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## LEARNING ACTIVITY – PREREQUISITE FOR QUASI-DISCOVERIES\*

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**Максименко С.Д. Учбова діяльність – умова квазі-відкриттів.** Матеріал публікації є частиною монографії автора «Психологія учіння людини: генетично-моделюючий підхід». Презентовано матеріал, що характеризує сучасний етап генетичних досліджень у психології. Обґрунтовується, що учбова діяльність є умовою квазі-відкриттів. Зосереджено увагу на дослідженнях, виконаних в рамках теоретичних уявлень культурно-історичної моделі Л.С. Виготського з використанням експериментально-генетичного методу. Підкреслено, що вихідна теоретична і дослідницька позиція, способи одержання й інтерпретації експериментальних результатів є тим, що має першорядне і принципове значення для розуміння суті цього напрямку. Проаналізовано основні напрямки, що склалися в генетичній психології. Викладено проблеми і перспективи експериментально-генетичного вивчення розвитку психіки. Висвітлено лінії розвитку генетичної психології. Визначено поняття «формульовальний експеримент». Першою й основною лінією стала можливість побудови вищих психічних процесів дитини з задалегідь заданими показниками. Наступна лінія досліджень пов'язана з застосуванням положень і схем генетичної психології в психотерапії і реабілітаційній роботі (посттравматизм). Інша лінія представлена дослідженнями, у яких акцентується увага на процесі формування учбової діяльності учнів, де експериментально-генетичний метод представлений у формі природного формульовального експерименту. Це – один з найбільш цікавих і перспективних напрямків сучасних досліджень учбової діяльності. Ще одна лінія досліджень стосується проблеми прийняття навчальних завдань. Факт прийняття навчального завдання означає принципову зміну психіки учня і, у цілому, самого його як суб'єкта учбової діяльності...Результати проведених досліджень не лише підтверджують вихідні теоретичні передумови, а й дозволяють установити специфічні особливості розвитку дітей.

**Ключові слова:** генетична психологія, експериментально-генетичне дослідження, експериментально-генетичний метод, онтогенез особистості, учбова діяльність, учбова задача, формульовальний експеримент.

The attempt for analysis of modern state in national genetic psychology is linked with significant difficulties that have general and completely logical explanation: they appear because this sphere of psychological science is in the process of rapid establishment, which is accompanied by ambiguous phenomena. A very serious task is to define the subject of research, which is complicated by the fact that most other sections of psychology are inclined to the problems of development and formation.

The subject is thus “washed off” that once more testifies to the long crisis in scientific psychology. If to try in the analysis “to catch” everything that is known about development in modern psychology (and, at last, it would be fair) – we would have to write a large book, although it could not help in this situation to differentiate this subject from other sections of psychology. Thus, it is very difficult to distinguish the field of analysis “due to subject”. Moreover, it is not necessary to do it in terms of scientific ethics. So, if we aim the analytical research to the problem on development of psychics, then we are just obliged to use the results from a great number of works that are not included into that scientific school, in which achievements we are interested.

It is impossible to pretend that as if there are no other directions, which also relate to development, or to mention them only in negative aspect, as it is unfortunately the case in some theoretical analytical works on genetic psychology.

So, having acknowledged that psychical development is studied very widely, let's mention that we are interested in those researches, which were made within theoretical notions in cultural historical model by L.S. Vygotskyi using experimental genetic method (if the research is experimental).

This unity (theoretical notion – method) is very essential not only in terms of general methodological point of view but because, in our opinion, it is namely its strict learning that allowed the scientific direction not only surviving but developing into independent and very interesting sphere of psychology (hereinafter in the text we will use the expression “genetic psychology” exclusively for designation of this direction in psychology).

Dismal grimace of social conditions “provided” with closedness of this science for international scientific community, and not only international ... (at least, modern western psychology, with all its positives, continues fighting in the nets of two-factor scheme for explanation of treatment and development, artificially

finding “something third”). It is compulsorily necessary to open national genetic psychology to the scientific world, having realized the real meaning of its achievements, without neurotic shyness.

It is not sufficient to analyze concrete researches in order to understand and to assess the scientific results, received by genetic psychology. The initial theoretical and research position, ways for receipt and interpretation of experimental results are the things that have top-priority and principal meaning in order to understand the essence of this direction.

Firstly we will try to formulate our vision of this real phenomenon in scientific thought. Here we will analyze the main directions that were formed in genetic psychology. Then we will briefly fix upon some problems and perspectives in experimental genetic study of development of psychics.

Of course, it is necessary to start from L.S. Vygotskyi, from his understanding of necessity in refusal from existing way of scientific psychological analysis and statement that “it is not the experimental but genetic psychology that leads us to the new understanding of analysis” [Vygotskyi, 1982, p. 95]. And further Vygotskyi explains which analysis, in his opinion, will be adequate to psychical development as a subject of research. This, he writes, “is the analysis of a process but not of a thing, the analysis that discloses the real causal dynamic connection and relations, and does not divide the external features for the process, so, the explanatory genetic analysis but not the descriptive one that returns to initial point restores all processes of development of any form that in this kind is the psychological petrification” [Vygotskyi, 1982, p. 100]. And a bit further there is the exact formula “Most difficulties of genetic analysis are to penetrate into how the real natural process of development occurs using experimentally caused and artificially organized processes of treatment” [Vygotskyi, 1982, p. 129].

The abovementioned citations are necessary as they contain the sources for genetic psychology and to do without them would mean to interpret Vygotskyi that is in general very difficult, as he is very precise in scientific definitions while expressing his opinion. It is important as the research position of scientist is important for us.

What was inconvenient for Vygotskyi in existing way of psychological analysis? He found the facts for creation and application of symbols (signification) in human behavior that resulted in principal reconstruction of behavior: a human itself managed its psychical life.

The scientist understood the real meaning of these facts (phenomena of mediation) but the existing methodological apparatus of psychology did not allow explaining them (let’s remind that there was talk of the process for choice in indefinite situation, mediated memorizing and “bringing up” operation of calculation).

These higher psychical functions in the life of adult (or a child that achieved the level of mediation in its age) are in fact obvious but it is impossible to explain them using any finesse of traditional methods. They really create the impression of petrifications for these methods (i.e. such ones that are as firm as stone and do not allow a researcher to come “inside them”). And meantime they are principally important because only they transform the natural psychics into cultural one. So, we need the adequate analysis.

Here, in our opinion, is the most important turning point. And it happens so not even because a principally new method of research was established but because the fundamental and unique tradition of scientific research for psychology until now was laid here. Vygotskyi, having noticed and distinguished really key facts, found the bravery to treat them as the facts of life and did not start interpreting and creating his theory but made significantly correct step as a scientist.

He started creating the method in order the facts of life would be filled with theoretical content, would be confirmed, disproved or specified and only then would be laid as the basis for theoretical construction. This position became the ideology of pupils and followers of Vygotskyi, and, finally, the whole national genetic psychology. It determined the success of the latter.

What shall be the adequate method of research? In principle, the problem of method is one of the central problems in genetic psychology and hereby such one that is actively and meaningfully being developed. One can tell about separate direction of genetic psychology [Maksymenko, 1981, 2000], which object is the experimental genetic method. Here we will settle only schematically as certain directions of genetic psychology were mainly formed pursuant to modifications of research method.

Vygotskyi thinks that it is necessary artificially to cause and to create the genetic process of psychical development in order to overcome with petrification of mature psychical structures. This is the definition for experimental genetic method of research.

The ways for this transition (appropriation): acquisition, invention, inheritance are planned. The principally important nuance is that the means are not given but set, i.e. a child itself shall make (create) something (finally, it may be anything) by the means. Here,

Firstly, the real (“natural”) genesis is taken into consideration (the characteristic expression by Vygotskyi on occasion of how a Moor “wrote” the whole message using hacks on the tree: “How many thoughts were used for this!”)

Secondly, the genetic heterogeneity of psychical development is emphasized (it is convincingly concretized in modern researches by P. Tulviste about heterogeneity of thinking [Tulviste, 1977]);

Thirdly, the determinative meaning for activity of subject itself is accentuated, hereby, the activity is clearly creative due to nature (it establishes the means).

Hence, such purely psychological thing as feelings “clears up”, and the process for creation of means and the means itself and its “displacement” inside is experienced. F.T. Mykhaylov exactly tells in this relation: “Any subjective feelings of human are the feelings – processing of external subject into “its-living”, into the sphere of its life” [Mykhaylov, 1990].

In the whole, already at initial stages of application, the experimental genetic method brilliantly confirms its research possibilities. He is equally and highly efficient in research of genesis of all higher cognitive processes, and, besides, very flexible and multi functional (the latter one, by the way, is already seen from names.

Vygotskyi himself used very many terms: in addition to classical – “experimental genetic”, “genetic modeling”, “causal genetic”, “synthetic genetic” and even “conditional genetic” (it is doubtful that Vygotskyi here uses the synonyms – he rather underlines the nuances but this problem should specially be studied).

Along with strictly diagnostic qualities the fact that this method is also forming and modeling starts increasingly being realized and accented. There appears the perspective (that takes your breath away) for purposeful formation of human psychics. Perhaps, it partially caught Vygotskyi himself. In any case, the sixth chapter “Thinking and language”, devoted to research of development of scientific concepts in childhood, contains some passion on this occasion; and due to content it is in many aspects not limited by study of this process and presents the perspective program for development of special measures for formation of scientific concepts.

Strictly speaking, it historically so happened: this chapter became the basis for this sphere of genetic psychology that we now call “Theory of developing learning”. Here the problem on correlation of learning and development is actualized and solved by Vygotskyi in the brilliant classical style using the new concept “area of the nearest development”. He clearly sees the perspective for management of psychical development and it catches him (as it shall catch any psychologist). It is necessary to take into consideration the time of actions – they would like so much to remake a human!

And still Vygotskyi have enough courage to be very careful and cautious. Thus, learning as management of process for acquisition of cultural historical experience by child in the form of ways of activity is the determinative one in development. It is its form, it may “tail along” development, may forego or “keep pace” with it but it is not the same.

They are two different processes. They are correlated (“learning and development correlate as the area of the nearest development and actual area”) but however they are different things. All this is clearly formulated in the following phrase: a step in learning may mean hundred steps in development or vice versa(!).

The same refrain is in the problem on correlation of vital and scientific concepts, relative and absolute successfulness, and normative academic disciplines. These problems have been waiting for their solution until now. The problem on individual variants for development is in the same context. The discussion of abovementioned problems by Vygotskyi is the warning against very daring modeling (designing) of psychical processes.

By the way, G.S. Kostiuk was the nearest one to Vygotskyi in the terms of manifestation of special caution in issue about management of development. We think that the common point of view that these two scientists followed to different opinions on this problem is absolutely ungrounded. On the contrary, their opinions on the problem of learning and development are not just close but practically identical.

In the whole, researches, made by Vygotskyi and his pupils, allowed determining the important mechanisms for process of psychical development. Besides, they opened the directions for further search. Strictly speaking, these directions are found to be included into experimental genetic method itself. The first

and the main line in development of genetic psychology became the possibility for construction of the higher psychical processes at child with the indices, set in advance.

Here the works by P.Ya. Galperin about formation of oriented basis for action, ideal action (way of action) and its transformation into internal component of consciousness (interiorization of action) were initial ones. This line was quite logically “included” into learning and transformed into the most powerful part of genetic psychology (theory of developing learning). Further we will return to the analysis of this direction and now we will fix only upon its scientific essence.

If we assume from the primary scheme (instrumental method), there is the mystery how a subject transforms “another” object into the means. It is natural that it causes to a certain activity. For it this is the whole tangle of problems: it is necessary to “retain” the task, to identify the object that mostly “suits” to be a means for its fulfillment in the environment, to make the system of actions for transformation, to return to the task and to fulfill it. The process is not finished at this but one can already see the scheme, researched by P.Ya.Galperin with his colleagues and pupils.

The most impressive results were received from special learning of blind, deaf and mute children (I.A. Sokolyanskyi, O.I. Mescheryakov). In this case the nature provided the genetic psychology, if we could say so, with the ideal conditions for experiment, and the possibilities for method were brilliantly confirmed. However, the approach by Galperin-Davydov (including the theory of developing learning) itself does not and cannot solve all problems on study of genesis of psychics. It shows only one aspect – functional (due to apt expression by L.F. Obukhova), i.e. such one that discloses and realizes the possibilities for directed formation of psychical structures.

There is one more, strictly speaking, genetic problem, related to age development as such one that occurs beyond and regardless of experimental learning. The issue, whether the process of development can be as much formed as studied using experimental genetic method, gave rise to the second line of researches, linked with the names of O.V. Zaporozhets, O.M. Leontyev and G.S. Kostiuk (by the way, it was the first one chronologically). There is one more line of genetic psychology – the least developed but, perhaps, the most interesting one.

This is the problem for formation of personality. It is obvious, logical and fair to think that it was launched by researches of L.I. Bozhovych.

One more, already hardly marked line of researches is linked with application of provisions and schemes of genetic psychology in psychotherapy and rehabilitation work (post-traumatism). We shall pay attention to the fact the theoretical (even philosophical methodological) searches are now intensively run in modern genetic psychology. They are very original, in particular in modern Ukrainian psychology, and we will return to these, really most important questions at the end of section.

Modern science receives the main massif of experimental data about psychical development of personality thanks to researches, held within pedagogical science. It relates, as it was already mentioned, to powerful development of theory of learning activity (D.B. Elkonin, V.V. Davydov, S.D. Maksymenko, A.K. Markova, V.V. Repkin, et al.). The generalized work by V.V. Davydov [Davydov, 1996], as well as in our book [Maksymenko, 2000], tracks in details the evolution of experimental genetic method from methodology of gradual formation of mental actions (P.Ya.Galperin) to forming educational experiment.

We can here restrict only with underlying the essential things for our analysis:

Firstly, the abovementioned evolution “transferred” the research from laboratory to natural experiment (and this is principally important as here the development is specifically brought together, the one, being modeled, and the “natural”);

Secondly, it is necessary once more maximally to settle with the term “forming”, as until now some works of adherents and opponents of direction reflect its primitive wrong understanding: as if we transform a child into passive, objective being (ancient “tabula rasa”) and literally “form” its structures with our influences.

Finally, thirdly: the researches, made within the framework of theory of learning activity, are very important for pedagogy – both practical and theoretical. It is an independent and very interesting aspect in modern development of pedagogical psychology that exceeds the limits of this book.

The main, essential idea of forming experiment in the theory of developing learning was that the acquisition of theoretical concept by child as a way to solve learning tasks means its (concept’s) transformation into the means (stimulus-means, by L.S. Vygotskyi) of management by its cognitive sphere.

This means first of all the spontaneity and mediation of cognitive processes, realized and reflected self-development of mental actions, and, as a result, - scientific theoretical attitude to reality.

It was hypothetically anticipated that as forming experiment has vivid constructive modeling nature, change of conditions and content of its performance, it will allow directionally forming other, including personalistic, psychical structures of child. A great number of researches, made during realization of this idea, allowed receiving many most interesting results, which are impossible to generalize now – as they are so multidimensional and numerous.

We will try to analyze only some modern researches in order to describe two important questions: whether the forming educational experiment in fact allows disclosing and studying the process of development that is hidden from observer under usual conditions. And, secondly, whether this experiment in fact allows influencing on development, designing it? It means that we are interested whether the abovementioned experiment is the variety of experimental genetic method?

Let's return to the facts. Our colleague L.I. Arshavina studied the peculiarities for development of analytical components for thinking at junior pupils [Arshavina, 1983]. The diagnostic research shows the preference of empirical or theoretical components in analysis in different modifications at various children. It allows establishing these components (composite structural, functional and genetic). However, the question how the analysis is developed, on what this development depends, remains open and is not studied within traditional experimental methodology.

This methodology enabled understanding the only thing that is the correlation between the type of analysis and the type of generalization, which is formed in learning: mainly formal analysis is formed at empirical type of generalization, at theoretical one – accordingly – theoretical. It allowed assuming the available dependence between generalization and analysis.

At the same time it was anticipated that the use of forming experiment will allow studying the process for analytical components of thinking itself. L.I. Arshavina performed the series of forming educational experiments with the group of junior pupils, devoted to formation of theoretical type of generalization at them. They really allowed disclosing the process for development of analysis.

It was found out that the key factor for development is the separation of genetic relations, which characterize the principle for construction of objects. The acquisition of these relations in the process for theoretical generalization leads to origin of theoretical forms for analysis. However, the process for development is not finished at this. The research convincingly shows that the ways for theoretical analysis are developed into techniques of independent mental activity, i.e. provide with further development of thinking process. It is the main line for development of analytical components in thinking.

It is expected that further pupils, thanks to the new psychological structure (independent techniques of mental activity), “will be able to overcome with generalizations that are empirically “introduced”. Thus, this research in fact studied the process for development of analytical components in thinking.

Author shows that, strictly speaking, the theoretical analysis is formed only at those children, who mastered its all three components (structural, functional and genetic); the prerequisites for rapid formation of this kind of analysis are formed at other children (“area of the nearest development”).

The research by L.I. Arshavina positively answers our second question – it was obviously developing.

The interest to study on development of thinking using forming experiment remains very high. Researchers received very important results. It is necessary to mention the works by Ya.O. Ponomaryov, who studied the influence of experimental learning on formation of internal plan for actions at junior pupils, O.S. Zak, who analyzed the peculiarities for development of theoretical thinking at junior pupils, and many others.

Let's briefly stop on the analysis of some works in this field, made by our colleagues. Already in 1982 the research, devoted to study on development of creative musical thinking at junior pupils, was held [Vasylkevych, 1982]. In the analytical declaratory part of this work we tried to move away from traditionally multidimensional explanation of creative thinking (which, unfortunately, is still used until now) and to apply the analysis “due to units”. It was anticipated that such “unit” shall determine the development of creative musical thinking. It was necessary to find it. Besides, of course, we had the task to disclose and to study the process of development itself.

Forming experiment allowed determining that motion in development of musical thinking at children from reproductive until creative level is in fact determined not by a range of musical psychological

components (hearing, sense of rhythm, etc.) but by the use of absolutely special structure by a subject as a means, which we then called musical experience.

This “unit” is internally structured pursuant to initial general contradiction (perception of music – musical self-expression).

The experimental learning of music, built due to the type of meaningful generalization, was aimed to master the musical experience as a theoretical concept, i.e. a way for solution of systems of learning tasks. The way for development of musical thinking at children, the appearance of elements for creativity in it became obvious as a result from such learning.

Moreover, it was also cleared up that the formed structure then continues being developed, defining the attitude of children to music. This research, in our opinion, was to a certain extent unique, mainly due to its results.

The peculiarities for development of thinking at pupils of average school age were studied in connection with formation of techniques for linguistic activity at them [Tokarevo, 1997]. The educational experiment in this research was built in the form of original spiral, at each coil of which pupils mastered the definite operations from subjective sense bearing and logical organization of verbal statement, as well as the arsenal of techniques for their use.

The characteristic feature for this system of learning tasks is the realization of principle for unity of subjective content in thinking verbal activity and operational technical procedures that was expressed in realization of linguistic structures as a composite integral verbal statement.

The special attention in this monograph is also paid to the objective content of learning that a pupil in this experiment transformed into a means for development of own thinking.

Such means here was the author’s verbal statement (thereby, among others, the provision by M.M. Bakhtin about addressness and its meaning in establishment and perception of text). The use of this means allows pupils processing and building the sense bearing structures of text that, in their turn, testifies to development of analytical synthetic components in thinking.

It seems to us that it is possible and necessary to mention here one peculiarity that, due to our data, is inherent namely to researches by Ukrainian psychologists.

The task in described cycle of works was to receive the scientific facts, which would confirm or disprove the initial idea by Vygotskyi that a means can be not only a tool or symbol (it is studied by Vygotskyi himself) but very many other things (“anything”, if to cite the classic more precisely). Firstly, our researches once more confirmed experimentally that such means can be the meaning (scientific concept).

By the way, Russian authors in traditional researches limited by this, passing to solution of other problems. Later it was found out that a means may be “musical experience”, “verbal statement” and many other factors. They all are the means for development of different sides in higher psychical structures. Interiorizing, they stipulate, first of all, different connection of other psychical functions that are included into this “cluster”; secondly, define the genetic heterogeneity of higher forms for psychics and, thirdly, create their own tissue of consciousness.

We think that our direction of researches is cardinal because it experimentally opens the specificity for construction of human consciousness and fills the concept of interfunctional systems, which was the last “favorite” subject of study For Vygotskyi, with concrete scientific content.

The possibility really to understand the structure of consciousness, relying on data of science but not on own logical schemes, is opened. The research on mechanisms for goal-setting in learning activity is demonstrative in this sense [Shvalb, 1997, 1983].

Having theoretically proved that “a unit” of goal-setting is not the relation “purpose-result” but relation “purpose-means”, author showed that the main form for goal-setting in learning activity is the perception of learning task by pupil, i.e. transformation of this task into learning exercise by pupil that “is in fact the objective rethinking of learning task, i.e. it is the subjective purpose of action” [Shvalb, 1997, p. 66].

The learning task reflects the personalistic content of learning exercise and learning in the whole, thus, it is strictly connected with sense-forming motive of learning activity. The diagnostic research of goal-setting allows detecting three levels of its development in junior pupils. The use of forming experiment opens the process for development of this psychological phenomenon and allows establishing that the means for construction of learning purpose are determinative in this development.

In case of traditional learning such means are not clear notions about product of activity and the ways for its fulfillment as if “fall out” from actual consciousness of subject and is not directionally formed.

The experimental learning, held due to the type of formation of learning activity, is directed to appropriate namely the ways for construction of subject under study. In this case these ways serve as the means for construction of purpose. Thus, the meaningful determinants for goal-setting are established – “psychical formations (concepts, notions, and images) that function in activity in the role of the means for definition of purpose, and valuable motivational components that are expressed in the interests of personality” [Elkonin, 1974, p. 25].

What occurs further?

Goal-setting is the process, being appropriated using the special means, - became “a unit” of consciousness and is transformed into the means not only of ordered and purposeful treatment but serves to development of higher levels of consciousness.

Yu.M. Shvalb makes the conclusion that goal-setting is the component of consciousness but not of activity and provides with realization of its attitudes to the world by personality. Thus, the author comes to a very interesting concept of goal-setting consciousness.

It was found out that the level in fixation of results in productive actions that stand, perhaps, higher than the level of productive goal-setting, i.e. “intentional processes appear a bit later than capabilities of children to separate and to form their own results” [Lysiuk, 2000, p. 66]. Pursuant to received results the author assumes that the capability to form productive purposes consists of minimum two mutually dependent processes: process for establishment of capability to form and to separate the productive results and process for transformation of productive results into purpose at children. We see that “a unit” of analysis in this work pursuant to analysis for empirical data is the relation “result-purpose-result”.

Another line in modern genetic psychology is represented by researches, in which the attention is paid to the process for formation of learning activity at pupils. Here experimental genetic method is represented (and is used) in the form of natural forming experiment. If we use the term by L.F. Obukhov “functional genetic research” it should be mentioned that the functional part is realized in this direction. It is also essential that the developing effect in these researches acquires the mass character because it concerns at once a significant contingent of pupils.

Certain research tasks for this group of works were defined already by founders of theory of developing learning (D.B. Elkonin, V.V. Davydov, S.D. Maksymenko, V.V. Repkin) and remained, strictly speaking, without changes. It is:

Firstly, logical psychological analysis of different school academic subjects,

Secondly, organization of children learning due to experimental methodologies,

Thirdly, formation of psychological components for learning activity of children.

It is important that each concrete research in this line contains the solution of tasks from all three groups, although, of course, one prevails depending on purpose of the work. Let's mention that these researches are well-known, rather fundamentally generalized and thus, we will here touch only some perspective, in our opinion, problems and results.

Logical psychological analysis of academic subject is the procedure, which is very necessary in developing learning. Already L.S. Vygotskyi by research way established that “scientific concept is developed”, later the way of this development in consciousness: from the general to the concrete was studied (E.V. Ilyenkov).

The activity itself is hereby a quasi-discovery. In general, the learning material shall be the dynamic model for theoretical generalization.

The first researches were held on the material of Russian language and Mathematics in primary school. They were very successful and perspective, having confirmed, in the whole, the developing effect of this approach (L.I. Aydarova, A.K. Markova, P.S. Zhedek, V.V. Repkin, et al.). In fact, different opinions of scientists appeared already here.

Thus, if logical psychological analysis of Russian language in works by V.V. Repkin and P.S. Zhedek was held in terms that the essential task for its acquisition was the formation of theoretical linguistic concepts in learning cognitive activity, then L.I. Aydarova assumed that genetically initial learning linguistic activity shall be formed in this age (junior pupils).

Hence her approach to analysis is, strictly speaking, communicative and she considers “notification” as a general way of speech. Further the point of view by V.V. Reprin was mainly developed (effective curricula, textbooks and study guides were created namely pursuant to those notions).

However, the problem is not already solved. The abovementioned positions shall be researched and synthesized by some way because the principles of experimental genetic research require it. It means first of all the requirement of Vygotskyi that the method shall not only be formed but shall allow studying the development itself and here one cannot but takes into consideration the importance and generality of communicative activity in linguistic development of child.

On the other hand, the psychological collision, related to genetic heterogeneity, is disclosed: simultaneous representation of “vital” layer in psychics (unconsciously acquired and used in communication by native language) and layer of “theoretical – theoretical – scientific theoretical” (acquisition of generalized linguistic concepts). This coexistence worried very much already Vygotskyi (correlation of scientific and vital concepts), however, now we are still far away from solution of issues on heterogeneity in this meaning; in other words, we cannot answer, which activity – learning cognitive or learning linguistic – will mostly optimize the general process for linguistic development of child.

In the whole, we shall mention that logical psychological analysis and construction of other academic subjects (in addition to language and mathematics in junior classes) were and are carried out in the theory of developing learning much less intensively that may be justified only partly. The cardinal psychological question “What is developed?” remains still without answer in the theory of developing learning, and, moreover, it shall be added with other cardinal question: “What could be developed?”

If we think that the acquisition of one-two subjects due to developing methodology will provide with overall development, then we easily return to the theory of formal discipline “in terms of influence of the whole on everything in learning” [Davydov, 1996, p. 232]. However, the fact for influence of experimental learning in one-two subjects on overall development in theory of learning activity has not been proved. V.V. Davydov in his time expressed the meaningful idea about different sides of developing consciousness (scientific theoretical, artistic, moral) that are quite different, and, thus, they shall be developed in different modifications of learning activity, and using different academic subjects.

Let’s emphasize once more: out interest to empirical research of different academic disciplines means that, besides, other, methodological instructions – conclusions and generalization shall arise from scientific facts. In other words, we think that the conclusions about possibility for construction of all academic subjects due to logics “general – concrete” and receipt of developing effect from their acquisition will be reliable if we receive these results but not transfer them in the process of own analysis, relying on “development” of one subject.

The results from performed researches and those ones, which are held now, not only confirm the initial theoretical prerequisites, they allow establishing specific peculiarities for development of children. The work by M.D. Boyprav, which studied the psychological conditions for formation of scientific concepts at junior pupils while studying botany, is demonstrative in this content [Boyprav, 1982]. Logical psychological analysis of academic subject, held by author, allowed establishing the initial genetic relation in the course of botany as a sphere of scientific biological knowledge.

It is the relation “function – structure”. The structure of academic course as a deployment of this correlation and development of scientific concepts was built up. The way for acquisition (transformation of concept into means), suggested by author, is interesting. The educational experiments played its role.

Experimental genetic research allowed studying the development in independence at pupils, having defined four qualitatively originals levels in it. Besides it was found out that the declared waiting of author about influence of independence on efficiency in formation of concepts shall significantly be added as the reverse process was detected: independence was formed in educational experiment and theoretical concept served as the means for this formation.

On the other hand, it was determined that independence was used as a means for further acquisition of concepts.

In the whole the research “comes to” the structure of consciousness in a bit other plan than the works on goal-setting but more precise because here we can exactly define the structure and functions of interfunctional system, which appeared, having hereby avoided excessive hypothetical character. This work, thanks to its complexity, touches very important aspect in development of personalistic structures using learning activity in great number of interesting researches on personality in genetic psychology, on which analysis we will fix below.

The third from abovementioned tasks (study on construction of learning activity and psychological peculiarities for its formation) is considered in numerous theoretical and experimental researches, made



within the theory of developing learning. The theoretical works by D.B. Elkonin, V.V. Davydov, A.K. Markova, which underlie the theory of learning activity, are well known.

Fundamental works by V.V. Repkin allowed clearing up the construction of learning activity, peculiarities for learning tasks, their classification and development in learning activity of pupils.

Another line here is the research of separate structural elements in learning activity and peculiarities for their formation. Thus, our colleagues study the peculiarities for development of goal-setting in learning activity (abovementioned research), formation of self-control at junior teenagers [Glazyrina, 1985], formation of separate learning actions and their system, peculiarities for assessment and self-assessment in learning activity, etc. The cycle of researches, devoted to study of motives for learning activity, will be considered at analysis on development of personality in genetic psychology.

One more line of researches concerns the problem on acceptance of learning tasks. We think that it is one of the most interesting and perspective directions in modern researches of learning activity.

The process for acceptance of learning exercise is in fact studied very widely in terms of theoretical and experimental but, unfortunately, not genetic psychology.

The phenomena of pre-definition and post-definition were discovered by experimental way (G.O. Ball, V.T. Dorokhina, Yu.I. Mashbits, et al.), and these are principal discoveries that however have the empirical character. A great number of works established the factors, which influence on the process for acceptance of tasks, however, they, although being very important, cannot explain the essence of this key phenomenon.

In these researches the acceptance itself is taken out of the brackets. The attempts for theoretical explanation for this phenomenon in its "binding" with learning task are very fruitful, and especially it should be mentioned about significant step by G.O. Ball, who introduced the concept "internal learning task" and at its development he most closely came to understanding the essence of process for acceptance of learning task.

Why do we think that this phenomenon is the key one and its study is so important?

In our opinion, it is in fact a meaningful "unit" of process for development in learning activity. Hereby it is not usual relation of two opposite phenomena in their unity. It is a complex "unit", in which such different structures as the level of actual development and "area of the nearest development", motives, interests (both learning and extra-curricular processes), level in acquisition of ways for actions and many other things "gathered" in it.

All this gathered and implemented in simultaneous act that we call "acceptance of learning task". And this is the personalistic act itself because the emotional sphere and individually typological peculiarities also have their representation in it. We think that it is necessary to deploy the researches, directed to detect the psychological essences of this phenomenon. Let us state the assumption that acceptance of learning task is the "ideal object" in genetic psychology and shall be studied in classical variant of experimental genetic method. And here, in our opinion, there is the possibility to unite its functional and genetic components.

The simultaneous process for acceptance shall be deployed and exteriorized under special experimental conditions, and at the same time it shall be formed (once more we refer to classical experiments by O.V. Zaporozhets and then O.N. Leontyev, G.S. Kostyuk, S.D. Smirnov, et al.).

Having sketchily implemented the depicted scheme, we can study the genesis for acceptance of learning task and it means to study and to understand it alone.

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