagination, memory, attention and logic.

To the psychological essence of perception O. Polozenko, L. Omelchenko, S. Yashnyk and others (2009) attribute a number of properties: objectivity, integrity, structurality, meaningfulness, constancy, selectivity. For the study of mathematical competence, it is worth highlighting structurality – the perception of the generalized structure of an object or phenomenon that is actually abstracted from the senses and encountered in the real world. For example, listening to the teacher, the student perceives not individual letters, but the entire material; the writing of the work occurs through the conscious drawing up of a plan. Meaningfulness (fixes the connection with thinking) – understanding the essence of an object or phenomenon from their understanding and awareness. For example, a student perceives a sentence as a word or a grammatically related combination of words that express a certain idea; the teacher can check written works written in different handwritings. Such a property of perception is called apperception – an image of the dependence of perception on past experience, on the general content of mental activity and individual characteristics of the personality; exists at the level of consciousness and characterizes the personal level of perception. H. Kostiuk noted that the processes of perception take place in the dialectical interaction of learning and student activity. On the one hand, perception is the starting point of learning, on the

other – the correct organization of the pedagogical process does not remain without influence on its features. A person is aware of what he perceives, when he understands the content in the context of real events, when he considers the possible consequences of his actions. To understand an object means to include it in the system of one's knowledge and to attribute it to a certain class of objects. Therefore, in the process of perception, the experience of students is enriched (Kostiuk, 1939, p. 225). The selectivity of perception is manifested in the preferential selection of some subjects and objects compared to others, which is determined by a person's experience, needs, interests, and motives. For example, when answering in class, the student pays attention to the teacher, while other students are just the background.

Any activity does not occur without imagination, which psychologists consider to be a factor of searching creative activity, which determines its cognitive function. Therefore, imagination acts as a mental creative force aimed at understanding and knowing reality (Polozenko et al., 2009). For example, some rules of the Ukrainian language should be understood in the form of schemes, models, because this way the information is better remembered. Students' ability to imagine involves the use of imagery by means of language. The judgment is first built in some abstract forms or addressing the interlocutor with an imaginary phrase. Imagery and imagination enable teenagers to learn very complex abstractions that reflect essential aspects of their activity (Maksymenko, 2004, p. 238). Accordingly, communication skills depend on how developed the applicant's imagination is. Psychologists advise in the learning process to involve as many children as possible in creativity, to use game forms that contribute to the best and most effective understanding of the material.

At the age of 13–15, physiological changes are observed, which are accompanied by increased fatigue and irritability, which in some cases lead to a decrease in attention characteristics. Therefore, experienced teachers try to make their lessons bright and exciting, which is achieved by frequently changing the form of presentation of educational material. From the position of L. Artemenko and N. Berezovska-Savchuk (Artemenko & Berezovska-Savchuk, 2023, p. 69) important and relevant during the preparation and conduct of the lesson is the correct choice of educational online technologies as a general pedagogical digitalization concept (strategy) for the implementation of mediated interaction between the teacher and students for the purpose of comprehensive personality development and the formation of necessary competencies for life. L. Zhukovska, I. Martynyuk, L. Omelchenko, O. Polozenko, V. Svystun, V. Stakhnevich, S. Yashnyk, and others (Polozenko et al., 2009) recommend constantly training attention,

developing the habit of being attentive even under the most unfavorable conditions, thus conditioning observability to develop into stable personality properties. Accordingly, attentiveness will contribute to the development of other personality qualities, primarily memory. According to the results of research by H. S. Kostiuk (1963, p. 23) proved that the most difficult thing for weaker students is not memorizing factual data, descriptive educational material, but mastering concepts, ideas, problem-solving skills, which requires thinking. Therefore, mental operations that determine the ability to reason are important when solving mathematical and other problems, mastering concepts, ideas, the psychologist noted. The qualities of students' thinking determine the features of their minds to reason coherently. After all, solving serious life situations depends on the ability to think.

As we can see, the development of cognitive mechanisms related to thinking based on the possibility of acquiring new knowledge and practical experience, motivation and inspiration, self-development and self-realization is necessary for the formation of mathematical competence in Ukrainian language lessons. Age-related changes in students include the ability to think abstractly, which allows thinking about the future, awareness of the consequences of one's actions, and planning of actions. Therefore, organizing the activities of ninth-graders is important in the learning process. For a more directed and socially motivated aspiration, it is necessary to teach the acquirers to act in a planned, organized and collective manner. To successfully solve the task while working in groups, the role of partners will more effectively contribute to both the development of creative thinking and the functioning of the psychological mechanism of collective (joint) decision (Naidenov, 1989, p. 24). This can be done under the condition of verbalization of all processes occurring in the human mind.

Modern researchers are drawn to speech and the main means of speech activity – thought processes and language. Scientists Z. Bakum, O. Horoshkina, S. Karaman, O. Karaman, A. Nikitina, M. Pentylyuk, etc. (Pentylyuk et al. 2011), G. Shelekhova (2013) emphasize that speech is an activity aimed at the development of communication. A teenager must skillfully navigate during communication and be successfully implemented in the process of social interaction. The psyche is revealed and formed during the application of its efforts, that is, mental processes are components of human activity that often-become special actions (thinking, speech, imagination, volition, etc.). Involvement of applicants in active communicative interaction will contribute to the development of their manner, style of behavior in various life situations. Therefore, a necessary component of the formation of communicative skills as a mandatory

ability during cognitive activity is a mathematical way of thinking, during which flexibility, spatial imagination, the ability to find the main thing, proof of judgment, the logical presentation of one's own opinion, clarity and conciseness of speech, etc. are manifested (Artemenko, 2021, p. 160).

The main effective means during communication is the separation of main and secondary information, establishment of cause-and-effect relationships, the ability to substantiate an opinion, and transform information from one form to another. To form the appropriate skills, it is advisable to use restructuring techniques in Ukrainian language lessons (replacing the order of words in a sentence, combining simple sentences into a complex one and vice versa, spreading a sentence by adding parts to create different types, etc. improves the logic and clarity of the structure of syntactic units), compilation of synonymous constructions (expands the speech reserve, improves understanding of the content structure of complex sentences and the correct use of syntactic synonyms in various style texts), forecasting (aimed at developing the student's ability to provide further context for the text in general, sentences in particular to increase the level of speech competence and understanding structures) of complex sentence languages). Accordingly, while developing Ukrainian speaking skills in lessons, students simultaneously learn mathematical skills. S. Rubinshtein noted that in the process of acquiring knowledge, abilities and skills, abilities develop, the formation and development of which is impossible outside of this process. On the other hand, abilities make it possible to acquire relevant knowledge, skills and abilities faster, easier and deeper (2002, p. 715).

According to the researchers, the implementation of speech activity occurs through the conscious construction of an expression using a system of language signs and knowledge of language theory. M. Labashchuk (1995, p. 8) believes that speech activity is an active process of using language tools during communication, that is, the process of creating a verbal message or its decoding, understanding. S. Kuranova (2012, pp. 76–79) analyzed a number of psycholinguistic theories of the generation of speech arising from the motive and design of thought in words.

We undoubtedly believe that the interaction of types of speech activity during the learning of the Ukrainian language is the basis for the formation of not only communicative, but also mathematical competence. Understanding the main content of the text, its analytical and synthetic analysis (separation of main and secondary information), mastering the grammatical structure of sentences and the text in general, replenishing the lexical reserve of the language, forming skills to model utterances occurs through the perception of

spoken and written speech. Students, in the process of building a statement and its logical justification, maneuvering the transformation of information from one form to another, acquire an integrated ability that consists of linguistic and mathematical knowledge, experience, and the ability to think and make decisions. Comprehension by the learner of oral speech (listening) facilitates comprehension of graphic. This type of work helps to master speaking, reading, and writing. We agree with the opinion of researcher G. Shelekheva (2013, p. 546): in the process of speaking and writing (productive speech activity), a person expresses his thoughts, and during listening and reading (receptive speech activity), he receives speech information, perceives and understands the thoughts of other people. Therefore, the development of such abilities and skills will contribute to the comprehensive mastery of the language, the improvement of speech and the formation of mathematical competence.

Thanks to the research of psychologists, it is possible to analyze the psychological functions, processes, states, and properties of the students of education, which will allow to ensure favorable conditions during the learning of the Ukrainian language, to systematize the appropriate methods and means for the development of knowledge, skills, experience, values, and attitudes. Adolescence is characterized by self-confidence, firmness of decision, indomitable character, stubbornness, so it is more difficult to influence ninth graders. However, it is possible to influence the formation of children's mathematical competence through interest in activities (which is actively manifested in this period of life) and with the help of the skill of a motivated teacher who meticulously prepares for lessons and clearly studies psychological and pedagogical literature. Therefore, it is necessary to emphasize the presence of activity and problem aspects, which will allow us to distinguish personal and behavioral potential. After all, learning is interconnected with personality development, where the activation of thinking activity plays an important role, not only attention, perception, memory, and imagination.

CONCLUSION

Psychological factors in the formation of mathematical competence of students in the process of learning the Ukrainian language are highlighted through students' mastery of the specified psychological categories, which are aimed at mastering thinking techniques (induction, deduction, analysis, synthesis, analogy, generalization, abstraction, concretization, etc.). Motivation that will satisfy the actual need, the opportunity and ability to solve issues of

varying complexity, assimilation of new information, development of the ability to use linguistic means, oral and written literary language, to engage in communication, compliance with the rules of speech behavior, gaining experience intensively contribute to the development of ideological orientation, worldview and self-awareness of the individual. Creating a favorable psychological and emotional environment in the lessons will help to strengthen the cognitive motivation of the individual, and the selection of the necessary technologies, methods and techniques will contribute to the formation of the components of students' mathematical competence. Therefore, teenagers value the approval of their educational activities by the class team, they are guided by it in their behavior, as it is of great importance for the formation of their character and motivation in learning.

The analyzed literature is mandatory when planning lessons, since the teacher's knowledge of the age and individual psychological characteristics of students is a necessary condition for the organization of successful learning.

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THE PSYCHOLOGICAL BASIS OF SHAPING THE MATHEMATICAL COMPETENCES OF STUDENTS (9TH GRADE) IN EDUCATION UKRAINIAN LANGUAGE

SUMMARY

The article examines the psychological foundations of Ukrainian language learning. The psychological components that ensure students master a dynamic combination of mathematical and communicative skills, ways of thinking and a number of characteristics (memory, attention, perception, imagination, self-improvement, decision-making) for comprehensive personal development are outlined. The main skills (analysis, argumentation, comparison, generalization, abstraction, specification, etc.) that influence the success of basic education students in learning the Ukrainian language are highlighted.

Keywords: psychological components; mathematical competence; motivation; ways of thinking; cognitive process; speaking abilities; methods and techniques of learning the Ukrainian language.

PSYCHOLOGICZNE PODSTAWY KSZTAŁTOWANIA KOMPETENCJI MATEMATYCZNYCH DZIEWIĄTEJ KLASY (UCZNIÓW) W NAUCE JĘZYKA UKRAIŃSKIEGO

STRESZCZENIE

Artykuł analizuje psychologiczne podstawy nauki języka ukraińskiego. Przedstawiono komponenty psychologiczne, które zapewniają uczniom opanowanie dynamicznej kombinacji umiejętności matematycznych i komunikacyjnych, sposobów myślenia i szeregu cech (pamięć, uwaga, percepcja, wyobraźnia, samodoskonalenie, podejmowanie decyzji) w celu wszechstronnego rozwoju osobistego. Zwrócono uwagę na główne umiejętności (analiza, argumentacja, porównanie, uogólnienie, abstrakcja, specyfikacja itp.), które wpływają na powodzenie uczniów szkół podstawowych w nauce języka ukraińskiego.

Słowa kluczowe: komponenty psychologiczne; kompetencje matematyczne; motywacja; sposoby myślenia; proces poznawczy; zdolności mówienia; metody i techniki nauki języka ukraińskiego.