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Ontogeny of Evolution: from Instinctive Actions to Activity

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It is shown that the child goes to educational activity through spontaneous activity, objective action, quasi-joint activity, game activity. The educational activity is considered as a cooperative activity, which is based on individual activity. Specific function of motivation and desirability of a child and an adult at different stages of their interaction is shown on the basis of the ontogenetic "arousal — activity" analysis. The article demonstrates the key terms of the structure of educational activity by D.B. Elkonin, its positive aspects and limitations. The author's concept of the general psychological structure of labor activity is substantiated methodologically and theoretically, and on this basis a competence-based model of the structure of the school pupil's educational activity is proposed, which can be used as the basis for diagnosing the readiness of a school pupil as a subject of educational activity. This allows us to answer the question: has the child learned to learn?

Keywords: action, activity (cooperative, game, educational, labor), objective actions, quasi-joint activity, motive, purpose of activity, systemogenesis, psychological system of activity, competence, skills set.

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Онтогенез: от инстинктивной активности к деятельности

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Показано, что к учебной деятельности ребенок идет через спонтанную активность, предметное действие, квазисовместную деятельность, игровую деятельность. Учебная деятельность рассматривается как совместная, в основе которой лежит индивидуальная деятельность. На основе онтогенетического анализа «активности—деятельности» показывается специфическая функция мотивации и целеполагания ребенка и взрослого на разных этапах их взаимодействия. Рассматриваются основные положения структуры учебной деятельности Д.Б. Эльконина, показываются ее положительные стороны и ограничения. Методологически и теоретически обосновывается авторская концепция общей психологической структуры трудовой деятельности и на этой основе предлагается компетентностная модель структуры учебной деятельности школьника, которая может быть положена в основу диагностики подготовленности ученика как субъекта учебной деятельности. Это позволяет дать ответ на вопрос: научился ли ребенок учиться?

Ключевые слова: активность, деятельность (совместная, игровая, учебная, трудовая), предметные действия, квазисовместная деятельность, мотив, цель деятельности, системогенез, психологическая система деятельности, компетентность, компетенции.

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Origin of mental setup

An infant receives primary information from his sensations, which are realized by specific physiological systems. Sensations give the subject the information about "... individual objects characteristics (signs) or psychological experience of the effects on the sense organs by individual stimuli (flows of energy: light flux, sound vibrations, vibration, chemicals, mechanical pressure, infrared radiation, ultrasound, etc.)" [6, p. 248]. Monosensations interact with each other, giving the subject an idea of a certain quality of the object. V.A. Ivannikov gives the following example on this occasion: "A smooth surface of an object appears to the subject both as a shiny (in vision), and as a slippery (in tactile sensation), and as a cold (in temperature sensitivity) surface" [6, p. 240]. Thus, sensations act as languages that give the subject in different subjective sensations signs of an objectively existing object with which the subject interacts. "The characteristics, presented in the subjective language of signs, are behind the subjective features of objects objective" [6, p. 249]. Unfortunately, Ivannikov writes, "... this dual nature of sensations is not realized by many people even until nowadays: to be the language for which each individual analyzer (the sensory organ and the corresponding parts of the brain) is responsible, and the description of external influences in this language" [6, p. 249].

Here we come to the main question: where does the psyche begin and what is the psyche? By answer to this question, we will also define the subject of psychology.

Let's turn back to feelings. They give us information about the individual properties of objects in the surrounding world. *But only the thought determines the connection of the thing's characteristics with a thing.*

Consequently, sensations in their connection with the thing, which characteristics they reflect, generate thought. Right here the secrets of the psychology subject are hidden. As the source of objective thought, the last one in its development is associated with the needs of the subject and his experiences. Elements of subjective experience are introduced into thoughts, because the thought is always generated by acting person. The thought acquires a functional meaning and personal sense through the activity of the subject [more details: 17; 20].

Thus, the psyche is formed by thoughts and their aggregates. It acts as a subject of psychology in this capacity. The evolution of mental setup begins from the moment of birth, from the first interactions of a baby with the environment and, above all, with his mother. After that it keeps on for the whole life. "Defining the subject of psychology," S.L. Rubinstein writes, "one could say that psychology studies the psyche... But the content of the formula according to which psychology studies the psyche remains very vague and problematic until it is determined how the psyche is understood" [12, p. 39]. Only the appeal to thought allows us to determine what is thought and what is the psyche.

Newborn activity

A newborn baby has needs and is armed with some instincts. Let's distinguish the sucking instinct and the imitation instinct. Biological need is expressed in the biological motivation of behavior aimed at satisfying an urgent need.

The biological basis of the infant conscious behavior is a complex system consisting of the integration of three neuronal subsystems: afferent-independent, afferent-dependent and intermediate.

With the safe birth of a child and the timely presentation of the mother's nipple to him, genetic information becomes integrated with the information of the environment focused on the mother's nipple and forms sucking behavior. "Thus, a new and inseparable functional association and interaction of mother and child appears in the postnatal period for a long time, replacing the intrauterine community of fetus and mother" [13, p. 67].

While a variety of definitions of biological theory have been suggested, this paper will use the definition this question not up to psychological point of view. Here we have the germ of "joint activity". In fact, the child shows motivation, which under certain conditions (contact with the nipple or binky) leads to activity (sucking movements), accompanied by positive emotions. Under the influence of the child's motivation, mother makes a number of actions: determines the breast-feeding posture in holding, takes into account the energy of sucking and grabbing the breast by the child, maintains the feeding regime and the duration of feeding, determines whether the child is full (how much milk he sucked).

The child shows activity directed by the mother's activity. Activity is instinctive, aimed at maintaining life. The mother's activity (behavior) is conscious, purposeful, having its own motive and informational basis (signs of the child's behavior). The mother makes certain decisions and performs purposeful actions during the feeding process. She controls the child's behavior and decides to stop feeding.

There is no joint activity here yet, but there are prerequisites for it, and these prerequisites are inherent in the nature of the child, in his desires and instincts. It is relevant to suppose that by reflex activity the child,

directs and controls the behavior of the mother, who is determined by her love for the child and is characterized by an expanded structure.

At the same time, single sensations associated with the mother give rise to thoughts related to the mother, the needs and experiences of the child himself. An indissoluble connection between mother and child is established in these thoughts and feelings, the first thoughts are formed, which become the content of his psyche, its basis; the child's relationship with the outside world is laid.

Recently, researchers have shown attachment of a fetus to his mother is formed even in the perinatal period [5].

Objective action. Quasi-joint activity

Child development is determined by a genetic program, which involves the formation of certain functional systems based on information coming from environment. At the firsts stage obtaining this information is associated with an indicative reaction, which is defined as "a multicomponent reflex (involuntary) reaction of the human and animal body caused by the novelty of the stimulus. Synonyms: orientation reflex, research reflex, reflex "What is it?", activation reaction, etc." [2, p. 359].

A child reflex activity in combination with the orientation reflex is directed to the mastery of external objects. An adult comes to the aid of a child in this desire to master objects that attract his attention with novelty. Here we meet with the phenomenon that we will define as *distributed action. The motive and the desire to master a new subject* comes from a child, and *the way to realize this desire* in an objective action comes from an adult. The child's activity remains reflectory, and the adult directs this activity, creating a situation of novelty, and then helps the child (*based on imitation*) to master the desired subject.

Based on an indicative reaction,".. orientation activities aimed at mastering the surrounding objects are formed and developed in order to obtain the information necessary to solve the tasks facing the subject"[2, p. 359]. In the expanded form, the indicative reaction is realized by the functional physiological system. In the combination of reflectory activity and indicative reaction, the objective action is born.

Data from several studies the field of neuroontogenesis suggest that "... it is important not only to have the necessary ordinary effects, but, most importantly, their timely presence" [13, p. 86]. One of the main tasks of an adult at this stage of a child's development precisely lies in the timeliness of creating an environment enriched with new objects that will bring new information to the child. The program for the formation of the content of the psyche, sensory, motor and communicative development of the child continues to be implemented in this knowledge of the surrounding world.

Distributed action is a prototype of cooperative activity. It combines natural mechanisms (involuntary motivation, the desire for novelty and imitation) with a detailed structure of an adult's action, which has a purpose to organize the child's actions by filling in the missing components of the latter's action: goals, conscious information basis, methods of action, reflection of the results of the action.

The development of the child's activity follows through the path of mastering individual actions in the structure of a specific activity.

Taking into account the fact that child's activity is not formed in all components and it is carried out in interaction with a full-fledged structure of adult actions, such activity can be defined as *quasi-joint*.

The analysis shows that the ontogenesis of activity proceeds from reflectory activity associated with natural motivation, orientation reaction and imitation, to distributed action and quasi-joint activity. The evolution of activity is closely related to the life tasks that child solves and the environment in which he is located.

The child's development is carried out in activity and through the activity: motor, sensory, intellectual, communicative. But to define development in this way is only to designate the area of development, without affecting its essence. The essence lies in the fact that the knowledge of the world occurs through the thoughts that are generated in action and through action, and then formalized in the word [17]. Thoughts express not only the properties of objects, but also the characteristics of movement and the properties of people the child comes into contact. As S.L. Rubinstein defined "... the initial type of *thinking* is thinking in action and by *action*, thinking that is accomplished in action and revealed by action" [11, p. 311].

Play activity

A significant role in the child's development belongs to the game as one of the forms of activity. He doesn't know how to play. He should be instructed how to play. The game reflects the adult world, embodies the abilities of those who made the toy, reflects certain social roles. Child must rise to the knowledge and skills that the toy assumes for playing with it.

Fundamental analysis of play activity is presented in the work of A.V. Karpov [7]. Based on D.B. Elkonin's study [22], Karpov suggests the following structure of the plot-role-playing game (Fig. 1).

The following units are distinguished in the game: role, plot, game action, game interaction and game rules. Ehe game is filled with meaning by the plot and action. The system of rules gives the game a certain structure, bringing it closer to the normative way of activity; interaction translates the game into joint activity. Thus,

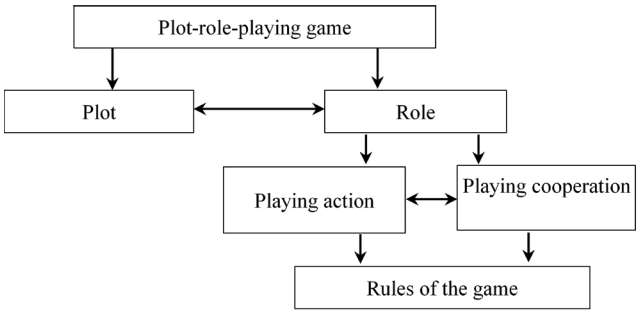

Fig. 1. Structure of the plot-role-playing game

the game merges the subject of individual activity and joint activity. The game is self—determined, it gives the player a wide range of experiences: pleasure-displeasure.

Methodological and theoretical analysis of the game and play activity allowed A.V. Karpov to draw an important conclusion about the result of the game as "... the main demarcation line between gaming activity, on the one hand, and educational and work activities, on the other" [7, p. 38]. He showed that as the game becomes more complex, interest shifts from the procedural side of playing activity to its result, from procedural motivation to effectiveness.

The provision on the system-forming role of the goal in the play activity is not less important. According to A.V. Karpov "the goal of play activity is that it does not ensure the formation of an integral and complete structure (and even more so, a system), but underlies only one or another achieved at each age stage and constantly increasing structurality and consistency of its organization. In the end, this leads to the fact that in relation to play activity, it is more correct to assume that not any of its "rigid" structure is being formed, and even more so its psychological system. It develops (and even lays down), and subsequently develops structurality itself, and then systemicity — as a form of organization of its psychological activity"[7, p. 48]. This approach creates conditions for the relatively free formation of future components of the system of playing, educational and subject activities.

Thus, the child *goes to educational activity through reflex activity, objective action, quasi-joint activity with an adult, aimed primarily at mastering his body through play activity, laying the target effectiveness and motivation*. The educational activity itself is presented as a joint activity, which is based on individual activity.

It should be noted that a child approaches admission to the first grade with a formed inner world, the basis of which is everyday concepts, and a certain level of development of abilities. The transition to schooling is associated with the formation of scientific concepts, which should be based on everyday concepts in primary school. The formation of conceptual abilities is an important factor of development at this stage of life [16].

Educational activity

The logic of our analysis leads us to the need to move on to the consideration of educational activities. Let us turn first of all to the ideas about educational activity formulated by the outstanding Russian psychologist Daniil Borisovich Elkonin. Daniil Borisovich outlined its structure in the article "On the structure of educational activities" [21].

Let us consider the structure of educational activity in more detail due to its significance. According to D.B. Elkonin the formation of educational activity "... is the most important task of learning — a task no less important than the assimilation of knowledge and skills" [21, p. 214].

D.B. Elkonin has repeatedly insisted that the formation of educational activity is a process "... long and takes place at all training sessions" [21, p. 214]. Based on the study of this process, D.B. Elkonin proposed a general structure of educational activity consisting of four interrelated components: "...1) an educational task, which in its content is a method of activity to be assimilated; 2) educational actions, which are actions as a result of which a representation or a preliminary image of the action being assimilated is formed and the initial reproduction is made images; 3) the action of control, which consists in comparing the reproduced action with the sample through its image; 4) the action of assessing the degree of assimilation of those changes that have occurred in the subject itself" [21, p. 219]. At the same time, D.B. Elkonin emphasized that this structure of already formed educational activity, "... however, it becomes such only at a certain stage of its formation" [21, p. 218]. Different academic subjects have different opportunities for the formation of individual components of the structure and only from their interaction a full-fledged general structure of activity is able to be formed. D.B. Elkonin [23] later added a fifth element to the proposed structure — motivation.

Let us express our attitude to the presented structure. Supporting D.B. Elkonin's point of view on the process of formation of educational activity, we consider it necessary to make the following clarifications and additions:

Firstly, it should be emphasized that educational activity is formed not only under the guidance of a teacher, it is formed in the joint activity of a pupil and a teacher. It is necessary to have knowledge about the pupil's learning activities and the teacher's learning activities, as well as about the patterns of their interaction for doing it. The joint activity of a pupil and a teacher should be considered according to L.S. Vygotsky's position on the zone of proximal development attributed to the structure of the activity of a pupil and a teacher.

Secondly, it is impossible to limit ourselves to a remark about the long process of formation of educational activity. It is necessary to consider the process of forming a system of activity from the standpoint of the systemogenesis of activity [18; 20]. "It should be noted that in the research of Yu.N. Slepko, an attempt was made to systemogenetic analy-

sis of the development of the psychological functional system of activity. It was shown that in the process of systemogenesis of educational activity, the latter develops and functions at different levels of system formation — levels of stages, periods and phases of activity. At the same time, the chronological framework of the normative levels of general education does not always coincide with the chronology of the systemogenesis of the student's educational activity" [14].

Thirdly, it is possible to evaluate the proposed structure of educational activity only from the standpoint of the general psychological functional structure of activity, primarily labor activity [4].

Fourth, D.B. Elkonin correctly shows the need to separate the topic of the lesson and the purpose of the lesson and points out the need to set before the student "... an educational goal as a way of action that needs to be learned." But 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. Our observations show that it is in this nodal link of activity that teachers experience great difficulties.

Fifth, serious doubts should be expressed about the evaluation operation. According to the definition of D.B. Elkonin, the action of evaluation is an assessment of "... the degree of assimilation of those changes that have occurred in the subject itself" [21, p. 219]. "Evaluation becomes a key point in determining how much the educational activity implemented by the student has an impact on himself as a subject of activity" [21, p. 219].

Indeed, the implemented educational activity (as well as other forms of activity — playing, labor) is a source, a determinant of the development of the subject of activity. But this relationship is revealed in the psychological analysis of activity.

The relationship between the internal and external sides of activity is revealed in the process of a special psychological study of activity. And therefore, the operations of assessing the degree of development of schoolchildren as a result of educational activities, the degree of changes that have occurred in the subject itself, are hardly available outside of special study. But they must necessarily be included in the teacher's ideas about the pupil's educational activities.

If earlier in the section "Subject action" we showed the meaning of distributed action, then to even greater extent this is manifested in the joint educational activity of a teacher and a student [15].

Next let us try to look at individual educational activities from the perspective of the general structure of human activity.

Systemogenetic approach to the study of activity

We studied the process of teaching working professions from the late 60s to the late 70s of the XX century. Our appeal to the issues of the psychological theory of industrial training was determined by the urgency of the problem of improving the training of qualified workers and improving the quality of labor. Our work began in the laboratory of labor psychology, labor training and education was created at Yaroslavl Pedagogical Institute by the decision of the Ministry of Education of the RSFSR in 1964.

The methodological and theoretical basis of the work were fruitful concepts of activity and methodological approaches to its study, which were developed in Russian psychology [4; 8; 9]. The systematic approach in psychology was the second source, which had being formed at that time.

Finally, the third source was the research of the author and his students related to the psychological analysis of working professions for the purpose of professional training: operators of sorting slides on railways, assemblers of semiconductor devices, grinders, operators, universal turners, manual arc welding welders, tire collectors, gluers of rubber products.

Separately, it should be noted the work on the systemogenesis of functional systems of various levels, carried out at the school of the outstanding Russian physiologist Pyotr Kuzmich Anokhin, and, above all, the general architecture of the functional system proposed by him and justified in all components, which is the basis of a "conceptual bridge" between the levels of system and analytical processes [1, p. 46].

Analyzing the work on the system approach, P.K. Anokhin made a fundamental methodological conclusion about the decisive role of the result as a system-forming factor. At the same time, he emphasized the unity of need and purpose. Anokhin wrote: "The peculiarity of the biological system is that the need for some useful result and the goal of obtaining this result ripen inside the system, in the depth of its metabolic and hormonal processes, and only after that, through nervous "drive belts", this need is realized in behavioral acts that allow to some extent mathematical formalization" [1, p. 29].

Based on his ideas about the formation of biological systems, P.K. Anokhin introduced the concept of systemogenesis in 1937, the which laws were further developed for a long period.

The process of systemogenesis is realized on the "basis of heterochrony in the bookmarks and rates of development and in the moments of consolidation of these structures throughout embryonic development" [1, p. 278].

Based on the above statement, we, first of all, tried to develop a universal structure of activity in developing a systemogenetic approach to vocational training, The following principles of activity study were used as a basis.

— *The principle of objectivity*, according to which, it is necessary to proceed from the analysis of the result of activity during studying activity, as a system-forming factor, the conditions of activity and the process of activity that leads to a normative result.

— *The principle of unity of consciousness and activity*, which involves the study of activity as a conscious reality. Awareness of activity acts as a condition for considering it as a whole.

— *The principle of unity of activity and experience*, which allows you to reveal the moments of activity that are significant for the subject, connects activity with motivation and personal meanings, with the inner world of a person.

Taking into account the stated approaches and principles of psychological analysis of activity, a general architecture of the psychological system of activity has been developed and included the following components:

— motive of professional activity;

— purpose of professional activity related to the result;

— result of activities and individual actions;

— activity program;

— information basis of activity;

— decisions taken in the activity;

— subsystems of professionally important qualities, primarily the abilities of the subject of activity;

— reflection of the results.

A detailed description of each unit of the system is given in works [18; 19].

The approach to educational activity through psychological analysis of work activity was comprehensively justified by Vasily Vasilyevich Davydov. As a result of the philosophical and psychological analysis of the concept of the theory of developmental learning, V.V. Davydov showed that "... the concept of activity can be the initial abstraction, the concretization of which will allow creating a general theory of the development of people's social existence and various private theories of its individual spheres", that "... activity should be understood as a form of historical cultural creativity" [4, p. 15], that it is advisable to begin the construction of theoretical psychology with the concept of activity [4, p. 19], that it is necessary to put "... labor activity in all historical forms of its development and build on this foundation all the diversity of other socially significant activities" [4, p. 29] into the foundation of the classification of various types of activity.

This is exactly the logic we followed by developing educational activities in our research. According to V.A. Mazilov and Yu.N. Slepko, this approach "... is not only applicable to the analysis of various types of educational and pedagogical activities, but also opens up wide opportunities for the organization of interdisciplinary psychology"[10, p. 150].

What does it mean to teach a child to learn?

Currently, it has become an axiom that one of the main tasks of the school is the task of "teaching a child to learn". But what is behind this expression? This means to form the child's "competencies" that will allow him to master the educational material offered to him in various forms. What are these competencies (generalized methods of action)? We will get the answer to this question if we turn to the general architecture of the psychological functional system of activity. In the form of a formal model, these competencies are presented in Figure 2.

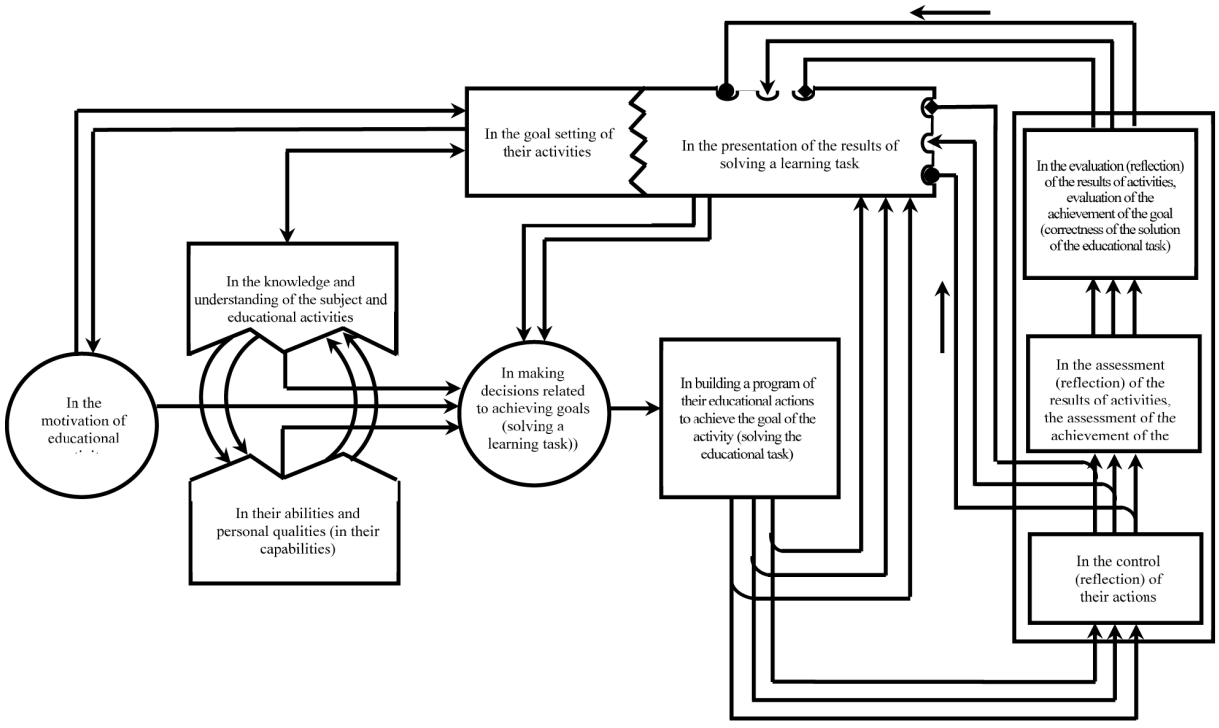

Fig. 2. Student's competencies in the structure of educational activity

We can say whether we have taught the student to learn or not only on the basis of the diagnosis of these competencies. Here is the question arising: is the teacher ready for the formation of these competencies? The answer to this question is beyond the scope of this article.

Conclusion

In this article, an attempt is made to help the teacher to comprehend the psychological category of educational activity. On the one hand, educational activity (teaching) has its roots in the interaction and mutual interaction of a child and an adult all the way from birth to school. This is the way of objective knowledge of the world. It is characterized by visibility, the possibility of imitation, reliance on the natural curiosity and motivation of the child. He fits into the life of a child, and the knowledge that he receives refers, in the words of V.P. Zinchenko, to "living" knowledge, to everyday concepts and their connections. But, on the other hand, due to the naturalness of behavior, its structure remains unreflected, hidden from the adult and the child himself. And the teacher will have to make the secret explicit, conscious. And for this, he must clearly understand both the psychological structure of educational activities and the competencies that should be formed in the student (see Fig. 2), and the difficulties that may arise in the way of its development by the child in the learning process.

References

1. Anokhin P. K. Ocherki po fiziologii funktsional'nykh system [Essays on the physiology of functional systems]. Moscow: Medicine, 1975. 448 p. (In Russ.).
2. Bol'shoi psikhologicheskii slovar' [Great psychological dictionary]. Meshcheryakov B.G. (eds.). Moscow: Olma-Press, 2003. 672 p. (In Russ.).
3. Vygotskii L.S. Pedagogicheskaya psikhologiya [Pedagogical psychology]. Moscow: Pedagogy, 1991. 480 p. (In Russ.).
4. Davydov V.V. Teoriya razvivayushchego obucheniya [The theory of developmental learning]. Moscow: INTOR, 1996. 544 p. (In Russ.).
5. Znamenskaya I.I., Yaroslavtseva T.G. Privyazannost' materi k plodu: faktory formirovaniya i prakticheskoe primenenie konstrukta [Attachment of a mother to a fetus: factors of formation and practical application of the construct]. *Psikhologicheskii zhurnal* [*Psychological journal*], 2022. Vol. 43, no 2, pp. 72—83. (In Russ.)
6. Ivannikov V.A. Osnovy psikhologii. Kurs lektsii [Fundamentals of psychology. Lecture course]. Saint-Petersburg: Piter, 2010. 336 p. (In Russ.).
7. Karpov A.V, Shadrikov V.D. Sistemogenez deyatel'nosti. Igra. Ucheniya. Trud.: v 4 t. T. 4. [Integral'naya kontseptsiya sistemogeneza deyatel'nosti Systemogenesis of activity. A game. Teachings: in 4 vol. Vol. 4. Integral concept of activity system genesis]. Moscow: Publishing House RAO; Yaroslavl: Yargu, 2017. 446 p. (In Russ.).
8. Leont'ev A.N. Deyatel'nost'. Soznanie. Lichnost' [Activity. Consciousness. Personality]. Moscow: Politizdat, 1975. 303 p. (In Russ.).
9. Lomov B.F. K probleme deyatel'nosti v psikhologii [On the problem of activity in psychology]. *Psikhologicheskii zhurnal* [*Psychological journal*], 1981. Vol. 2, no 5, pp. 3—22. (In Russ.).
10. Mazilov V.A., Slepko Yu.N. Psikhologiya deyatel'nosti: itogi i perspektivy [Psychology of activity: results and prospects]. *Yaroslavskii pedagogicheskii vestnik* [*Yaroslavl Pedagogical Bulletin*], 2015. Vol. 2, no. 1, pp. 150–155. (In Russ.).
11. Rubinshtein S.L. Osnovy obshchej psikhologii [Fundamentals of general psychology]. Saint-Petersburg: Piter, 1999. 720 p. (In Russ.).
12. Rubinshtein S.L. Osnovy psikhologii [Fundamentals of psychology]. Moscow: Gosuchpedgiz, 1935. (In Russ.).
13. Skvortsov I.A. Razvitie nervnoi sistemy u detei (neiroontogenez i ego narusheniya) [Development of the

Литература

1. *Анохин П.К.* Очерки по физиологии функциональных систем. М.: Медицина, 1975. 448 с.
2. Большой психологический словарь / Сост. и общ. ред. Б. Мещеряков, В. Зинченко. СПб.: Прайм-ЕВРОЗНАК, 2003. 672 с.
3. *Выготский Л.С.* Педагогическая психология. М.: Педагогика, 1991. 480 с.
4. *Давыдов В.В.* Теория развивающего обучения. М.: ИНТОР, 1996. 544 с.
5. *Знаменская И.И., Ярославцева Т.Г.* Привязанность матери к плоду: факторы формирования и практическое применение конструкта // Психологический журнал. 2022. Том 43. № 2. С. 72—83.
6. *Иванников В.А.* Основы психологии. Курс лекций. СПб.: Питер, 2010. 336 с.
7. *Карпов А.В, Шадриков В.Д.* Системогенез деятельности. Игра. Учение. Труд: в 4 т. Т. 4: Интегральная концепция системогенеза деятельности. М.: Изд. дом РАО; Ярославль: Яргу, 2017. 446 с.
8. *Леонтьев А.Н.* Деятельность. Сознание. Личность. М.: Политиздат, 1975. 303 с.
9. *Ломов Б.Ф.* К проблеме деятельности в психологии // Психологический журнал. 1981. Том 2. № 5. С. 3—22.
10. *Мазилов В.А., Слепко Ю.Н.* Психология деятельности: итоги и перспективы // Ярославский педагогический вестник. 2015. Том 2. № 1. С. 150—155.
11. *Рубинштейн С.Л.* Основы общей психологии. СПБ.: Питер, 1999. 720 с.
12. *Рубинштейн С.Л.* Основы психологии. М.: Госучпедгиз, 1935.
13. *Скворцов И.А.* Развитие нервной системы у детей (нейроонтогенез и его нарушения). М.: Тривола, 2000. 208 с.
14. *Слепко Ю.Н., Поваренков Ю.П.* Психология учебной деятельности школьника: системогенетический подход. Ярославль: РИО ЯГПУ, 2019. 263 с.
15. Совместная учебная деятельность и развитие детей / Коллективная монография / Под ред. В.В. Рубцова, И.М. Улановской. М.: ФГБОУ ВО МГППУ, 2021. 325 с.
16. *Холодная М.А., Я.И. Хиповская.* Понятийные способности: теория, диагностика, эмпирика. М.: ИП РАН, 2023. 172 с.
17. *Шадриков В.Д.* Неокогнитивная психология. М.: Университетская книга, 2017. 368 с.

nervous system in children (neuroontogenesis and its disorders)]. Moscow: Trivola, 2000. 208 p. (In Russ.).

14. Slepko Yu.N., Povarenkov Yu.P. Psikhologiya uchebnoi deyatel'nosti shkol'nika: sistemogeneticheskii podkhod [Psychology of educational activity of a schoolchild: a system genetic approach]. Yaroslavl: RIO YaGPU, 2019. 263 p. (In Russ.).

15. Rubtsov V.V. (eds.), Sovmestnaya uchebnaya deyatel'nost' i razvitie detei: Kollektivnaya monografiya [Joint educational activity and development of children]. Moscow: FGBOU VO, MGPPU, 2021. 325 p. (In Russ.).

16. Kholodnaya M.A., Ya.I. Khipovskaya. Ponyatiinye sposobnosti: teoriya, diagnostika, empirika [Conceptual abilities: theory, diagnostics, empiricism]. Moscow: IP RAN, 2023. 172 p. DOI:10.38098/mng_23_0458. (In Russ.).

17. Shadrikov V.D. Neokognitivnaya psikhologiya [Neocognitive psychology]. Moscow: Universitetskaya kniga, 2017. 368 p. (In Russ.).

18. Shadrikov V.D. Problemy sistemogeneza deyatel'nosti [Problems of system genesis of activity]. Moscow: Nauka, 1982. 185 p. (In Russ.).

19. Shadrikov V.D. Psikhologiya deyatel'nosti cheloveka [Psychology of human activity]. Moscow: IP RAN, 2013. 463 p. (In Russ.).

20. Shadrikov V.D. Sistemogenez mental'nykh kachestv cheloveka [Systemogenesis of human mental qualities]. Moscow: IP RAN, 2022. 282 p. (In Russ.).

21. El'konin D.B. O strukture uchebnoi deyatel'nosti [About the structure of educational activity]. *Izbrannye psikhologicheskie Trudy* [*Selected psychological works*]. Moscow: Pedagogika, 1989, pp. 212-220. (In Russ.).

22. El'konin D.B. Psikhologiya igry [The psychology of the game]. Izd. 2, stereotype. Moscow: Vlados, 1999. 360 p. (In Russ.).

23. El'konin D.B. Psikhologiya obucheniya mladshego shkol'nika [Psychology of teaching a schoolchild]. Moscow: Knowledge, 1974. 64 p. (In Russ.).

18. *Шадриков В.Д.* Проблемы системогенеза деятельности. М.: Наука, 1982. 185 с.

19. *Шадриков В.Д.* Психология деятельности человека. М.: ИП РАН, 2013. 463 с.

20. *Шадриков В.Д.* Системогенез ментальных качеств человека. М.: ИП РАН, 2022. 282 с.

21. *Эльконин Д.Б.* О структуре учебной деятельности // Избранные психологические труды. М.: Педагогика, 1989. С. 212—220.

22. *Эльконин Д.Б.* Психология игры. 2-е изд., стереотип. М.: Владос, 1999. 360 с.

23. *Эльконин Д.Б.* Психология обучения младшего школьника. М.: Знание, 1974. 64 с.

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