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In 2024, the attention of Russian scientific community is focused on the most important date, the 120th anniversary of the birth of Daniil Borisovich Elkonin, the author of the psychological theory of children’s play, co-author of the theory of educational activity. The article analyzes the views of D.B. Elkonin on the development of children’s skills from the standpoint of the author’s concept of reproduction of an activity. Arbitrary activity reproduction is a purposeful reconstructive-reproductive process, relatively independent from memorization, characterized by individual originality, manifested in the quantity and quality of recall of previously memorized information for the purpose of future activity based on a certain level of its understanding and comprehension. We consider mnemonic abilities as tools for memorizing, reproducing, forgetting, recognizing and preserving any material. It is shown that the concept of arbitrary activity reproduction of educational material implement an activity-based approach to the development of skills. The research results prove the importance of developing children’s cognitive skills and abilities through the pupil’s mastery of educational activities — associative-indicative, analytical-synthetic, control-evaluative.

Keywords: D.B. Elkonin, theory of children’s play, theory of educational activity, the concept of arbitrary activity reproduction, capabilities, genesis of skills and abilities, memory, updating, recollection, educational action.

Acknowledgements. The author expresses gratitude to his teacher, Professor L.V. Cheremoshkina for her help and support in scientific work.

Introduction

The category of skills has been studied in the works of many educators and psychologists who put forward different points of view on the process of their development. In Russian psychology, the problem of developing skills was considered in the works by S.L. Rubinstein, B.M. Teplov, A.N. Leontiev, V.A. Krutetsky, V.N. Druzhinin and others. Great teachers of the past also showed interest in the category of skills in the context of considering the goals and objectives of education, mental education of the individual (I.G. Pestalozzi, K.D. Ushinsky, L.N. Tolstoy, V.A. Sukhomlinsky, etc.). When discussing the genesis of skills in the scientific literature, it is proposed to separate the actual and potential skills, and consider the identified skills as more relevant. The dialectics of the correlation between skills and activity manifested itself evidently in the systemogenetic theory of V.D. Shadrikov [10], the theory of mnemonic skills, the concept of memory functioning and mnemonic skills of L.V. Cheremoshkina [7]: skills exist before activity, but develop only in the process of activity. Activity, as a factor in the development of personality skills, reveals a lack of a tool base during its development, generating contradictions that promote the development of personality skills. With a decrease in the number of studies of the problem of skills recorded over the past 30 years in Russian psychology [3], it is of interest to turn to the legacy of thinkers who studied this issue. The analysis of the problem of developing children’s skills in the views of the author of the psychological theory of children’s play, co-author of the theory of educational activity Daniil Borisovich Elkonin contributes to rethinking the role of gaming and educational activities in their genesis.

The purpose of the article is to analyze D.B. Elkonin’s views on the development of a child’s skills from the standpoint of the author’s concept of arbitrary reproduction of activities, implementing an activity-based approach to the formation of educational actions that ensure the actualization of educational material.

The phenomenology of mnemonic skills is represented by memorization, preservation, reproduction, forgetting and recognition of information. The concept of arbitrary reproduction was developed based on the results of a long-term longitudinal experiment (2008—2022) devoted to the study of the dynamics of qualitative specificity and the volume of recall of educational texts by actors aged 12—20 years. The experiment was conducted on the basis of schools in Orekhovo-Zuevo, Moscow region and was carried out in two series: the first series includes 8 stages, the second — 7 stages. The final stages of the first series are implemented on the basis of State University of Humanities and Technology (GGTU).

The method of studying activity reproduction, followed by the imposition of individual trajectories of indicators of volume and qualitative specificity of recall, was supplemented by methods of studying subjective and subjective-personal factors of actualization effectiveness (the level of intelligence development, the effectiveness and level of development of mnemonic skills, the level of development of educational motivation, the level of understanding of the material), an associative experiment. Arbitrary reproduction is a purposeful mnemically-intellectual process of recall, implemented by multi-level mechanisms characterized by individual originality, manifested in the qualitative specificity and volume of actualization of previously remembered for the purposes of upcoming activities. Recall activity depends on the objective, subjective and subjective-personal patterns [8, 9].

Research methods. The material was obtained on the basis of an analysis of the fundamental works by D.B. Elkonin, theoretical and methodological studies considering D.B. Elkonin’s contribution to the development of psychological science.
Play activity as a factor in the development of a child's skills

D.B. Elkonin, as a scientist who has passed a long scientific path of understanding the patterns of child development, considered the exceptional role of play activity in the formation of a child's cognitive skills. Through the game, the child is connected with the environment, but the decomposition of the game, as the leading activity of children, into the sum of cognitive skills, including perception, memory, attention, thinking, imagination, according to D.B. Elkonin, is unacceptable. He noted: “When decomposed into separate elements, the qualitative originality of the game as a special activity of the child is completely lost” [14, p. 221]. Even if you find a tool that will allow you to determine the weight of each ability in the activity, the nature of the game will not be revealed. Illustrating the provisions of L.S. Vygotsky on the need for psychology to switch to an analysis that divides into units, D.B. Elkonin suggests considering the role and actions in its implementation as such a unit in the analysis of the game [16]. The role is realized through appropriate, organically related actions.

According to D.B. Elkonin, the formation of a child's cognitive skills and speech, his orientation in the human sense occurs in the process of subject-manipulative and playful activities. Later, in the school period, the processes of education and upbringing determine the development of children's cognitive skills [17].

The contribution of D.B. Elkonin, as the creator of the periodization of child development, game theory, and methods of teaching children to read, is incommensurable for both psychological and pedagogical theory and practice. Considering various types of children's activities, the scientist emphasized its role in the mental development of the child. Activity, as a source of personal development, has a social character (“a child in society” [14, p. 9]). In addition, “… the appropriation of the achievements of human culture by a child is always of an active nature — the child is not passive in this process, does not adapt to the conditions of his life, but acts as an active subject of their transformation, reproducing and creating human skills in himself” [14, p. 9]. Sharing the position of A.N. Leontiev, D.B. Elkonin emphasizes that “… the child carries out such activities that are adequate (but not identical) to the activities embodied by people in these skills” [14, p. 9]. The fundamental thesis about the role of activity in the development of personal skills, first expressed by I.G. Pestalozzi, finds significant confirmation in the works by D.B. Elkonin.

D.B. Elkonin, as a representative of the scientific school of L.S. Vygotsky, whose ideas were further developed in his writings, characterizing the process of mental development of a child, noted that arbitrariness of actions begins to form at preschool age in play activities, and at primary school age verbal and logical thinking actively develops in educational activities. Moreover, at some ages, the child develops the motivational side of activity, and in others, subsequent, the operational side. The result of educational activity, as D.B. Elkonin notes, it is the change in the pupil, the acquisition of new knowledge by him.

The method of experimental genesis of mental skills in the theory of D.B. Elkonin

To form a new level of a particular ability, D.B. Elkonin uses a formative experiment or a genetic modeling research method in experimental schools [14, p. 15]. Touching upon the problem of the correlation of theory and method, which, according to V.A. Mazilov, is fundamental in the correlation of psychological theories and the integration of scientific psychological knowledge [1], it should be noted that D.B. Elkonin’s research used the method of experimental genesis of mental skills based on the theory of interiorization. Relying on this method allowed us to obtain new results on the problem of the genesis of skills in child psychology (A.N. Leontiev, V.V. Davydov, A.K. Markova), where the experimental genetic method, according to D.B. Elkonin, is the most promising. D.I. Feldstein notes that in the works by D.B. Elkonin “… organically combines the development of fundamental psychological problems and their experimental study” [6, p. 14]. D.B. Elkonin writes about the dominance of the “cross-section” strategy in the research of his time, which “… allows only to state the achieved level and the external connection between the individual stages of development” [14, p. 79], and sees the future behind the strategy of active formation. Comprehensive research organized in experimental schools under the leadership of D.B. Elkonin allowed him to collect valuable material and develop a psychological theory of educational activity on its basis.

It should be noted that, describing the components of the structure of educational activity: educational task, educational actions, control action, assessment action, motivation [15; 17], D.B. Elkonin pays special attention to the educational task, having solved which the child masters the general ways of obtaining a result, which allows him, if necessary, to reproduce them independently and quickly.

V.D. Shadrikov defines D.B. Elkonin’s approach to separating the topic of the lesson and the purpose of the lesson as a way of action that needs to be learned, and notes: “Due to the importance of the purpose of the activity, it is necessary to separate it into a separate component of the structure of educational activities. <...> It
is in this nodal link of activity that teachers experience great difficulties" [10, p. 84]. In our study of the problem of developing the skills of learners in the classroom in the context of the implementation of Federal State Educational standards, most teachers, when identifying specific professional difficulties that they experience in the educational process, note precisely the problem of setting lesson goals [2].

**Educational activities in the theory of D.B. Elkonin and the concept of arbitrary reproduction of activities**

As you know, the educational task (according to D.B. Elkonin) provides the assimilation of a general way to solve a whole class of concrete practical problems. It is necessary to teach the pupil certain actions that will help solve the educational task. B.D. Elkonin, characterizing the educational task, notes: "UZ involves a transition from direct trial and error in achieving a result to a special construction (together with the teacher and other children) of the supports of a possible action (its indicative basis)" [12, p. 30].

D.B. Elkonin notes that at the beginning of mastering an educational action, a pupil observes a sample of performing an action, so that he develops an image-an idea of the implementation of this action. Further mastering of an action is based on its reproduction: "Without reproduction, no mastering of an action is possible" [14, p. 217]. In our study devoted to the study of patterns of arbitrary reproduction, based on the mechanisms that make up the structure of recall, we identify actions that need to be mastered by the teacher and teach these actions to the pupil. The actions of the teacher in organizing the reproduction process include: associative-orientation, analytical-synthetic, control and evaluation actions.

Associative orientation actions are actions for launching and deploying arbitrary reproduction. The management of associative-orientation activity involves: setting actions for actualization depending on the educational task, stimulating the goal-setting of intellectual activity through clarifying the parameters of recall, encouraging associative activity with the help of leading questions and examples, discussed historical facts, etc. The teacher needs not only to evoke associations in pupils to reproduce the material, but also to perform orientation actions in the pupil's associations.

Analytical and synthetic actions are intellectual actions aimed at organizing the recalled educational material, its transformation. The management of intellectual activity is carried out with the help of tasks for predicting the results of its reproduction, for visualizing the material stored in memory. Tasks for the transformation of the material, i.e. grouping, allocation of a reference point, drawing up a mnemonic plan, classification, completion, recoding, establishing analogies, schematization, structuring, are of primary importance. The pupil must be taught to use the operational mechanisms of mnemonic skills when reproducing material.

Control and evaluation actions are actions involving the analysis of the relationships between recovered and forgotten material, analysis of the causes of errors in activity reproduction, planning of recall, thinking over different results of recall and determining their impact on the preservation of meaning. The management of control and evaluation mechanisms of recall accuracy is largely due to the teacher's awareness of the nature of those mnemonic techniques that were used by schoolchildren to memorize this verbal material.

The listed methods of managing the process of learning knowledge will help to organize the process of remembering, arming the teacher with actions of installation, goal-setting, motivation, transformation, control, which determine the development of cognitive skills of the pupil. Currently, the teacher's mastery of the methods of managing the process of learning knowledge is becoming particularly relevant, noted by D.B. Elkonin: "Now the primary school sets itself the task not so much of arming children with elementary practical skills of reading and writing, counting and solving the simplest arithmetic problems, as of forming the ability to assimilate a system of scientific knowledge" [14, p. 221].

N.V. Repkina, who develops the theory of D.B. Elkonin—V.V. Davydov, rightly notes the role of the learning system in the formation of a pupil as an actor of educational activity. Her research focuses on the connection of memory with the processes of actor's self-regulation, primarily with goal setting. The task of understanding the educational material, unlike the task of assimilation, the pupil can set himself only by himself. Therefore, the ability to set goals is the main characteristic of the actor in educational activity. N.V. Repkina established the stages of determining the content of the purpose of the action by the pupil: reflexive assessment of the problem situation, updating knowledge, reflexive control [4]. According to the results of our experiment, it was found that the understanding of educational material is ensured by moving from distinction and description to the identification of essential and non-essential features, highlighting the connections of new material with individual experience and, consequently, comprehension of meaning and meaning. Such advancement is possible only in the presence of regulatory memory mechanisms [2].

D.B. Elkonin emphasized the role of the child's control over his own educational activities in the holistic educational activity. It is educational activity, as the
scientist notes, that determines the formation of the foundations of theoretical thinking, the ability to self-esteem, and the ability to arbitrarily regulate one's actions. "Only by changing the content of education, only by giving it a theoretical character, assuming its assimilation by children in the process of solving educational tasks, it is possible to ensure the proper mental development of junior schoolchildren, the formation of their theoretical thinking..." [14, p. 16].

It seems to us that the developed regulation of cognitive skills, assuming the presence of orientation, decision-making, planning, controlling, evaluative, corrective, anticipatory actions interacting with motives, emotions, volitional qualities [7], determines the success of solving educational tasks. This position was confirmed in the results of our study: schoolchildren with a high level of development of mnemonic skills, which is characterized by high efficiency of memorization due to functional and operational mechanisms, the presence of regulatory mechanisms of mnemonic skills, differ both in higher indicators of the volume of reproduction of educational material and the qualitative specifics of its arbitrary reproduction. Offering educational texts for memorization and subsequent reproduction, we recorded both the volume of the remembered and its qualitative specifics — the transformations that the material undergoes during immediate and delayed actualization. In addition, we couldn't help but be interested in conveying the meaning of the educational text, as well as the level of its understanding. It is proved that the regulation of mnemonic activity contributes to fewer distortions of the educational text and a greater number of additions of educational material with new content. For schoolchildren with formed regulatory mechanisms of mnemonic skills, conclusions and conclusions on educational material are more often characteristic than for schoolchildren with no actions of control, planning, evaluation, anticipation of the results of arbitrary activity reproduction [8].

The problem of the formation of scientific concepts in the theory of D.B. Elkonin

Reflecting on the problem of the formation of scientific concepts and their system in schoolchildren, D.B. Elkonin rightly emphasizes the limitations of receptive-reproductive learning technology, which consists in the fact that the teacher informs the pupil, shows an example of performing exercises, solving typical tasks, and the pupil reproduces this algorithm according to a sample. Information-receptive and reproductive methods are generally accepted and all attempts to improve the learning process based on these methods are characterized by low efficiency. We emphasize that they can only provide reproductive recall of educational material and the pupil’s solution of typical tasks, but not the formation of a holistic picture of the scientific world, including the formation of a system of scientific concepts, conceptual thinking.

Activity reproduction is the recollection of the material in the form in which it was presented to the actor of educational activity for memorization. It should be noted that some educational material, for example, rules, theorems, laws, requires reproductive recovery. Moreover, such reproduction should be based on a deep level of understanding of the reproduced material. Most of the educational material determines its reconstructive recall as a result of the restoration of the image-representation, which is subject to a large number of transformations. In the vast majority of cases, the recollection of educational texts of historical and biological content in our study is a reconstructive actualization, the quality and volume of...
which is determined by both objective and psychological factors proper. Conceptual thinking presupposes such a level of realization of reconstructive activity, in which we fix the result of remembering, obtained based on an educational task, manifested in concretization, conclusions, conclusions, additions that develop the original, with a deep level of understanding and preservation of meaning. Reducing the amount of material to be studied, according to D.B. Elkonin, is an ineffective way to achieve its assimilation. Let’s agree that the volume of recollection is far from the most important indicator of the effectiveness of arbitrary reproduction, in which its qualitative component comes to the fore, depth of understanding and not loss of meaning, willingness to apply what is remembered in practice. As an effective system of promotion in the formation of scientific concepts, Daniil Borisovich, based on the views of A.N. Leontieva suggests moving from “... solving practical problems of changing an object to highlighting its hidden properties and generalizing them, to generalized knowledge (concept) about it” [14, p. 104]. Real practical actions with objects in the process, which goes through a number of stages in cooperation with the teacher, who acts as a carrier of the concepts being formed and their system, ensure the assimilation of scientific concepts. An alternative to the information and reproductive method, as noted by D.B. Elkonin, is the method of active transformation of the acquired educational material by children. Elkonin continues: “Teaching is not just learning something, it is working with one’s own action, with what will be called experience” [11, p. 89].

E.V. Subbotsky, analyzing the limits of the applicability of the cultural-historical method, emphasizes that school curricula for teaching the concepts of D.B. Elkonin and V.V. Davydov arose as a result of the development of “psychological tools” such as “speech, logical thinking, scientific concepts, social norms or culturally developed perception schemes” [5, p. 133], mediating the work of living subjectivity. Mnemonic skills, in our understanding, are tools or instruments of memorization, activity reproduction, forgetting, recognition and preservation of material, which are stereotyped mental processes characterized by qualitative and quantitative originality, which characterize a person simultaneously as an individual, an actor of activity and a personality [9]. The formation of scientific concepts is determined by the effectiveness and level of development of the educational activity actor’s mnemonic skills.

Conclusions

Thus, the analysis of D.B. Elkonin’s views on the development of a child’s skills from the standpoint of the concept of arbitrary activity reproduction allows us to conclude that the methodological foundations of both approaches implementing an activity-based approach to the formation of educational actions are close. D.B. Elkonin’s legacy is filled with a desire to study the patterns of development of skills, taking into account their role in educational activities, which proves the value of the scientist’s views for modern psychological science and education and their viability. The fundamental principles of the theory of D.B. Elkonin — the principle of development, the principle of activity, the principle of changing the forms of community of children and adults [13] — determine the scientist’s views on the process of developing a child’s skills. An activity-based approach to recall, which implements mnemonic skills, consideration of the mnemonic-intellectual process through the prism of purposeful cognitive activity of the actor, which is dynamic and changeable, along with a systematic approach allowed us to conceptualize the main provisions of the psychology of arbitrary activity reproduction and propose educational actions for launching, deploying and controlling the actualization of educational material.

References

1. Мазилов В.А. Теоретические методы в психологии: возрождение из изгнания // Методология современной психологии. 2020. № 11. С. 199—211.

Literatura

1. Мазилов В.А. Теоретические методы в психологии: возрождение из изгнания // Методология современной психологии. 2020. № 11. С. 199—211.


7. Cheremoshkina L.V. Obrabotka i zapominanie neverbal'noho bessmyslennoho materiava pri ogranichenii vremeni eksponzitsii [Processing and memorizing non-verbal non-meaning material when the exposure time is limited]. Sensorye sistemy [Sensory systems], 2022, Vol. 36, no. 4, pp. 322–337. DOI: 10.31857/S0235009222040023 (In Russ.).


9. Cheremoshkina L.V., Osinina T.N. Mnemicheskie sposobnosti v period peredkhoza ot podrostkovogo k yunosheskomu vozrastu (po materialam longitjuodnogo issledovaniya) [Mnemonic abilities during the transition from adolescence to youth (on the materials of a longitudinal study)]. Psikhologicheskiy zhurnal [Psychological journal], 2020, Vol. 41, no. 6, pp. 35–47. DOI:10.31857/S020595920011082-6 (In Russ.).


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Получена 10.02.2024
Принята в печать 20.03.2024

Received 10.02.2024
Accepted 20.03.2024