

**Zhantikeev S.K.<sup>1</sup>, Aimaganbetova O. Kh.<sup>2</sup>, Bimagambetova Zh.T.<sup>3</sup>**

<sup>1</sup>Candidate of Psychological Sciences, professor, Astana-Turan University, Kazakhstan, Nur-Sultan, e-mail: zhantikeev\_serik@mail.ru

<sup>2</sup>Doctor of Psychology Sciences, Professor, e-mail: alnara25@mail.ru

<sup>3</sup>Candidate of Philological Sciences, Associate Professor, e-mail: bimzhibek@gmail.com Al-Farabi Kazakh National University, Kazakhstan, Almaty

**THE STAGED FORMING OF MENTAL ACTIVITIES AND CONCEPTS BY P.I. GALPERIN: INNOVATINAL APPROUCH**

This article attempts to consider the value of the P. I. Galperin's theory on phased formation of mental actions and concepts as the first stage in the development of the assimilation activity theory of social experience and to show the relevance of using it as the method in order to study the formation of human mental activation. The study presents significance of the fundamental assumptions of the theory of staged (planned) formation of mental actions by P.I. Galperin for the further development of the activity theory of learning

The importance, relevance and effectiveness of the use of the theory of systematic step-by-step formation of mental actions and concepts created by P.I. Galperin in general practice of teaching and in the practice of school education, in particular, as well as other forms of education are substantiated. The role and importance of the scientist in the systematization of the so-called basic characteristics of subject-specific skills, methods of their development, as well as the connection of these characteristics with the actualization have been indicated.

Thus, more than 60-year history of existence and development of the theory of step-by-step (planned) formation of mental actions of P.I. Galperin gives all grounds to assert that scientifically grounded use of this approach allows to successfully realize many theoretical and methodological and practical problems.

**Key words:** activity approach, psychological theory of activity, activity theory of teaching, theory of step-by-step (planned) formation of mental actions, structure of activity.

Жантеев С.К.<sup>1</sup>, Аймаганбетова О.Х.<sup>2</sup>, Бимаганбетова Ж.Т.<sup>3</sup>

<sup>1</sup>психология ғылымдарының кандидаты, профессор, университет Астана-Туран, Қазақстан, Нұр-Сұлтан қ., e-mail: zhantikeev\_serik@mail.ru

<sup>2</sup>психология ғылымдарының докторы, профессор, e-mail: alnara25@mail.ru

<sup>3</sup>филология ғылымдарының кандидаты, қауымд. профессор, e-mail: z.bimagambetova@inbox.ru әл-Фараби атындағы Қазақ ұлттық университеті, Қазақстан, Алматы қ.

**Ақылды әрекет және П.Я. Гальперин түсінігінің кезеңдік құрылуы: инновациялық тәсіл**

Бұл мақалада адамның ақыл-ой қызметін дамыту, жүйелі түрде кезеңділікпен қалыптастыру әдісі ретінде пайдаланудың өзектілігін, әлеуметтік тәжірибені меңгерудің белсенділік теориясын дамытудың бірінші кезеңі ретінде П.Я. Гальперин тұжырымдамасы және ақыл-ой әрекеттерін кезеңмен қалыптастыру теориясының мәнін бағалауға әрекет жасалды. Әрекет теориясын одан әрі дамыту үшін П.Я. Гальпериннің ақыл-ой әрекеттерін кезеңдік (жоспарлы) қалыптастыру теориясының негізгі ережелерінің маңыздылығын ашады.

Жалпы білім беру тәжірибесінде және мектептегі білім беру практикасында, атап айтқанда, білім берудің басқа да түрлері бойынша П.Я. Гальперинмен құрылған ақыл-ой әрекеттерін кезеңдік (жоспарлы) қалыптастыру теориясының пайдаланудың өнімділігі мен өзектілігінің маңыздылығына негіздеген. Ғалымның жүйелендірудегі негізгі сипаттамалар деп аталатын тақырыптық-нақты дағдылары, оларды өңдеу жолдары, сондай-ақ осы сипаттамалардың өзектілігіне байланысты рөлі мен маңыздылығы көрсетілген.

Осылайша 60 жылдан астам тарихы бар П.Я. Галпериннің ақыл-ой әрекеттерін кезеңдік (жоспарлы) қалыптастыру теориясының дамуы және осы көзқарасты ғылыми негізде пайдалану көптеген теориялық, әдістемелік және практикалық мәселелерді табысты іске асыруға мүмкіндік береді деп айтуға барлық негіздерді береді.

**Түйін сөздер:** әрекеттік тәсіл, психологиялық әрекеттік теориясы, оқытудың әрекеттік теориясы, ақыл-ой әрекеттерін кезеңдік (жоспарлы) қалыптастыру теориясы, әрекет құрылымы.

Жантیکеев С.К.<sup>1</sup>, Аймағанбетова О.Х.<sup>2</sup>, Бимағанбетова Ж.Т.<sup>3</sup>

<sup>1</sup>кандидат психологических наук, профессор кафедры психологии, университет Астана-Туран, Казахстан, г. Нур-Султан, e-mail: zhantikeev\_serik@mail.ru

<sup>2</sup>доктор психологических наук, профессор, e-mail: alnara25@mail.ru

<sup>3</sup>кандидат филологических наук, ассоциированный профессор, e-mail: z.bimagambetova@inbox.ru  
Казахский национальный университет им. аль-Фараби, Казахстан, г. Алматы

### **Поэтапное формирование умственных действий и понятий П.Я. Гальперина: инновационный подход**

В данной статье предпринята попытка оценить значение теории поэтапного формирования умственных действий и понятий П. Я. Гальперина как первой ступени развития деятельности теории усвоения социального опыта и показать актуальность использования его как метода планомерно-поэтапного формирования в целях исследования становления и развития психической деятельности человека. Раскрывается значимость фундаментальных положений теории поэтапного (планомерного) формирования умственных действий П.Я. Гальперина для дальнейшего развития деятельности теории учения.

Обосновываются значимость, актуальность и эффективность использования созданной П.Я. Гальпериним теории планомерного поэтапного формирования умственных действий и понятий в практике обучения вообще и в практике школьного обучения, в частности, а также других форм образования. Показаны роль и значение ученого в систематизации так называемых базовых характеристик предметно-специфического умения, способы их отработки, а также связи этих характеристик с актуализируемостью.

Таким образом, более чем 60-летняя история существования и развития теории поэтапного (планомерного) формирования умственных действий П.Я. Гальперина дает все основания утверждать, что научно-обоснованное использование этого подхода позволяет успешно реализовывать многие теоретико-методологические и практические проблемы.

**Ключевые слова:** деятельностный подход, психологическая теория деятельности, деятельностная теория учения, теория поэтапного (планомерного) формирования умственных действий, структура деятельности.

## **Introduction**

Analysis of the process of human interaction with the outside world, the study of the activity as a system makes it possible to activity approach as one of the methodological principles of science. The assimilation of the social experience of previous generations is possible thanks to the activities of the teachings carried out in a specially organized environment. Research of Leontiyev (1983) and his followers were focused on the study of the structure of activity, the importance of each of its structural components.

From the point of view of the activity approach, the process of teaching is a system of actions performed by the student. Each action, in turn, has a rather complex structure. Activity is a coherent system, where unity presents all the mental functions: emotional, cognitive, etc. If we compare this approach to teaching with functionalist or behaviorist approaches, we can see

that the proponents of these approaches is limited to reviewing only those elements of a process of teaching, taken out of the whole system.

Thus, the behavioral approach in the analysis of the teaching process takes into account only the initial (stimulus) and final (reaction) links, and the process of student activity leading to the final answer is not investigated. Representatives of the functionalist approach study every mental function involved in the process of teaching, in itself (“the role of memory in the process of teaching”, “the role of thinking”, etc.), and not as a link in the holistic system of teaching.

The principal difference between the activity approach is that when it is implemented, not the individual elements of the teaching process taken by themselves are analyzed, but the activity of the teaching as a whole.

This approach involves the consideration of the doctrine as an activity, as actions united by a single motive and aimed at achieving a common

goal – the assimilation of the experience of previous generations, which leads to the satisfaction of the cognitive needs of the subject of the doctrine. It is this need meets the activities of the doctrine.

The acquired social experience leads to the change of the student, which is the ultimate goal of the teaching.

The subject of psychology is the study of the integral activity of the subject in all its forms and types.

- Genetically original and basic is external, objective, sensory-practical activity, from which derived the internal psychological activity; both of these activities have socio-historical origin and fundamentally the overall structure.

- Components of activities are the need – motive – goal – conditions and correlate them with the activity – action – operation.

- Defining property of activity is objectivity. The subject character of activity is realized through the need of the subject passing into the need.

- Activity and its components are divided and enlarged according to a certain law, to which the differentiation and integration of subjective images orienting them correspond.

- Method of psychological analysis of human activity is aimed at identifying its specific historical nature, its structure, subject content and mutual transitions of its forms and components that occur in accordance with their systemic relationships and relationships.

Further comprehensive development and clarification of these provisions have served the development of the psychological theory of activity.

### Literature review

The aim of theoretical and methodological analysis was to study the genesis of mental activities by P.I. Galperin through the study of mental activity using the activity approach of social learning.

The theory of step-by-step formation of mental activities and concepts has arisen in the process of analyzing traditional forms of learning, which turn out to be a kind of the same method, in which, as P.I. Galperin pointed out that “...the student’s activity in the process of mastering a new task that occurs without sufficient guidance, is controlled mainly by the end result and comes to him by touch”. (Galperin, 1985:3).

The main task of the author of the theory of gradual formation of mental activities seen in the identification of conditions that would allow the student to “act as it should”, so you can be sure that

he “will inevitably come to the pre-planned results” (Galperin, 1976:4).

Understanding the psyche as a result of the transformation of external activity into internal opens up opportunities for studying the laws of this transition, as well as for controlling the process of formation of new mental formations by their preliminary modeling in external material form and subsequent transfer to the mental plan.

The specific mechanisms of such transfer are revealed in the theory of step-by-step formation of mental actions and concepts of P.I. Galperin.

The original theoretical foundations for the following situation developed in the Russian psychology, L. S. Vygotsky, S. L. Rubinstein, A. N. Leontiyev:

- all internal mental are developed, interiorize outer; first the psychic function acts as interesting, then both intrapsychic (Vygotsky);

- psyche (consciousness) and activity are unity, not identity (S. L. Rubinstein): mental is formed in activity, activity is regulated by mental;

- mental, internal activity has the same structure as the external, subject (Leontiyev, N. F. Talyzina);

- mental development has a social nature. “The development of human individuals went not by the deployment of the internal hereditary inherent experience, but by the assimilation of the external social experience, fixed in the means of production, in the language”. Leontief.);

- activity nature of the mental image allows us to consider the action as its unit. It follows that the formation of the image can be controlled only through the actions by which they are formed (Talyzina, 1969: 63).

Experiments conducted under the guidance of P.Y. Galperin and his theoretical considerations led to the conclusion that mental activity is formed not just in the process of practical activity, but from practical activity.

As it has been said, activity is a system of processes through which a person’s attitude to the surrounding world is realized. Activity approach involves the analysis of the doctrine with the use of concepts related to the activity, usually the following: action, motive, purpose, subject, operation.

In the theory of stage-by-stage formation of mental actions the mechanism of formation of new ways of action with the set properties, with allocation of set of conditions which provide their interiorization and in General – assimilation was opened.

However, within the framework of this theory, the problem of studying the conditions

of actualization of skills, i.e. the conditions under which they begin to function for the deployment of the process of the corresponding action, had not been raised. Of course, the need to update the formed skills has always been in mind.

The theory of gradual formation of mental actions considers the doctrine as a system of certain activities, which result in the formation of new knowledge and skills. The main “units” of activity are considered to be actions. Therefore, the main attention is paid to the analysis of assimilation of actions, and knowledge is considered as education, derived from the actions and the quality of their assimilation.

The history of the formation of ideas about orientation in the framework of the theory of gradual formation of mental actions begins with the thesis that, in its specific function, “the psyche is the indicative activity of a person derived from his practical activity and serving it”. It is also emphasized that “the indicative activity consists of two parts – the formation of the image of the world and orientation in it on the basis of these images” (Galperin, 1953: 98).

Thus, P.I. Galperin defines the subject of psychology as an indicative activity, the concept of which is further concretized as follows: the process of orientation of the subject in a situation that opens in the mental reflection, the formation, structure and dynamics of this indicative activity, determining its quality, nature and capabilities – that is the subject of psychology (Galperin, 1976: 102).

Indicative activities can be of different degrees of automation, interiorization and reduction. Indicative basis of action as a system of knowledge about “situation, material, tools and the process of action that must be taken into account... to properly perform the task”, for its part, can be formed in different ways: “more or less fully, systematically or spontaneously, with an understanding of how it stands out, or without such understanding” (Galperin, 1957: 58-69).

In accordance with this, there are three types of “orientation in the job”, understood as “three ways to explain the job”.

In the psychological literature describes a number of studies – N.S. Pantina (Pantina, 1957:117-132), L.I. Aidarova (Aidarova, 1968: 42-80), Z.A. Reshetova (Reshetova, 1959:56-65; 1968:17-41), N.F. Talyzina (Talyzina, 1975; 1993), M. Teplenkaya (Teplenkaya, 1968:124-152), G.A. Butkin (Butkin, 1968:187-237), etc., devoted to the study of types of orientation in the subject, determine the type of exercises, as well as

the efficiency of the second and especially the third type exercises.

### Materials and methods

The process of formation of new ways of activity involves the passage of six main stages, which are studied and described by P.I. Galperin:

1. Stage of creation and maintenance of learning motivation.

At this stage, the motivational basis of the action is formed; the attitude of the subject to the goals and objectives of the upcoming action, to the content of the material intended for assimilation is laid. Undoubtedly, this attitude can later change, but the role of the initial basis of action in the content of the assimilated action, and in the dynamics of its assimilation is very large.

2. Stage of understanding the scheme of the approximate basis of assimilated actions of a student.

The second stage is the formation of the primary scheme of the indicative basis of action, i.e. a system of guidelines and instructions, the account of which is necessary to perform the assimilated action with the required qualities and in a given range. During the assimilation of this scheme is constantly being checked and refined. P.I. Galperin identified three types of construction of the scheme of the indicative basis of action and, accordingly, three types of teaching.

In type I, the subject deals with an incomplete system of conditions and compelled to act on the basis of trial and error. The final structure of the action is established at the same time slowly, is comprehended and does not always and does not completely realized.

In type II, the subject focuses on the full system of guidelines and instructions and takes into account the entire system of conditions for the correct performance of the action, which guarantees the accuracy of the action, the specified range of its generality, a high level of awareness, criticality and other properties of the action. In this case, the scheme of the approximate basis of the action is set in a finished form, or it is prepared by the students in cooperation with trainee.

The III type of assignment of the orienting basis of action scheme is characterized by a complete orientation no longer on the conditions for performing a specific action, but on the principles of the structure of the material being studied, on the objective units of which it is composed, and the laws of their combination. Approximate basis of this kind provides a deep analysis of the

material being studied the formation of cognitive motivation.

3. The stage of formation of the action in a material or materialized form.

At this stage, the subject carries out the orientation and execution of the action being mastered, based on the externally presented components of the orienting basis of the action scheme.

4. The stage of formation of action in a high-profile socialized speech.

At this stage, the reliance on externally presented means is gradually replaced by reliance on the meanings of these means presented in external speech. Consumption necessity of the orienting basis of the action scheme disappears; its content is completely and psychologically fully reflected in the speech, which begins to act as the main support for the becoming action.

5. The stage of formation of the action in the “external speech about himself.”

At the fifth stage, the external, sound side of speech gradually disappears; the becoming action remains external only in an insignificant number of the main orienting and executive moments for which control is exercised (both external and internal). The main content is transferred to the inner, mental plan.

6. The stage of formation of action in the inner speech.

At the last, sixth stage, and these moments “go away” from consciousness, leaving in it only the final result – the substantive content of the action.

P.I. Galperin emphasized that the formation of the action empirically can occur with the omission of certain stages of this scale; in some cases, such omission is psychologically justified, since the subject in his past experience has already mastered the relevant forms and is able to successfully incorporate them into the current formation process. At the same time, a full-fledged deciphering of the mechanisms of each particular case, an explanation of the specific dynamics of the formation of an action — everything becomes possible only thanks to the researcher’s knowledge of the complete system of the mental actions phased formation.

In the theory of the phased formation of mental actions in order to analyze the process of assimilating social experience P.I. Galperin was first introduced to a holistic system of action characteristics, which included both primary characteristics — they do not depend on each other and on any other — as well as secondary characteristics derived from primary ones. In the process of forming actions undergo certain changes. P.I. Galperin writes: “... the transition “from the outside to the inside” is one

of the transformations of the action, and only in one of the four directions in which every action of the subject inevitably and naturally changes ... Each of the directions in which the objective action changes, has a number of steps, indicators and is one of its permanent parameters.

The first of these parameters indicates the level at which the action is actually performed. The second parameter is completeness of operations (deployment and reduction of action). The third parameter is the generalization of the action on the material, types and patterns. The last, fourth, parameter of action is its development (in any form and variety), which is obtained from a combination of various indicators of the previous parameters” (Galperin, 1966: 236-277).

Thus, independent primary characteristics of the action have been identified, two of which have been sufficiently investigated, they are form and generalization. As secondary characteristics P.I. Galperin allocated intelligence and consciousness.

As noted by P.I. Galperin, these characteristics are found empirically and are subject to further analysis and differentiation. One of the significant problems remains a detailed study of the basis for which both primary and secondary characteristics were identified. As a result of the conducted P.I. Galperin and his research students found that: “...a. Along with actions, sensual images and concepts about the objects of these actions are formed. The formation of actions, images and concepts is different sides of the same process. Moreover, the schemes of actions and the schemes of objects to a large extent can replace each other in the sense that the known properties of the object begin to indicate certain modes of action, and behind each link of the action certain properties of its object are assumed.

b. The mental plan is only one of the ideal plans. Another is the scheme of perception. It is possible that the third independent plan of activity of an individual is the plan of speech. In any case, the mental plan is formed only on the basis of the speech form of action.

c. The action is transferred to the ideal plan, either in its entirety, or only in its approximate part. In this latter case, the executive part of the action remains in the material plane and, changing with the orienting part, ultimately turns into a motor skill. The transfer of the action to the ideal, in particular to the mental plan, is accomplished by reflecting its objective content by means of each of these plans and is expressed by repeated, sequential changes in the form of the action.

The transfer of action into the mental scheme, its internalization is only one line of its changes. Other, inevitable and equally important lines constitute changes: the fullness of the links of action, the measures of their differentiation, and the measures for mastering them, pace, rhythm and power indicators.

These changes determine, firstly, a change of execution methods and forms of feedback, and secondly, determine the quality of action achieved. The first of these changes lead to the transformation of an ideally performed action into something that opens in self-observation as a mental process; the latter allow one to control the formation of such action properties as flexibility, rationality, consciousness, criticality, etc.”(Galperin, 1969: 15-25).

P.I. Galperin pointed out that with the achievement of the mental form actions; its evolution does not end: it is included in the systems of others, changing according to a number of characteristics.

In the theory of the phased formation of mental actions in order to analyze the process of assimilating social experience P.I. Galperin was first introduced to a holistic system of action characteristics. It included the primary characteristics: generalization, deployment, development.

These characteristics do not depend on each other and on any other characteristics in their manifestations. The secondary characteristics of the action are consciousness, rationality, abstractness and strength, which are derived from the primary ones.

In a number of studies, the property of a skill characterizing the ability of an actor to initiate a corresponding action — relevance (Ilyasov, 2011; Gabay, 2014; Gabay, 2012) was included in the discussion.

At the same time, until recently, the goal was not to organize a special study of the conditions under which, in the assimilation process, the reproduction of an action on the basis of a previously acquired skill can be provided according to circumstances.

## Results and discussions

Knowledge and skill can be considered learned in the full sense of the word only when it is adequately and timely applied. We have undertaken an empirical study (Zhantikejev, 2004), aimed at clarifying both the nature of actualization and the conditions under which timely, adequate and stable reproduction of the learned material is achieved.

Conducted theorist-experimental psychological research showed the existence of a certain system of

actualization conditions, including three subsystems: actualization conditions relating to the “actual assimilation” course, conditions necessary during the “skill storage”, and conditions characterizing the situation of using this skill.

Activity approach to the assimilation of social experience developed by L.S. Vygotsky, A.N. Leontiev and their followers, suggests its analysis as an integral system, the study of the structure of activity and its structural components.

Moreover, in the theory of phased formation of mental actions and concepts as the first stage of development of the activity assimilation theory of social experience, the practical application of its

fundamental principles are actually shown, when by creating appropriate conditions it is possible to form adequate knowledge and skills with predetermined qualities, when an external, objective action become internal, mental.

The theory of the gradual formation of mental actions makes it possible to understand the formation of a new mental act, however this is not an end in itself. Mental actions, concepts are necessary for the implementation of some tasks.

The analysis of research conducted in line with the activity approach shows that by now there is already a fairly complete picture of the conditions for the successful appropriation of knowledge and skills. However, according to the analysis of the actualization process and its conditions, special studies were not conducted.

The findings suggest the possibility and need for a special study of this process. In this case, the corresponding characteristic appears as central. Consideration of its nature and relationships with other characteristics would also mean further improvement of the typology of characteristics.

The existence of specific conditions of actualization was confirmed experimentally. The dependence of the success of actualization on the similarity of conditions in the situation of formation and in the situation of reproduction of the action corresponding to this skill was established. Actualization, as the study showed, depends on the development of the entire sequence of operations. Update depends on the level of motivation: the higher its level, the higher the productivity of reproduction. One of the significant conditions for successful actualization is also the generalized nature of the material being digested. It should be noted that this experimental study is devoted to the identification of only some of the most “representative” conditions of their selected system. It involves the study of the conditions of actualization and study of their very

system. And finally, we believe that our research is a continuation of well-known works in line with the activity approach to the problem of assimilating social experience, created by P.I. Galperin and continued by his followers-disciples.

### Conclusion

P.I. Galperin for the first time developed the idea of orientation in the theory of systematic (phased) formation of mental actions, its three types; on the scale of the phased formation of mental actions and concepts; about the characteristics of the action (properties, or parameters).

Based on the provisions of the theory of phased (planned) formation of mental actions under the direct supervision of P.I. Galperin, his students and disciples implemented several hundreds of applied projects aimed at improving the content, forms and methods of education in preschool education, in primary, secondary general and vocational school, in higher education, in training workers and specialists in industry, in advanced training and retraining of executives and specialists in the sectors of the national economy, in military and sports training.

The major outcome of the applied developments implementation in these areas is to reduce the duration of training while improving the quality of assimilation of the relevant material; ensuring the success of learning from the overwhelming majority of students; a significant increase in interest in learning from the students; the possibility of differentiated learning with the preservation of a unified structure of theoretical knowledge.

The theory of step-by-step (systematic) formation of mental actions and concepts, created by P.I. Galperin is one of the generally recognized psychological theories used in many areas of psychology and pedagogy and has its followers in countries not only near but also far abroad.

However, the real contribution of Peter Iakovlevich to scientific and psychological knowledge is not limited to the world-famous theory of the phased formation of mental actions and concepts, but much wider.

The theory of attention and the study of linguistic consciousness, a new approach to the classical problem of the relationship between the psyche and the brain, and an original solution to the problem of the subject of psychology, a kind of interpretation of the problem of the unconscious and the theory of the relationship of learning and mental development, issues of differential diagnosis of intellectual development, followed by individualized correction traditional functionalism classification of forms and types of mental activity – this is not a complete list of the positions of the

richest heritage, left to subsequent generations of scientists by Peter Iakovlevich (Podolsky, 2017).

The main result of the applied developments introduction into these areas is to reduce the term of training by the quality improvement of learning relevant material; ensuring the success of learning from the overwhelming majority of students; a significant increase in interest in learning from students; the possibility of differentiated learning with the preservation of a unified structure of theoretical knowledge.

### Литература

- 1 Айдарова Л.И. Формирование некоторых понятий грамматики по третьему типу ориентировки в слове // В кн.: Зависимость обучения от типа ориентировочной деятельности. – М.: Изд-во МГУ, 1968. – С. 42-80.
- 2 Буткин Г.А. Формирование умений, лежащих в основе геометрического доказательства // В кн.: Зависимость обучения от типа ориентировочной деятельности. – М.: Изд-во МГУ, 1968. – С. 187-237.
- 3 Габай Т.В. Научные идеи П.Я. Гальперина и их развитие в современной деятельности теории учения // Культурно-историческая психология. – М.: Московский городской психолого-педагогический университет, 2012. – № 4. – С. 20-37.
- 4 Габай Т.В. Педагогическая психология. – М.: Изд-во МГУ, 2014. – 160 с.
- 5 Гальперин П.Я. Доклады на совещании по психологии 1952 г. // Известия АПН РСФСР. – 1953. – Т.45. – С. 93-99.
- 6 Гальперин П.Я. Умственное действие как основа формирования мысли и образа // Вопросы психологии. – 1957. – № 6. – С. 58-69.
- 7 Гальперин П.Я. Психология мышления и учение о поэтапном формировании умственных действий // В сб.: Исследования мышления в советской психологии. – М.: Наука, 1966. – С. 236-277.
- 8 Гальперин П.Я. К исследованию интеллектуального развития ребенка // Вопросы психологии. – 1969. – № 1. – С. 15-25.
- 9 Гальперин П.Я. Введение в психологию. – М.: Изд-во МГУ, 1976. – 150 с.
- 10 Гальперин П.Я. Методы обучения и умственное развитие ребенка. – М.: Изд-во МГУ, 1985. – 45 с.
- 11 Жантукеев С.К. Психолого-педагогические условия актуализации умений: автореф. дисс. на соискание ученой степени к. психол. н. – Алматы, 2004. – 140 с.
- 12 Ильясов И.И. Структура процесса учения. – М.: Изд-во МГУ, 2011. – 200 с.
- 13 Леонтьев А.Н. Избранные психологические произведения. – М.: Педагогика, 1983.

- 14 Пантина Н.С. Формирование двигательного навыка письма в зависимости от типа ориентировки в задании // Вопросы психологии. – 1957. – № 4. – С. 117-132.
- 15 Подольский А.И. Научное наследие П.Я. Гальперина и вызовы XXI века. – М.: МГУ имени М.В. Ломоносова, 2017. – 134 с.
- 16 Решетова З.А. Типы ориентировки в задании и типы производственного обучения // Доклады АПН РСФСР. – 1959. – № 5. – С. 56-65.
- 17 Решетова З.А., Калошина И.П. Психологические условия политехнического метода обучения // В кн.: Зависимость обучения от типа ориентировочной деятельности. – М.: Изд-во МГУ, 1968. – С. 17-41.
- 18 Талызина Н.Ф. Теоретические проблемы программированного обучения. – М.: Изд-во МГУ, 1969. – 284 с.
- 19 Талызина Н.Ф. Управление процессом усвоения знаний. – М.: Изд-во МГУ, 1975.
- 20 Талызина Н.Ф. Теория планомерного формирования умственных действий сегодня // Вопросы психологии. – 1993. – № 1. – С.17-25.
- 21 Тепленькая Х.М. К проблеме формирования понятий у детей дошкольного возраста // В кн.: Зависимость обучения от типа ориентировочной деятельности. – М.: Изд-во МГУ, 1968. – С. 124-152.

### References

- 1 Aydarova L.I. (1968) Formirovaniye nekotorykh nonayti grammatiki po tretiemu tipa orientirovki v slove [Formation of some concepts of grammar on the third type of orientation in the word. In the book: The dependence of training on the type of orientation activity]. M.: Publishing House of Moscow State University, pp. 42-80.
- 2 Butkin G.A. (1968) Formirovaniye umeni, leshasih v osnove geometricheskogo dokazatelstva [Formation of skills on basis of geometric proof. In the book: The dependence of training on the type of orientation activity]. M.: Publishing House of Moscow State University, pp. 187-237.
- 3 Gabay T.V. (2012) Nauthnie idei P.Ya. Gal'perina I ih rasvitiye v sovremennoi deyatelnostnoi teorii utheniya. [Scientific ideas P.I. Galperin and their development in the modern activity theory of the doctrine]. Cultural-historical psychology. Moscow: Moscow City Psychological and Pedagogical University, no 4, pp. 20-37.
- 4 Gabay T.V. (2014) Paedagogicae Psychology [Pedagogical psychology]. M.: Publishing House of Moscow State University, 160 p.
- 5 Galperin P.I. (1953) Dokladi na sovesanii po pshohologii 1952 [Reports at a meeting on psychology in 1952]. News of the APS of the RSFSR, T.45, pp. 93-99.
- 6 Galperin P.I. (1957) Umstvennoe deistvie kak osnova formirovaniya misli I obrasa [Mental action as the basis for the formation of thought and image]. Questions of psychology, no 6, pp. 58-69.
- 7 Galperin P.I. (1966) Psihologiya myshleniya i uchenie o poetapnom formirovanii umstvennykh deistvii [Psychology of thinking and the doctrine of the phased formation of mental actions. In Proc.: Studies of thinking in Soviet psychology]. M.: Science, pp. 236-277.
- 8 Galperin P.I. (1969) K issledovaniyu intellektual'nogo razvitiya rebenka [To the study of the intellectual development of the child]. Questions of psychology, no 1, pp. 15-25.
- 9 Galperin P.I. (1976) Vvedenie v psihologiyu [Introduction to psychology]. M.: Publishing House of Moscow State University, 150 p.
- 10 Galperin P.I. (1985) Metodi obuchenija i umstvennoe rasvitiye rebenka [Methods of learning and mental development of the child]. M.: Publishing House of Moscow State University, pp.45.
- 11 Zhantikeev S.K. (2004) Psihologo-pedagogicheskie usloviya aktualizatsii umeni [Psychological and pedagogical conditions for the actualization of skills: authorized dissertation to competition of scientific degree]. Almaty, 140 p.
- 12 Ilyasov I.I. (2011) Struktura prozessa ucheniya [The structure of the learning process]. M.: MSU Publishing House, 2011, 200 p.
- 13 Leontiev A.N. (1983) Sobrannie psihologicheskieskoe proisvedeniya [Selected psychological works]. M.: Pedagogy.
- 14 Pantina N.S. (1957) Formirovaniye dvigatel'nogo navika pisma v savisimosti ot tipa orientirovki v sadanii [Formation of the motional skills of writing, depending on the type of orientation in the task]. Questions of psychology, no 4, pp. 117-132.
- 15 Podolsky A.I. Nauhnoe nasledie P.Ya. Galperina I visovi 21veka [Scientific heritage of P.I. Galperin and the challenges of the XXI century]. M.: Moscow State University named after M.V. Lomonosov, 134 p.
- 16 Reshetova Z.A. (1959) Tipi orientirovki v sadanii i tipi proisvodstvennogo obuteniya [Types of orientation in the task and types of industrial training]. Reports of the RSAF RSA, no 5, pp. 56-65.
- 17 Reshetova Z.A., Kaloshina I.P. (1968) Psihologicheskie usloviya politehnicheskogo metoda obuteniya [Psychological conditions of the polytechnic teaching method. In the book: The dependence of learning is of the type of orientation activity]. M.: Publishing House of Moscow State University, pp. 17-41.
- 18 Talyzina N.F. (1969) Teoreticheskie problem programirovannogo obuteniya [Theoretical problems of programmed learning]. M.: Publishing House of Moscow. University, 284 p.
- 19 Talyzina N.F. (1975) Upravlenie prozessom usvoeniya snani [Managing the process of learning]. M., 1975.
- 20 Talyzina N.F. (1993) Teoriya planomernogo formirovaniya umstvennykh deistvi segodnya [Theory of the planned formation of mental actions today]. Questions of psychology, no 1, pp.17-25.
- 21 Teplinkaya K.M. (1968) K probleme formirovaniya nonayti u detei doskoln'jg vosrasta [To the problem of the formation of concepts in preschool children. In the book: The dependence of learning on the type of orientation activity]. M.: Publishing House of Moscow State University, pp. 124-152.