Contemporary Russian Contributions to Vygotsky's Heritage

Editors

Sylvie Barma
Viktor Zaretskii

CRI_SAS International Journal is based at Laval University,
the first Francophone university in North America

Vygotsky's Heritage: Innovation in Education
http://ojs.crires.ulaval.ca
ISSN = 2291–6717

Inviting Russians Scholars to Reflect on Vygotsky's Heritage

Sylvie Barma   sylvie.barma@fse.ulaval.ca
Faculté des sciences de l'éducation
Université Laval
Québec, Canada

Viktor K. Zaretskii   zar-victor@yandex.ru
Moscow State University of Psychology and Education
Moscow, Russia

The *International Journal of the Centre of Research and Intervention for Student and School Success (CRI_SAS): To innovate in Vygotsky's heritage* is a journal that focuses on the innovation and transformation of learning environments related to the educational success of young people. It invites researchers and graduate students to propose theoretical texts, reflections on methodological issues or empirical research results based on the idea that individuals learn and develop through social mediation and use transformation of artefacts from the culture within which they pursue a given activity. Eligible contributions are therefore in line with Vygotsky's work and are based on theories of language (speech), situational cognition, socio-cultural approaches and formative research interventions. The launching of this Special Issue coincides with the 25th anniversary of CRI_SAS. It is therefore an opportune time to promote our free online distribution of scientific and professional texts. As editors, we are also thankful for the financial support provided to the editing team lead by Marie-Caroline Vincent.

The ISCAR 2017 conference decided to take a 360° view of the Society's landscape. It was thus an opportunity to reach out at the roots of cultural-historical theory and to invite scholars from Russia to contribute to a Special Issue to better grasp the state of our scholarship in practice. The congress theme invoked the past, the present, and the future of cultural-historical activity research and it is with that intention that the two editors invite you to enjoy reading our Special Issue. We hope that it will allow you to engage in challenging conversations issues that could lead to revisit ideas or expand upon our current practices. We propose 22 articles written by more than 24 Russian authors.

The first section of the Special Issue addresses questions related to translation and dissemination of Vygotsky's ideas. One of the challenges we faced was to translate Russian texts to English. This is why the first article by Olga Tuchina raises some interesting issues about translating, as the importance of language and culture has always been at the core of

Vygotsky's work. The second article by Anna A. Shvedovskaya presents the analysis of the development of the ideas of L. S. Vygotsky's school using the example of the publications in the international scientific journal 'Cultural-Historical Psychology', for the period 2005 through 2016.

The second section *Theoretical and Methodological issues* gathers 7 articles. We begin with Vitaly V. Rubtsov, who reflects on Davydov's opinion on the legacy of Vygotsky's students: A. N. Leontiev, A. R. Luriya, L. I. Bozhovich, A. V., Zaporozhets, D. B. Elkonin and P. Y. Galperin. Then, Elena Kravtsova takes us to Lev Vygotsky to better understand the sense and the meaning of cultural and historical theory. Nataliya N. Tolstykh focuses on the concept of will as an open problem and related to how A. Leontiev and L. Bozhovich developed original personality concepts based on Vygotsky's most prominent ideas. Marina Falikman and Alexander Asmolov see the problem of consciousness as one of the core problems in contemporary science to consider attention as a constructive process. For Stanislav M. Morozov, Vygotsky's cultural-historical psychology contains a significant methodological potential, rather than just a scientific theory. For Dmitry V. Lubovsky, art, as a system of means, can be powerful to develop higher mental functions during childhood and adolescence, periods which require a great attention by teachers and parents. Vladimir S. Sobkin situates his reflections during the Gomel period when Vygotsky analyzed the socio-psychological mechanisms of theatrical art effect.

The third section *Development* brings together 8 articles. The article of Viktor Zaretskii is devoted to one of fundamental Vygotsky's ideas, that one step in education may mean one hundred steps in development. There are provided theoretical arguments and are given examples of how this idea may be implemented in practice of providing conditions for development while helping children in overcoming learning difficulties using reflective-activity approach.

Viktor Zaretskii and Alla Kholmogorova, in their article, analyse the process of conversion of some ideas in cultural-historical psychology and contemporary tendencies in psychotherapy. The ideas of reflection, position of agency, collaboration in the zone of proximal development and problem epicenter are discussed in educational, practice, counselling psychology and psychotherapy. The concept of dual resource is worked out (the first resource is what a child/client can do by himself, the second is what they can do in cooperation with an adult/psychotherapist).

Irina Nicolayevska describes a multidimensional model of the zone of proximal development, worked out in reflective-activity approach, as a tool of analysis of the child's cognitive-personal dynamics of development while overcoming learning difficulties. The case study of creating conditions for development in individual work with teenagers is described.

The article written by Oksana Glukhova is devoted to the longitudinal (2004-2017) research on cognitive development of children from primary school who participated in the project "Chess for Overall Development", guided by Viktor Zaretskii. The article describes the methodology for studying the dynamics of increasing the level of development of

intellectual processes in children learning to play chess with the help of the reflective-activity approach.

Aleksei Chernysh tells about the computer program, "Chess for Overall Development", that was planned and realised as a current technological version of the ideas and methodological concepts making up the methodics of the same name. A crucial part of the planning process was the program's compatibility with the principles of the reflective-activity approach. The program, created as a powerful, resilient and convenient instrument, allows each student to progress along an individually constructed developmental path. Teachers using the program can quickly and accurately understand and define the limits of the zone of proximal development.

The concept of subjectness position relative to educational activities is considered in the article of Yury Zaretsky as central for the reflexive-activity approach. The author's definition of this concept is given. The main results of the research concerning the attitude towards educational activities in different age periods among Russian school's pupils are given, which show that, on the one hand, it is the subjectness position that is extremely important for many aspects of educational activities, but, at the same time, the Russian pupils' subjectness position intensity decreases in the adolescent period. The author describes possibilities and ways to support the subjectness position in educational process.

Elena Smirnova shows in her paper the specificity of L. S. Vygotsky's approach to child play and toy as the tool of play. Vygotsky paid special attention to pretend play, the essence of which consists in a divergence between the imagined and the real situations. Such play promotes the development of imagination, thinking, self-control, voluntary behavior, self-awareness, social interrelationship and emotional intelligence. The main tools of a child's play are toys. It is indicated that the good toys should be open for various actions and the ideas of the child. However, the majority of modern toys are equipped with technical devices which do not allow the child to show his/her own activity. Playing with such toys comes down to a putting button that, unlike a pretend play, doesn't develop the abilities of the child.

The last article in this section, written by Marina Ermolaeva, is devoted to the analysis of old age as a cultural-historical phenomenon and its transformation in modern times. The author shows that the term "old age" means different periods of life for different authors, and there is no general, identical for all people, final stage of life. Development trajectories, which are defined by a way of life, are so different that the concept of "old age" in one case means "the undergoing" suffering of total dependence on the conditions of existence and their own condition's deterioration, and, in another case, the continuation of progressive development of personality, productivity, and spirituality of life, which are realized in actions.

The fourth section *Clinical Psychology, psychotherapy and training* includes 5 articles. Cultural-historical approach and clinical psychology were very close to each other from the very beginning, L. S. Vygotsky worked a lot upon different problems of pathology in development. But, until last years, it seemed that cultural-historical psychology was

not connected with psychotherapy. In the articles of the fourth section, this thesis is refuted. The paper by Alla Kholmogorova provides a comparative analysis of the basic methodological principles of cognitive therapy and cultural-historical psychology. There are discussed the history of studying reflection in Moscow Psychological School and the scheme of a reflective act as the most important concept yielded by these studies. On the basis of this scheme, the author proposes the steps of a cognitive therapist's work and the mechanisms of change in cognitive therapy.

In her paper, Maria Radionova tries to interpret the effectiveness mechanism of a 12-step program in the recovery of addicts. This analysis leads the author to the conclusion that the stimulation and development of the subjective position of the convalescent manifest themselves in the early stages of recognizing the illness and assuming responsibility for recovery, and, further on, in mastering one's own behavior. Changes in the life of the addict proceed according to several vectors of development: managing their psycho-emotional state, reassessing past life experience, correcting relationships with people, resolving current problems without psychoactive substances, the ability to receive and provide social support, the development of empathy.

The aim of Elena Yangicher is to work out a model of development of constructive response to frustration of adolescence from socially advantaged and disadvantaged groups using art-therapy methods. The author comes to the conclusion that instruments of psychological influence can be considered special means of art therapy methods that contribute to the directed formation of positive mental states and reactions in adolescence and facilitate integration of positive (resource) mental states into the process of formation of new reactions, as well as realise the adolescent's need for self-expression (in constructive forms) preventing and reducing elevated frustration.

Alexey Obukhov's article is devoted to the problems of teachers' training as based on Vygotsky's idea that development is the process of mastering culture. There are described in the practice of creating a new educational system in Moscow Pedagogical State University. The problems and results of the effort to organize the educational process on the ideas of supporting subjectiveness position, developing of reflection, moving in the zone of proximal development are discussed in the paper.

This first experience between our two universities has been an adventure. We are thankful to all the contributing authors, who managed to engage in elaborating their ideas in a very short time. We hope that this Special Issue is just the beginning of an oncoming collaboration for the benefit of the disciples of Vygotsky. Our intention is to open up a channel so the International Scientific Community has access to the state of the research in Russia knowing well that nowadays, there are many other interesting approaches to Vygotsky's tradition that are not presented in this Special Issue.

Sylvie Barma
Viktor Zaretskii

Table of Contents

Part A:

Dissimination

Translating Cultural-Historical Psychology: Comments from Lay Professional

Olga D. Tuchina

*Peoples' Friendship
University of Russia
Moscow, Russia*

OLGA-SHUSTOVA@YANDEX.RU

Abstract

In translating texts for the Chess Overall Development Project (Zaretskii, 2016), we have encountered several types of challenges that may be illustrative of what translators in the field of cultural-historical psychology (CHP) may deal with. Translators use various tools and strategies in their search for equivalence. Lack of the uniform CHP vocabulary and consensus on the CHP terms: differences in transformational techniques and levels of the translators' linguistic competence and their competence in CHP as such, result in co-existence of various translations of the same concepts, which may interfere with the process of communication and become a subject of controversy. Other challenges relate to specific linguistic features of the psychological scientific discourse of CHP, i.e. the need to observe rigorous scientific requirements to style and content, and abundance in expressive, emotionally and culturally charged utterances and vocabulary. The CHP terminology is characterized by specific word formation; lack of stylistic neutrality and lack of equivalent terms in target languages. Therefore, an appropriate translation implies using a special modification technology to create a target-language term which would have an equivalent denotative meaning; meet the requirements of the scientific style and preserve its stylistic uniqueness, emotional, and cognitive relevance (ensuring congruence of the reader's experience with the author's experience as mirrored by the lexical unit).

Keywords : Cultural-historical psychology; Translation; Psychological discourse; Terminology; Connotation; Scientific style.

Travelling of the cultural-historical thought around the world opens the door of opportunity for its adherents to share their experience of the practical application of the Vygotskian ideas and to enrich corresponding theoretical and experimental research. Hence, specialists in cultural-historical psychology (CHP) face new challenges that concern the issues of translating CHP literature, first and foremost, into English as the language of scientific communication.

In translating texts for the Chess Overall Development Project (Zaretskii, 2016), we have experienced a number of challenges that may be illustrative of what other translators of the CHP literature may have to address. Overcoming linguistic challenges is a translator's routine job and there is abundant literature on this subject. So, it may seem to have nothing to do with psychology as such. Nevertheless, oftentimes psychological tests are translated by people who have no linguistic education (PhD students, researchers, etc.), and few professional translators may enjoy working in close cooperation with professional editors (proficient both in the language issues and the subject matter of the text). Being an experienced translator of psychological texts and a practicing counselor, the author is nonetheless a novice in CHP. Therefore, this article aims to investigate challenges that may arise in the course of translating CHP works, and to propose ways to overcome these challenges to assist prospective "lay" translators (both English-speaking CHP researchers and "psychologically-illiterate" translators).

1. Types of challenges

Translating CHP texts implies dealing with three main groups of challenges: (1) extralinguistic or contextual (relating to translators' overall expertise in CHP and an existing consensus on understanding CHP and its terminology); (2) linguistic (relating to the language use); (3) meta-factors (relating to translators' personality and discourse).

Extralinguistic challenges relate to the environment and the context of translating and include such issues as insufficient competence in CHP (lack of information and awareness of the basic concepts and processes); lack of professional literature on translating psychological texts; lack of consensus on translating CHP terminology (first and foremost, within the community of CHP specialists); poor networking in the translators' and psychologists' communities of practice etc. These issues result in tremendous differences in translating the Vygotskian terminology and discrepancies in understanding terms and concepts (see Table 4).

The aforementioned lack of consensus is evidenced by the scarcity of reference materials on the subject. Psychological dictionaries often include chapters on CHP, but CHP has few dictionaries of its own. Moreover, translators may want to avoid using existing translations of works by Vygotsky and his disciples as reference for creating new English translations. This limitation results from a possible unreliability of the translations which may serve as potential sources of error and distortion (Van der Veer & Yasnitsky, 2011). For instance, Van der Veer and Yasnitsky (2011) singled out such subcategories of errors

as inaccuracies, by which they mean "changes of the original texts that were unintended or intended with the idea of "clarifying" Vygotsky's' ideas or making him more palatable to contemporary taste" (p. 479); suppression of terms or passages; suppression of names; unidentified or suppressed citations; insertions (with the latter four types of errors resulting from censorship or falsification). Veresov (2004) points at another essential contextual challenge which has roots in readers' and translators' misunderstanding of the language of Vygotsky's scientific writings. This misunderstanding leads to inaccurate interpretation and misrepresentation of his concepts in other languages. Veresov (2004) gives a fascinating example of how the term "category" was omitted from the definition of the general genetic law of cultural development in "Mind in Society" (Vygotsky, 1978).

In this sense, the first group of challenges is close to the group of **meta-factors**, which include effects of translators' personality and a cultural context on the process and "the product" of translation. Broadly speaking, meta-factors are characteristics of a discourse that the translator is working with and a discourse that the translator is creating and lives in. The term "discourse" emphasizes dynamic and evolving character of the use of language which can hardly be conceptualized without accounting for a multitude of environmental, cultural and personality factors. Therefore, some researchers view discourse as "utterances", that is, "units of linguistic production (whether spoken or written) which are inherently contextualized" (Schiffrin, 1998, p. 41). Texts emerge as a result of this linguistic production and hence reflect the characteristics of its process and various contexts that language is evolving within. In pragmatic terms, translating a text my never be reduced to translating words and sentences (the linguistic content of translation) but inevitably ends in translating contexts, which are "a world filled with people producing utterances: people who have social, cultural, and personal identities, knowledge, beliefs, goals and wants, and who interact with one another in various socially and culturally defined situations" (Schiffrin, 1998, p. 363).

When translating texts in CHP, most often we are dealing both with psychological discourse as such and a specific discourse of CHP. Moreover, the CHP discourse is multi-layer rather than homogenous, with the most obvious (but hardly the simplest) example of this being differences in the psychological discourse of Vygotsky's life time, CHP discourse in the Soviet Union and contemporary scientific psychological discourse which some investigators pointed at (Van der Veer & Yasnitsky, 2011).

Linguistic challenges include everything that may exist under the linguistic sun – from understanding phonemes and morphemes to being aware of specific features of a corresponding discourse. When translating CHP texts, we have encountered the following major linguistic challenges: (1) relating to translating psychological scientific discourse in general; (2) pertaining to specific aspects of CHP as a subject of translation; (3) linguistic challenges proper.

2. Coping with Linguistic Challenges

2.1 Psychological scientific discourse

The space of the paper hardly allows for dwelling into details about psychological discourse. Thus, we are focusing on its most relevant and challenging aspects that are more characteristic of the linguistic content than discursive context, and hence become the epicenter of the translator's efforts.

These aspects relate to a certain ambivalence of the psychological scientific discourse which is created by the speaker's need to *observe rigorous scientific requirements* to style and content, and *abundance in expressive, emotionally charged utterances* and vocabulary. Investing efforts in staying within the boundaries of scientific discourse (implying coherent and cohesive structures, informativity, clarity and certain transparency of the text), the translator of CHP texts has to deal with an extensive use of imagery, comparisons, metaphors, allusions, rhetoric questions, parallelisms, repetitions etc. This "intrusion" of imagery and expressiveness is by no means accidental. Psychological discourse is always about people and for people, deep, different and expressive as they are. Psychological theory both determines practice and is determined by it. Psychologists' work with their clients gives birth to healing relationship, deep emotions and powerful insights that are experienced both by clients and psychologists. These experiences find their way to paper and transform into descriptive and explanatory means, using which psychologists conceptualize their work. It may be due to this reason why Graumann 1996, p. 90 (1996, p. 90) mentions that it is difficult to distinguish between "folk" and professional psychology as their vocabularies tend to coincide. Overall humanization of psychology which views the client as an active agent of change and research and as a partner (rather than a patient or a subject) may also contribute to fading of the boundaries between professional and folk vocabulary. The psychological language is becoming less frightening and stigmatizing; clients are being freed from labels of diagnoses and are seen as entering therapeutic relationship rather than treatment.

Imagery may also serve another purpose, namely, personality development of psychologists. It implies development of their professional competence in terms of empathic abilities and abilities relating to mentalization (Bateman & Fonagy, 2010), when the addressee not only perceives and analyzes the conceptual material, but builds his/her own empathic and psychological picture of what is happening in the text.

The language of contemporary psychological literature is respectful, friendly, full of humor, clear, and elegantly structured. Therefore, the translator needs to account for this scientific/folk dichotomy, paying close attention to rendering both denotative (literal meaning) and connotative (cultural or emotional associations inherent in a unit of language) aspects of the text. Connotations play a decisive role in understanding, for instance, descriptions of the psychotherapeutic process in case studies.

2.2 Linguistic challenges proper

Most linguistic challenges proper relate to working with CHP terminology, i.e. words or phrases that denote concepts of special fields of knowledge or practice. Extreme informativity (a term is a most precise, condensed and succinct definition of a concept) and dependence on the extralinguistic macro-context (i.e. what terms mean in their discipline) and linguistic (what they mean in an utterance) are two main aspects that make terms different from other words, although any word is a potential term. Cabré (2010, p. 359) believes that terminological challenges that translators may face, usually "relate to term understanding and the term pragmatic properties in the original text, or to the search for equivalents". Translators address and solve these challenges using reference materials (dictionaries), consulting experts and familiarizing themselves with the subject of translation to help themselves understand the context.

The vocabulary that CHP uses forms a specific terminological system within which terms (1) have a precise meaning and are understood by all specialists; (2) denote specific concepts; (3) have clear definitions that find their way to dictionaries. So, psychological terminology may seem to differ little from other terminological systems. The problems arise when translators encounter specific features of psychological terms depending on "peculiarities" of psychological discourse. Psychological terms are often derived from neutral-style or even colloquial (folk) words or words actively used by non-psychologists – educators, neuroscientists, linguists. They may have multiple meanings and carry distinct expressive or culture-specific connotations. In case of CHP, these connotations may even relate to the reality of the beginning of the 20th century and can hardly be understood correctly without understanding the context that they were coined in (e.g. psychopathy, defective children etc.). Thus, the appropriate translation of CHP terminology would imply understanding a term's specificity, and, hence, analyzing it from the perspectives of word formation; lexical meaning (denotation and connotation), and searching for its equivalents in the target language. These procedures represent three main issues to be addressed when translating CHP terms:

- Specific terminological word formation (ensuring equivalence at the level of morphemes).

- Lack of stylistic neutrality (ensuring equivalence at the level of connotation).

- Lack of equivalent terms in the source language (avoiding distortion of denotation when translating).

As far as ***terminological word formation*** is concerned, a successful translator needs to have knowledge of the main types of morphological derivation (including knowledge of Greek and Latin affixes), compounding (composing new words using several stems), conversion (creating one word from another by changing its class, e.g. adjectives to nouns). Understanding the word's structure and genesis may be very useful in decoding the term's meaning and rendering it in the target language (Table 1).

Table 1

Specific Morphemes in CHP Terms

Type	Affix	Origin and meaning	Examples	Comments
Prefix	inter- intra-	Latin. Between Latin. Inside	*Inter*-psychological *Intra*-psychological	Confusing "inter" and "intra" is a typical translator's mistake resulting in the distortion of meaning
	pere-	Russian. Multiple meanings, including: (1) repeating action;	*Pere-zhivanie* (ex-perienc-*ing*)	Denotation carried by the prefix [pere-] is partly lost in translation (ex- has a different denotative meaning)
		(2) moving in space from one point to another etc.	*Pere-nos* [*umenij*] (translating [skills])	Translations "transfer" or "transference" may be confused with the psychoanalytic concept of "transference", although it represents the morphological structure of the word pere(*trans*)-nos(*fer*) more accurately.
	so-	Russian. Together, co-	*so*-trudnik (*co*-worker)	In modern Russian, the word "sotrudnik" usually means "an employee", so its terminological use as "the child's partner in some joint activity" may be confusing if you ignore the morphological structure. The translation "co-worker" may be useful to avoid an expressed negative connotation of "collaborator".
Root	psych-	Greek. *psyche* – soul, mind, spirit	Vysshie *psikh*-icheskie funktsii (higher mental functions); psychology; *psychopathy*	Translation of "mental functions" is most widely spread; however, the term may also be translated as "higher psychological functions" reflecting the original form of the term as it was proposed by Vygotsky (Yasnitsky, 2012).
Suffix	-ik	Russian. -ik	Psikh-*ik*-a (psyche or mind)	Translating this term as "psychic" (human psychic) results in a gross distortion of meaning (a psychic is a person having a supernatural power of telling the future).

Note: the list of morphemes and examples is far from being exhaustive. Our aim is to draw the reader's attention to importance of morphological analysis.

Lack of stylistic neutrality is an amazing quality of psychological terms. Connotation renders socio-cultural and personal associations of the term and operates at the level of the

signified (Chandler, 2002, p. 120). Prokhorova (1996) believes that connotative meanings increase a term's chances to be memorized and stored within a terminological system, and specify additional qualities of a concept. She considers a term's connotative meaning as comprising emotive, expressive and figurative aspects (Table 2).

Connotations may bring about an effect of "a neutral-style word" when translators fail to identify a lexical unit as a term, which results in the distortion of the term's denotative meaning and inaccuracies in rendering some utterances. (See the example of "category" in Veresov (2004)).

One of the main characteristics of a term is its precise meaning within its field of knowledge. In practice, only a few terms meet this requirement (Table 3).

Translating terms with multiple meanings implies careful consideration of a linguistic micro-context. Terms that lack equivalents in the target language, pose another serious challenge. Usually, the non-equivalent vocabulary includes culture-specific words, proper names (especially, little-known ones), neologisms, specific concepts and terms for them which have no international equivalents (e.g. Pedagogika sotrudnichestva – the pedagogy of cooperation; subjektnaja positsiya – sense of agency; subjektnost' – agency etc.)

Lack of consensus on the CHP terminology translation results in the absence of the conceptual base of CHP in the target languages that would be shared by most specialists. Therefore, we often see a co-existence of parallel translations standing for the same concept. This creates obstacles for interpersonal communication and appropriate understanding of theoretical and research works when they are translated (Table 4).

The aforementioned differences in translation may also be due to the use of different translation techniques by different translators. We are aware that the readers of our article may be unprofessional translators, therefore we find it helpful to introduce them to some translation techniques which they can use both for understanding English translations of Russian texts and translating texts by themselves (Table 5).

All these terminology-related challenges complicate the process of decoding terms' meanings (and correspondingly, meaning of a related utterance) and encoding them in the target language. Our experience shows that appropriate translation of terms may be achieved by using a special modification technology. This technology includes both minding the context of the source-language term use, and creating a target-language term which would meet **the following criteria of appropriate translation**:

- has an equivalent denotative meaning;

- meets the requirements of the scientific style;

- preserves the stylistic uniqueness, emotional and cognitive relevance of a psychological term (ensuring congruence of the reader's experience with the author's experience as mirrored by the lexical unit), i.e. the translator invests efforts in rendering cultural

Table 2

CHP Terms' Connotations

Connotation type	Term (preferred translation)	Other translations	Comments
Figurative	Problem's epicenter, problem epicentre (problemny epicenter)	"Epicenter of a challenge problem", "problem point", "point of perplexity"	These translations lead to a slight distortion of denotative meaning and loss of imagery.
	Vnutrenniy/ vneshniy plan deistvii (internal /external or interior/exterior plane of action);	Internal /external plan...	The Russian term "plan" may be translated both as "plane" and "plan". Misunderstanding of the image of "a plane" leads to distortion of the denotative meaning.
	Orudije (tool)	Means	Translating the term "orudije" as "means of action" may render the denotative meaning but deprives the term of its implicit meaning and associations with cultural tools
	Vector razvitiya (dimension of development) Mnogovektornaya model (multidimensional model)	Vector of development Multivector model	In our translation, we replace the image of "vector" with the image of "a dimension" which leads to the loss of initial imagery and part of the denotative meaning (directionality of development), but renders the denotative meaning of a space where development occurs and the abilities enjoy improvement.
Emotive Negative	Trudnost' (challenge)	Difficulty	These words may be used interchangeably but we prefer using "challenge" as it both conveys a negative connotation of something which is hard to achieve and a positive meaning of something which may be addressed and overcome
Emotive Positive	Samostoyatelny (Autonomous)	Independent	Autonomous is preferred as it renders positive connotation but the context should be taken into consideration.
Expressive	Opora (Support)	Scaffolding, material tools, aids or supportive materials	Translations may be used interchangeably depending on the microcontext
Cultural	Psikhopatiya (Psychopathy)	Antisocial Personality Disorder, Personality Disorder	Carries both emotive negative and cultural connotations. What is now considered a derogatory term used to be a diagnostic category widely-used in the Soviet Union and Russia throughout the 20th century (even now by "old-school" psychiatrists). Extended terminological translations aiming at improving the style and making the text sound modern and compliant with current diagnostic categories devoid the text of its cultural flavor and distort meaning, especially if this term is used by modern researchers when describing recent situations (then it may speak about the researcher's scientific frame of reference)

Table 3

Terms with Multiple Meanings and their Possible Translations

Russian Term	Basic Translation Options
Obuchenije	Learning, instruction, teaching, training, education
Vospitanije	Upbringing, education
Subject	Subject, Agent
Perezhivanije	Emotional experience, experiencing
Trevoga	Concern, anxiety, agitation
Myshlenije	Thinking, thought, cognition, reflection
Refleksivny	Reflective, reflexive, reflection
Osoznanije	Awareness, consciousness, mindfulness, mentalization
Razvitije	Development, improvement, progress, evolution
Razvivayushchijsya	Developing, improving, evolving, emerging
Videnije	Perception, mental image, vision, visualization, sight and seeing
Deyatelnost	Activity, action, practice, performance
Protokol	Minutes, transcript, protocol

Table 4

Co-existing translations of CHP terms

Russian Term	Co-existing Translations
Refleksivno-deyatelnostnyi pod-khod	*Reflection and Activity* v. Reflexiveactive v. Reflexive and activity approach
Vnutrenniy/Vneshniy plan deistvii	Internal/external *plane* v. plan of action
Teorija poetapnogo formirovanija umstvennykh dejstviy	*Theory of the stage-by-stage formation of mental actions* Theory of the stepwise formation of mental actions
Zona blizhaishego razvitija Novoobrazovanie	*Zone of proximal* v. potential development New mental formation v. New mental acquisition v. Key milestone in development
Samoopredelenie	*Self-identification* v. self-determination v. *self-definition*
Dolgota and shirota (of a concept)	*Longitude and latitude* v. length and breadth
Sposob deistviya	*Mode* v. means v. methods of action

Note: Preferred equivalents are *italicized*.

and expressive connotations which the term carries to preserve the main characteristics of a given psychological scientific discourse.

Table 5

Translating the Concept of Perezhivanie Using Various Translation Techniques

Technique	Perezhivanie	Comment
Identifying an existing equivalent	-	-
Transcription and transliteration	Perezhivanie	Is used when it is important both to be succinct and to render specificity of a culture-specific item (CSI) if there is no precise equivalent in a target language.
Calquing or loan translation	Experiencing or reexperiencing	Although calquing seems to be mechanical literal translation, translators usually need to combine it with other modification techniques.
Semantic modification (generalization or particularization)	Emotional experiencing	Here particularization or narrowing of meaning is used.
Explication (descriptive translation)	According to Vygotsky, perezhivanie is "how a child becomes aware of, interprets, and emotionally relates to a certain event" (adopted from (Veresov, 2016, p. 130))	Is used for CSIs and is usually presented as a footnote or a glossary's entry. The main disadvantages are length and possible distortion of the concept's meaning by translators.

3. Conclusions

We have shown that translators have to overcome multiple challenges when translating CHP literature. In order to accomplish the overarching goal of achieving translation equivalence of the texts, translators use various tools and strategies when searching for equivalents. Lack of the uniform terminological base and consensus on the CHP terms, differences in transformational techniques and levels of the translators' competence both in languages of translation and CHP as such, result in co-existence of various translations of the same concepts. Sometimes these translations may be interchangeable and are quite clear both to Russian and English speakers, and sometimes they are interfering with the process of communication and become a subject of controversy.

We believe that CHP as branch of knowledge and practice which has been constantly evolving and gaining adherents all over the world, needs to reach a consensus on its terminology, both from the historical and theoretical perspective (in terms of understanding and translating historical texts and terminology used by Vygotsky and his disciples) and from the pragmatic perspective (addressing the need to disseminate research and best practices in the field).

This could be accomplished in different ways: creating a special task force or a project for (1) exploring historical and contemporary CHP terminology; (2) creating CHP glossaries (lists of terms) in Russian, English and other languages; (3) comparing them to create

a uniform CHP glossary; (4) creating CHP dictionaries, which would include CHP basic concepts and chapters on them written by the experts on the field; (5) creating a network or an organizational structure for translators working with CHP texts to enable their interaction and sharing knowledge and experience etc. These are just a few suggestions for overcoming extralinguistic translation difficulties to start from.

As to the discourse-related and proper linguistic challenges, there are no ready-made recipes. Translation is a process of creating and, moreover, co-creating texts in an entirety of their explicit and implicit meanings. Therefore, much depends on the translator's personality and his/her manner to cope with challenges. Nevertheless, we would like to share principles that helped us to translate a number of CHP texts and get positive feedback from readers, authors and publishers. Our main strategy in translating is taking a respectful stance towards the text and its authors, and the translation principles are a direct consequence of this strategy:

1. Translating very close to the text: investing efforts to render each word and each connotation. Interpreting is fine as long as you are the author of the text. Unless this is the case, check all interpretations with the authors. Usually, a need to interpret arises when you have some difficulty understanding the text's meaning.

2. Paying close attention to the context and taking the author's perspective so as to be able to understand what he/she wanted to communicate. "Empathizing" with the author in no way means fantasizing about his/her ideas or motives.

3. Asking questions: any questions, even those that seem minor and "stupid". A "stupid" question may be very smart, indeed. Checking meanings and utterances that you doubt or find strange or difficult to comprehend is very useful. Authors tend to answer translators' questions eagerly.

4. Keeping it simple. Although translators invest efforts to preserve the author's style in translation, they need to keep the main features of the scientific psychological discourse in mind and aim at stylistic transparency of the text. We find it useful to avoid passive voice and excessively long and complex sentences wherever possible.

5. Agreeing all the changes that are introduced to the text (including descriptive translations and translator's comments) with the author to avoid distortion of meanings. Translators' contribution should be clearly indicated in the text.

References

Bateman, A., & Fonagy, P. (2010). Mentalization based treatment for borderline personality disorder. *World psychiatry, 9*(1), 11–15.

Cabré, M. T. (2010). Terminology and translation. In Y. Gambier & L. van Doorslaer (Eds.), *Handbook of translation studies* (p. 356-365). Amsterdam/Philadelphia: John Benjamins Publishing Company.

Chandler, D. (2002). *Semiotics: the basics.* New York: Routledge.

Graumann, C. F. (1996). Psyche and her descendants. In C. F. Graumann & K. J. Gergen (Eds.), *Historical dimensions of psychological discourse* (pp. 83–102). Cambridge: Cambridge University Press.

Prokhorova, V. N. (1996). *Russkaya terminologiya (leksiko-semanticheskoe obrazovanie)[Russian terminology (lexical-semantic education)].* Moscow: Filologicheskiy fakul'tet Publ.

Schiffrin, D. (1998). Approaches to discourse. *Journal of Pragmatics*, *3*(29), 355–359.

Van der Veer, R., & Yasnitsky, A. (2011). Vygotsky in english: What still needs to be done. *Integrative Psychological and Behavioral Science*, *45*(4), 475–493.

Veresov, N. (2004). Zone of proximal development (ZPD): the hidden dimension? *Language as Culture—Tensions in Time and Space.*, *1*, 13–30.

Veresov, N. (2016). Perezhivanie as a phenomenon and a concept: Questions on clarification and methodological meditations. *Cultural-Historical Psychology*, *12*(3), 129–148.

Vygotsky, L. S. (1978). *Mind in society: The development of higher psychological processes.* Cambridge: Harvard University press.

Yasnitsky, A. (2012). L. S. Vygotsky's "tool and sign" as a "benign forgery": Introduction to virtual dialogue. *PsyAnima, Dubna Psychological Journal*, *5*(1), 112–113.

Zaretskii, V. K. (2016). Odin shag v obuchenii – sto shagov v razvitii: Ot idei k praktike [Vygotsky's Principle "One step in learning - One hundred steps in development": From idea to practice]. *Kul'turno-istoricheskaya psikhologiya [Cultural-Historical Psychology]*, *12*(3), 149–188.

Developing the Ideas of the Scientific School of L. S. Vygotsky: Scientific Publications of the Journal "Cultural and Historical Psychology" (2005-2016)

Anna A. Shvedovskaya   ANNA.SHVEDOVSKAYA@MGPPU.RU

Federal State Budgetary Educational Institution of Higher Education
Moscow State University of Psychology and Education
Moscow, Russia

Abstract

The article presents the analysis of the development of the ideas of L.S. Vygotsky's school using the example of the publications in the international scientific journal "Cultural and Historical Psychology" (for the period 2005 through 2016). Over the period from 2005 to the end of 2016, 595 articles of 524 authors from 32 countries have been published in the journal "Cultural and Historical Psychology." The study of the subjects of the articles published in the journal was held within the framework of the following criteria: scientometric publication indicators; group of authors; themes of the publications; relevance of the articles for their readers. The research uses the following sources: Russian Science Citation Index (RSCI); repository data of the psychological editions of https://psyjournals.ru/; report data on the activities of the journal "Cultural and Historical Psychology." The citation frequency of the journal's publications peaks in 2007, 2009 and 2006. Empirical findings comprise major part of the publications. The most developed areas are the studies of speech and thinking, personality, and communication.

Keywords : Cultural and historical psychology; L. S. Vygotsky; Bibliometric analysis; Web of Science; RSCI; Speech; Personality; Socialization; Scientific publications.

The Regulation of the Government of the Russian Federation No.301 dd. April 15, 2014 "Concerning the approval of the Government program of the Russian Federation 'Development of Science and Technology' for 2013-2020" (revised version) provides for solving the task of re-establishment of the leading positions of the Russian fundamental science in the world arena[1]. The respective Decree of the President of the Russian Federation No.599 dd. May 7, 2012 "Concerning measures to implement state educational policy" mentions the increase in the share of publications by Russian researchers in the total number of publications in international scientific journals indexed in the database "Web of Science" up to 2.44%[2]. According to the analytical database services Web of Science, the share of publications by Russian researchers in the total number of publications in scientific journals indexed in the database Web of Science was 2.1-2.11% in 2013-2014. The index by the end of 2015 rose to 2.31%. In 2013, the number of publications was 29,019. 30,097 publications were issued in 2014, and 33,628 publications in 2015[3].

At the same time, the share of Russian scientific periodicals in the Web of Science system based on the humanities and social sciences is extremely low. Over a long period of time, there have been only two Russian periodicals presented from the scientific periodicals in "Psychology" in the Web of Science system. This indicates the timeliness of including more of the leading scientific periodicals of the Russian Federation in the Web of Science system in order to raise awareness of the results of the Russian research in psychology and related fields all over the world.

In this context, it is extremely important to solve problems of carrying out substantial and scientometric analysis of the indicators as to the leading Russian scientific humanitarian publications. The international journal "Cultural and Historical Psychology" is the best known specialized Russian-language scientific publication in the field of cultural and historical and activity-related psychology. The year 2016 has been declared the International Year of Lev Semenovich Vygotsky, the founder of the school of cultural and historical psychology. The "Cultural-Historical Psychology" journal is the only Russian scientific periodical, the content of which fully meets cultural, historical and activity paradigm. The journal has been published in Russia by Moscow State University of Psychology and Education since 2005.

---

1. Postanovlenie Pravitel'stva RF ot 15.04.2014 No 301 «Ob utverzhdenii gosudarstvennoi programmy Rossiiskoi Federatsii "Razvitie nauki i tekhnologii" na 2013–2020 gody» [Electronic resource] [RF Government Resolution dated 4.15.2014 number 301 "On approval of the Russian Federation" Development of science and technology "for 2013-2020 state program"]. URL: http://www.consultant.ru/document/cons_doc_LAW_162175/ (Accessed 18.09.2016).
2. Ukaz Prezidenta Rossiiskoi Federatsii ot 07.05.2012 g. No 599 «O merakh po realizatsii gosudarstvennoi politiki v oblasti obrazovaniya i nauki [Electronic resource] [Presidential Decree of 07.05.2012, No 599 "On measures for implementation of the state policy in the sphere of education and science]. URL: http://kremlin.ru/acts/bank/35263 (Accessed 18.09.2016).
3. Otchet o khode realizatsii i otsenke effektivnosti gosudarstvennoi programmy Rossiiskoi Federatsii «Razvitie nauki i tekhnologii» v 2015 godu (utochnennyi) [Electronic resource] [Report of Progress on the implementation and evaluation of the effectiveness of the state program of the Russian Federation "Development of Science and Technology" in 2015 (revised)]. URL: http://government.ru/info/23028/ (Accessed 18.09.2016).

It should be noted that the "Cultural-Historical Psychology" journal was included in the main international databases, such as PsycINFO Journals Coverage (APA), European Reference Index for Humanities (ERICH PLUS), EBSCO publishing, Ulrich's Periodicals Directory, DOAJ, Russian Science Citation Index. The Higher Attestation Commission (HAC) recommended the Cultural-Historical Psychology Journal at the Ministry of Education and Science of the Russian Federation in the List for publication of scientific results of thesis research included in the List recommended fr publication by the Monash University of Australia. The National Research University "Higher School of Economics" (NRU HSE) has chosen the "Cultural and Historical Psychology" journal to be included in the list of B-category publications (mid-level conditional group), which are recommended for publication to the employees of NRU HSE in "Psychology" (2015). Since January 2015 the journal has been included in the basic list of magazines (Core Collection) of the international database Web of Science (WoS) Emerging Sources Citation Index (ESCI), where it has been inexed since the date of its first issue in 2015[4].

The editorial team and the editorial board of the international scientific journal "Cultural-Historical Psychology" includes 37 representatives from Russia (23), Australia, Denmark, Finland, the USA, Switzerland, Israel, Great Britain, and Cuba (14). Maximum h-index of the members of the editorial team: WoS – 41, RSCI – 38 (while maximum h-index in the "Psychology" sector is 55).

The tenth anniversary of the "Cultural and Historical Psychology" journal is the reason to analyze the development of Vygotsky's school. We have conducted a study of the subjects of the articles published in the journal in terms of the following criteria: scientometric publication indicators, group of authors, topics of the publications, and relevance of the articles for their readers (Shvedovskaya, 2016; Shvedovskaya & Meshkova, 2015). The following sources have been used for the research: Russian Science Citation Index (RSCI), repository data of the psychological editions of PsyJournals.ru., report data on the activities of the journal "Cultural-Historical Psychology" (Shvedovskaya & Meshkova, 2016).

According to the Russian Science Citation Index, "Cultural and Historical Psychology" journal ranks 21st among 203 psychology journals as to the number of citations per year. It is essential to note that the editorial policy of the publication is aimed at integrating the "Cultural and Historical Psychology" journal into the international professional context. According to the Journal Scholar Metrics of Art, Humanities, and Social Science journals (data obtained from Google Scholar), 10 psychology journals out of the total number of 1,032 journals are from Russia. "Cultural and Historical Psychology" ranks 2nd among them (h-Citation – 71, for the period of 2010 through 2014), and 792nd in the overall world ranking[5].

Over the period from 2005 to 2016, 595 articles of 524 authors from 32 countries have been published in the journal "Cultural and Historical Psychology." Three publications or more

---

4. Master Journal List Thomson Reuters [Electronic resource]. URL: http://ip-science.thomsonreuters.com/mjl/ (Accessed 18.09.2016).
5. Journal Scholar Metrics, Art, Humanities, and Social Science Journals [Electronic resource]. URL: http://www.journal-scholar-metrics.infoec3.es (Accessed 18.09.2016).

were presented by authors from the following countries: Germany, USA, Great Britain, Brazil, Poland, Italy, Canada, Finland, Mexico, Estonia, Belarus, and Latvia. According to the data provided by RSCI, the majority of the Russian authors are representatives of the Russian universities – 82% of the authors, while the total number of organizations is 81. Most of the organizations to which the authors are affiliated are inside the top hundred scientific and educational institutions of the Russian Federation in terms of *h*-index: the values are 69 to 218 out of total 3,317 (Fig. 1). Out of 524 authors: the works by 70% of them were published for the first time; 24.3% authors published two to five articles; 5.7% authors published more than five articles[6].
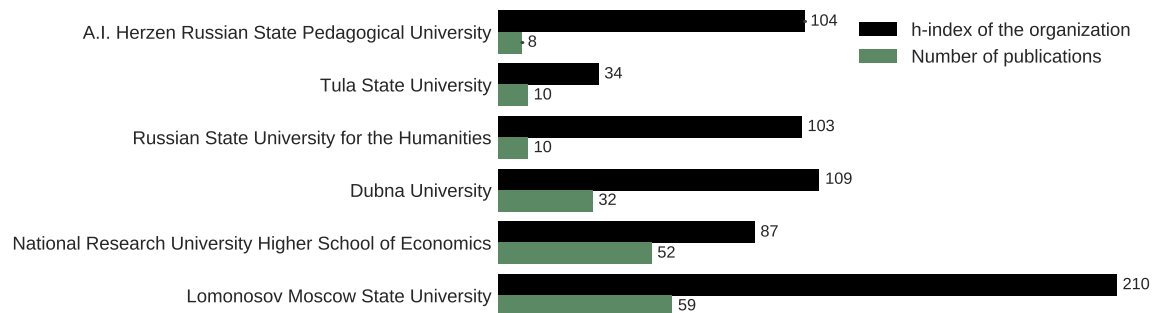
Figure 1. Affiliation of the authors of the "Cultural and Historical Psychology" journal, whose works have been published over the period from 2005 through 2016.

In 2016, the indicator of citations for the articles published in the "Cultural and Historical Psychology" journal was 1,356 (RSCI). The distribution of citations by year shows that articles published in 2007, 2009, and 2006 are among the most cited ones. At the same time, the studies published in the "Cultural and Historical Psychology" journal are frequently cited by the specialized journals of the following branches: psychology, education, medicine and philosophy[7].

If we refer to the data presented by RISC, the content of journal publications by key directions (keywords) is distributed as follows (Fig. 2).

Based on the results of content analysis of publications over 10 years in the "Cultural and Historical Psychology" journal (the total number of publications being 316), the number of empirical, theoretical, and other publications was calculated[8]. It was demonstrated that empirical publications predominate – 316 publications, followed by theoretical publications – 199, and others – 80 (Fig. 3).

6. Nauchnaya elektronnaya biblioteka, setevoi resurs [Scientific electronic library]. URL: http://elibrary.ru (Accessed 18.09.2016).

7. *Idid.*

8. Portal psikhologicheskikh izdanii [Electronic resource] [Portal of psychological publications]. URL: http://psyjournals.ru (Accessed 18.09.2016).

Speech	10
Value	10
Social situation of development	11
Psychotherapy	11
Understanding	11
Educational activity	12
Mediation	12
Affection	13
Higher mental functions	13
Implication	15
Reflection	16
Development	16
Zone of proximal development	18
Consciousness	20
Personality	24
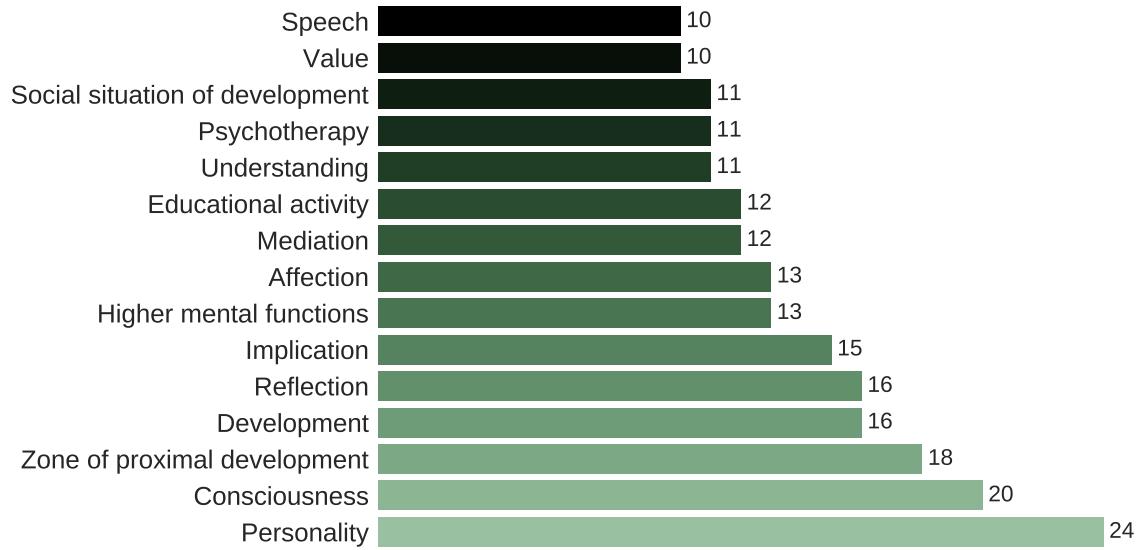
Figure 2. The number of publications of the "Cultural and Historical Psychology" journal published over a period from 2005 through 2016 per one thematic direction (according to RSCI)

Archives, reviews, interviews, anniversaries	80
Theory, methodology, discussion	199
Empirical studies	316
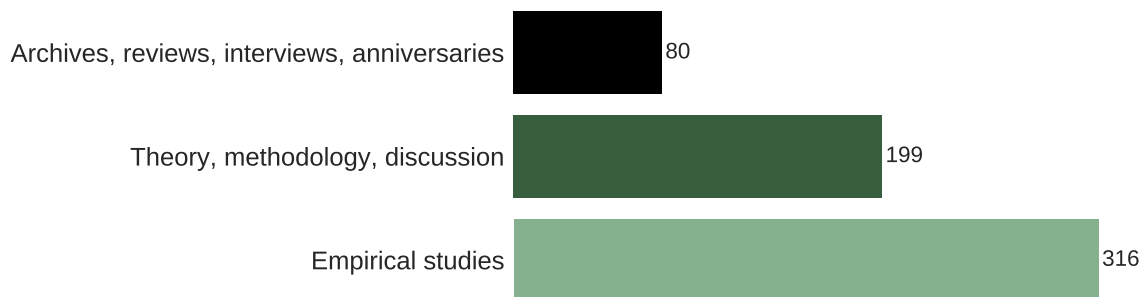
Figure 3. The number of theoretical, empirical, and other publications of the "Cultural and Historical Psychology" journal published over a period from 2005 through 2016.

19

There were 12 thematic units allocated in empirical studies.

1. Speech and thinking (17%).

2. Socialization, communication, attitude (14%).

3. Education (9%).

4. Perception (6%).

5. Memory (6%).

6. Special and neuropsychology (9%).

7. Personality, motivation, emotions (11%).

8. Ethnocultural research (3%).

9. Family (9%).

10. Religious identity (4%).

11. Types of activities, interests (8%).

12. Art, creativity (4%).

The intensity of thematic units in empirical research is shown in Fig. 4.
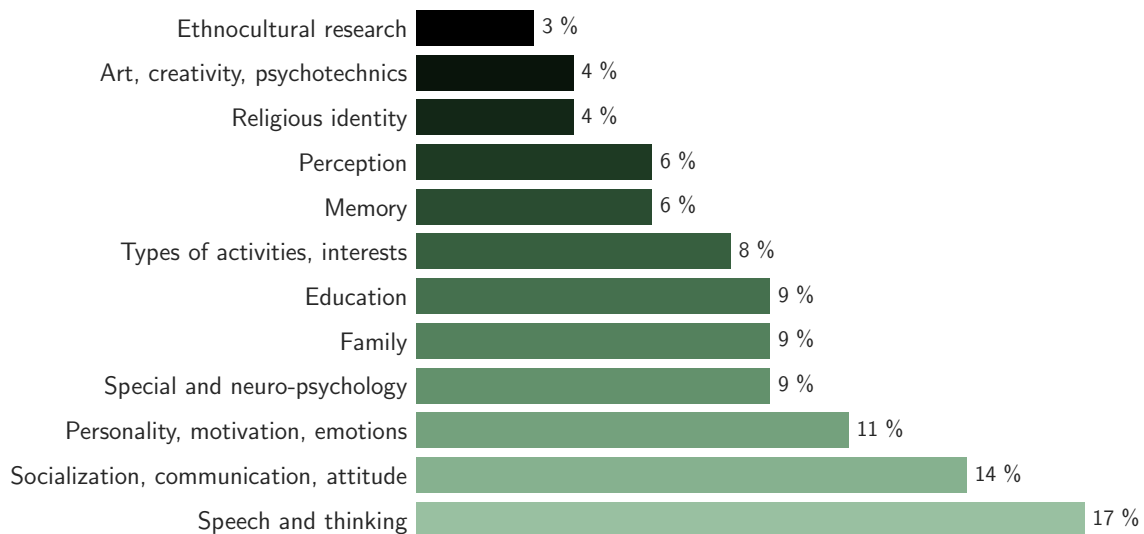
Figure 4. Intensity of the themes as to empirical research of the "Cultural and Historical Psychology" journal published over a period from 2005 through 2016.

According to the altmetrics of the Psyjournals.ru repository, the article which appeared to be most relevant for the readers of the "Cultural and Historical Psychology" journal

deals with the theme of burn-out (2010), the number of downloads of the PDF-file with the article is 2,123[9].

The publication on the interaction of social, linguistic, and conceptual experience (2014) – 1,018 downloads, and the publication on the basics of logopsychology (2008) – 926 downloads, are the top two most sought-after materials.

Let us elaborate on the selected topics and review the basic content of the publications presented in the research.

1. "Speech and Thinking" Research Unit

Aspects of thinking development in disadvantaged groups (orphans, working children and adolescents); mediation; syncretism; development of concepts; development of the perspective constructions in childhood; cognitive functions in late adulthood; strategies to address cognitive tasks; age dynamics of development of creative (or productive) thinking; the role of vision of preschool children of metacognitive knowledge in cognitive activity; special aspects of the categorical color perception in children with impaired speech development; mastering language by children for orientation in emotional relationships and conditions; intelligent operations and speech disintegration; activating the speech activity in the mental retarded; sign systems to substitute natural language in the early stages of mastering speech with different variants of dysontogenesis; modelling in the development of hypotheses.

2. "Socialization, Communication, Attitude" Research Unit

Attitude toward people with disabilities, socially desirable ways of acting and personal well-being, emotional well-being of the individual and sociability, the effectiveness of means of communication used by the parents of deaf children, and intellectual development of the child; suicidal behavior in the student population and emotional maladjustment; inter-personal relationships of adolescents with deviant behavior from socially disadvantaged families enrolled in special schools; social isolation of academically unsuccessful teenagers experiencing financial difficulties and family problems in regular school; teenage aggression and the nature of parent-child relationship; social factors and physical perfectionism in young people; identification of objects of attention and understanding of the context of the communicative situation; motivational profiles that contribute to the socialization of adolescents.

---

9. Portal psikhologicheskikh izdanii [Electronic resource] [Portal of psychological publications]. URL: http://psyjournals.ru (Accessed 18.09.2016).

3. "Education" Research Unit

Academic achievements of children and interaction of teacher with their class in a classroom; age peculiarities of voluntary regulation of children's activity in the transition to the systematic training; training teachers for primary schools in the context of the introduction of the new Federal State Education Standard; the dynamics of individual motives for learning in children throughout the primary school; use of symbolic and iconic means (schemes and models) in training during the development of the new content.

4. "Activities, Interests, Subculture" Research Unit

The double-contact mechanism of a game; animation as a source of experience and awareness of moral conflicts, age-related addressing of cartoons; peculiarities of entry into adulthood in a specific social context in off-field subculture; mass culture and the formation of children's favorite images; the role of media in shaping the body image and its ideal; collecting as a psychological phenomenon.

5. "Perception" Research Unit

Physical attractiveness; deficit of visuospatial functions; the environmental factor and features of spatial perception; eye movements in patients with schizophrenia in the perception of the "silent" video of social interaction; perception and understanding of architectural space.

6. "Memory" Research Unit

The phenomenon of ignoring information when fulfilling mnemonic tasks; activity (motivational) regulation of mnemonic processes (by the example of memories of the terrorist attacks); the effectiveness of involuntary memorization of words; nostalgia as a special kind of emotional memory; reflexive organization of experience as a principal memory function; study of the arbitrary memory in children with various types of deviant development.

7. "Personality, Motivation, Emotions" Research Unit

Intrapersonal conflicts in adolescence; initiative; fears (school fears); moral development of the individual and the dynamics of the individual values in the context of the social environment; the critical attitude to oneself as neologism in the structure of the self-concept of primary school-aged children; development of personality in people with disabilities as development in difficult conditions; involvement of bodily sensations in the understand-

ing of emotions; personal autonomy and moral orientation of adolescents defined with the priority values of justice or concerns; biographical reflection, sense-making and self-regulation; self-control as a personality-motivational resource of activity and psychological well-being.

8. "Ethno-Cultural Studies" Research Unit

Time perspective in various cultures; preferences of the principle of fairness and the principle of caregiving in cultural groups; adaptation of different cultures in the conditions of educational institutions; relevant social environment and ethnic identity; comparative etymological analysis of naming emotions in various languages; motivation, ethno-cultural continuity and strategies of acculturation and ethnic minorities; trust and accultural strategies of ethnic minorities and migrants; peculiarities of moral grounds in adolescents from different countries.

9. "Clinical Psychology, Special Psychology, and Neuro-Psychology" Research Unit

Neuropsychological approach to the improvement and development of mental functions in children with severe learning difficulties; features of the formation of functional hemispheric asymmetry and higher mental processes; training and support for special children (trisomy 21 syndrome, epilepsy); neurorehabilitation of higher mental functions in patients with brain injuries; formation of motor coordination in children with normal and abnormal development; analysis of the zone of proximal development in children with various forms of dysontogenesis; the development of gross and fine motor skills in children with schizophrenia.

10. "Family" Research Unit

Family orientation in the minds of girls from 15 to 22 years of age; socio-economic characteristics of a family and a child's temperament during infancy and early childhood; microsocial resources (support of the family and relatives, satisfaction with this support), and psychological resources of sustainability and self-identity; psychosemantic systems of family purposefulness; a mother's internal position of those participating in an IVF (in vitro fertilization) programme; the psychosemantic system of family purposefulness in men.

11. "Religious Identity" Research Unit

Attitude toward death in cultural centers with traditionally predominant Christian denominations; the vision of young students of atheism and the personality of atheist; religious identity of students of the Buddhist denomination.

12. "Art, Creativity" Research Unit

Implementation of dance movement techniques in complex speech therapy and psychocorrection in stutterers; the use of the themes of life and death by the teens from 14 to 16 years of age in their written word; the mascot as psychological tool.

Consequently, the themes related to the research of consciousness and personality are predominant among all publications of the "Cultural and Historical Psychology" journal from 2005 through 2016; the themes related to speech, thinking, socialization, and personality are predominant among empirical studies. The majority of the authors are representatives of Russian universities inside the top hundred scientific and educational institutions of the Russian Federation in terms of the *h*-index. One may say that the policy of integrating the efforts of scientific and professional community around the goals of studying, preservation, and development of the ideas of cultural and historical psychology brings its tangible results, and it is being actively supported by the "Cultural and Historical Psychology" journal.

References

Shvedovskaya, A. A. (2016). Prospective study of the L. S. Vygotksky's scientific school on pages of journal «Cultural-Historical Psychology»: Results of the decade of work. In *The materials of international symposium Scientific School of L. S. Vygotsky: Traditions and Innovations* (pp. 97–101). Moscow.

Shvedovskaya, A. A., & Meshkova, N. V. (2015). Bibliometric analysis of the journal [psychological science and education]. *Psikhologicheskaya nauka i obrazovanie [Psychological Science and Education]*, *20*(4), 108–116. doi: 10.17759/pse.2015200411

Shvedovskaya, A. A., & Meshkova, N. V. (2016). Bibliometric analysis of the journal "cultural-historical psychology". *Kul'turno-istoricheskaya psikhologiya [Cultural-Historical Psychology]*, *12*(1), 106–115. doi: 10.17759/chp.2016120112

PART B:

THEORETICAL AND METHODOLOGICAL CONSIDERATIONS

Cultural-Historical Scientific School: The Issues That L. S. Vygotsky Brought Up*

Vitaly V. Rubtsov   RECTORAT@LIST.RU
Moscow State University of Psychology and Education
Moscow, Russia

Abstract

The report highlights the fundamentals of L.S. Vygotsky's cultural-historical theory and discusses the system of concepts of this scientific school. The report analyses L.S. Vygotsky's approach, according to which the basis for the development of human psyche is created by a qualitative change of the social situation or, in A.N. Leont'ev's terms, by a change of human activity. The importance of intelligence and emotions, which are internally connected, is demonstrated in relation to the change of human activity. The role of social interactions in learning and development of children is discussed referring to the challenges of the "new school".

Keywords: Cultural-historical scientific school; The change of social situation; The change of human activity; The zone of proximal development; Social interactions and learning; Collective activity.

---

1. The Fundamentals of the Cultural-Historical Theory

I will discuss these fundamentals referring to a large extent to the point of view of my teacher, Davydov (1995). In his opinion, the foundations of the cultural-historical concept were laid down by L. S. Vygotsky himself around 1927-28. Later he contributed largely to the development of these fundamentals. But both during Vygotsky's life and after his demise, a significant part in disclosing the very essence of this concept, its elaboration and specification played his direct students, and later – his followers. To Vygotsky's direct students belong preeminently A. N. Leontiev, A. R. Luriya, L. I. Bozhovich, A. V. Zaporozhets, D. B. Elkonin, P. Ya. Galperin. According to V. V. Davydov, it is impossible to grasp the essence of the cultural-historical concept without taking into account that it was to a large extent elaborated, clarified, extended, modified and refined by Vygotsky's students and followers – that is, by his scientific school. Interestingly enough, already in the 1930-s during Vygotsky's lifetime quite an original theory for that time emerged – the general psychological activity theory, created preeminently by the efforts of A. N. Leontiev and his followers. In the opinion of V. V. Davydov, activity theory represents the direct successor to those principal ideas, which were put as a basis of the cultural-historical concept by Vygotsky himself.

In this regard, Davydov criticizes those psychologists who argue that Vygotsky did not apply the notion of activity. In Davydov's judgment, Vygotsky, being a connoisseur of German Classical Philosophy and a true Marxist, could not pass by Marx's distinguished works dedicated to the problems of activity. Already from the beginning of 1925, Vygotsky began to thoroughly examine the social-historical notion of activity and its application in psychology. Therefore, we should believe Leontiev when he claims that in 1925, Vygotsky began to elaborate the social-historical notion of activity in the context of psychology, and he made a few steps in that direction. The fact that Vygotsky had a truly substantial social-historical and partly psychological concept of activity is evidenced by several remarkable pages in one of his articles (which unfortunately had not been published until 1984), where he openly and directly used the term "activity" as a concept and demonstrated that human life, in comparison to the one of animals, is aimed at the future and becomes free by virtue of tools and words. Some of Vygotsky's ideas, particularly those referring to the social conditions of human development, were deepened by A. N. Leontiev already on the basis of his quite elaborated psychological understanding of activity. Without distorting anything in the essence of Vygotsky's approach to conditions of human development, Leontiev replaced the term "social situation" with the notion of "development of activity".

The fundamentals of the cultural-historical theory of Vygotsky, Leontiev and the whole Vygotskian scientific school were consistently articulated by V. V. Davydov. In his interpretation, they are presented in the following way:

First: the basis for the development of a human being is represented by a qualitative change in social situation, or, in terms of Leontiev, a change in person's activity.

Second: universal points of human's mental development are represented by learning and upbringing.

Third: the initial form of activity is its full-form execution by the person on the outer – social or collective – plane.

Fourth: psychological neoformations, which emerge in a human being, are derivative from the interiorization of the initial form of human activity.

Fifth: significant role in the process of interiorization belongs to different sign and symbol systems.

And finally, sixth: an important part in the activity of human consciousness belongs to the internal unity of intelligence and emotions. Without going into detail on these principles of cultural-historical psychology, V. V. Davydov still remarks that the issue of unity of intelligence and emotions had not been elaborated enough. And this is an important challenge in the organization and analysis of the research results by contemporary researchers. The point is, that on the one hand L. S. Vygotsky considers meaning as a unit of the development of the psyche. As we know, according to Vygotsky, giving meaning to a meaningless word represents the main way of the formation of scientific concepts (in contrast with spontaneous concepts). On the other hand, Vygotsky considers pereghivanie as a unit of the development of the psyche, the nature of which is connected with commonality, communication and certainly with the emerging emotion. What is the relationship between "meaning" and "pereghivanie"? This question is directly connected with the issue of the connection between intelligence and emotions.

V. V. Davydov also argues, that till now the notion of collective activity (brought into psychological science by Vygotsky himself) has still not been elaborated. Moreover, since collective activity exists, then consequently its bearer is a collective entity, a collective subject. The concept of collective activity and collective subject is also a new problem (though it has been raised long ago), which needs to be explored and elaborated on the contemporary level. However, if we are not able to say anything plainly about collective and social forms of human activity, then what can we say about the so-called interiorization, which Vygotsky and his followers perceive as a process of transformation of collective activity into individual activity, and of collective subject into individual subject?

V. V. Davydov also clarifies some aspects of Vygotsky's approach to human development. For instance, Vygotsky's ideas had been evolving from his first publication in 1915 to the end of his life. He had never had clear and definite terminology, because the theory that he was working on could not be elaborated as fast as he aspired. At the same time, considering his general point of view, a child is born into a social situation, into a communal situation as a human being with all the inherent potential, and develops further as a social and communal being. This also provides much food for thought.

Surely those six principles of the cultural-historical concept formulated by Vygotsky require serious and detailed experimental and theoretical working-through. However, I

would like to point out again that according to Vygotsky the beginning of human development is a collective (communal, joint) or social activity carried out by or with the assistance of a collective subject in a cultural environment. The mediums of the culture are signs and symbols. It is thanks to signs and symbols that in the process of learning and upbringing the individual activity of a person becomes important, and the individual subject becomes clear, and then said subject gains individual consciousness. So, in the very general outline, the pattern of origin of the individual consciousness is this: collective-social activity, culture, signs and symbols, individual activity, individual consciousness.

While attempting to highlight the singularity of the cultural-historical theory, it is crucial to keep the original point of view of L. S. Vygotsky himself – to distinguish between the theory and its interpretation in the framework of the activity approach, elaborated by A. N. Leont'ev. It is crucial to avoid reducing cultural-historical theory to cultural-historical activity theory. Doing so, means not taking into account L. S. Vygotsky's idea that the notion "change of social situation" corresponds to the notion "development of activity" in the framework of the activity approach. These notions correlate. However, they are defined in different systems of coordinates – in the framework of the cultural-historical theory on the one hand and in the framework of the activity approach on the other hand.

As I have already mentioned this highlights the singularity of each of the theories and illustrates the history of the development of L. S. Vygotsky's scientific school, below I will briefly discuss the meaning of the main concepts of the cultural-historical theory and those issues that are challenging for contemporary research, conducted in the framework of L. S. Vygotsky's scientific school.

2. Social Situation of Development. "Zone of Proximal Development"

As I have already mentioned, in L. S. Vygotsky's cultural-historical theory the social situation is perceived as the source of development (Leontiev, 1981; Luria, 1932; Pyzirei, 1986; Wertsch, 1985). According to Vygotsky, "any function in the cultural development of a child appears twice, in two aspects, first in a social plane and then in a psychological plane, first between two people as an inter-psychic category, and then inside of a child as an intra-psychic category" (Vygotsky, 1978, p. 145). Social interactions appear to be genetically social, moreover in its primary form any function is shared among the participants of interaction. "All superior psychic functions and their inter-relations have at their back those genetically social relations, real relationships, homo duplex (the man doubled, lat.). Hence the principal and the method of personification in cultural development research, i.e. dividing functions between people, personification of functions. Take voluntary attention, for instance: one acquires, the other masters. It's separating again of that which has been merged into one (compare to modern labor)" (Pyzirei, 1986, p. 54).

Social interactions define the mechanism of distribution of functions on the one hand and the means or method of mastering those functions on the other hand. Thus, for example, guided social interactions, which initially serve as instruments for social realization

of the processes of cognition and communication later begin to play the role of the cognitive function of self-regulation and mental representation of various kinds of information. These social interactions activate the not yet developed cognitive functions, which allows the student to act on a higher cognitive level. The gap between that which a learner is able to do on his/her own (the actual level of development) and that which he/she is capable of with proper guidance is called "zone of proximal development". Therewith, according to Vygotsky, learning is successful only when it goes ahead of development, when it awakens and brings to life those functions, which are yet in the process of maturing or are in the zone of proximal development. This, in his view, is the way how education plays a crucial role in development (Griffin & Cole, 1988; Vygotsky, 1978).

3. Social Interactions and Education

We can say that two ideas, formulated by Vygotsky, became cornerstones of the new approach to the issue of learning activity. First is that scientific community clearly realized that social interactions and cognitive development are neither mixed nor independent processes, they are also not reversible (in the sense of "isomorphic") processes, they are not even equivalent processes. They rather are interdependent processes, since generation and development of the one internally depends on development of the other. Deriving benefit and getting effect from specific social interactions, which means really finding oneself in the space of development and making a step up in one's own achievement, is possible for a child, when there is a certain correspondence to the actual developmental level. But this actual level itself is also the result of previous and future social interactions.

Another important issue is that content of the notion "zone of proximal development" suggests a new paradigm of development, and accordingly a new approach to teaching-learning psychology. The notion of learning as a natural and individual process, dividing participants of the educational situation into teachers and learners, is being replaced by the view of learning as a process of co-action, co-operation and joint activity (Davydov, 2000). Notably, the key mechanism of this process, which makes it culturally and socially determined, is the mediation of cognitive acts by means of interaction between the participants of activity. In this case a new problem comes to the fore: not only what to teach, but also how to teach, i.e. a problem of organizing effective joint forms of learning activity (Rubtsov, Martin, & Hall, 1991).

4. Organizing Joint Learning Activity

The search for effective forms of co-simultaneity (co-operation as a form of interaction) in Vygotsky's scientific school is related to many researchers' works on the concept of "organization of joint activity" which is characterized by:

- distribution and exchange of actions;

- mutual understanding;

- communication;

- reflection as a special kind of operation with modes of cooperative work.

The concept of joint-distributed action (co-action) is a way to refine Vygotsky's idea of distribution of a psychological function as a condition of mastering it in a social situation. Method of research on properties of organization of joint activity in relation to the genesis of cognitive actions in a child has a paramount importance in this regard. Distinctiveness of this method is due to modeling of interaction situations with the help of sign means-schemes and activity models. And its prototype is represented by the method of double stimulation of L. S. Vygotsky – L. S. Sacharov (Vygotsky & Sacharov, 1998). In such models, researchers generally record structure of individual actions, manner of their distribution between participants and sequence of their implementation. Working with such scheme gives a group of children a possibility to organize their communication and cooperation by recording in it the changes of the interaction modes, which correspond to different strategies of problem solving. This method of researching interactions in relation to genesis of learning-cognitive actions, which is based on the application of numerous sign schemes and models of activity, is in part an important result of social-genetic psychology of learning activity, which we have developed (Rubtsov, 2008).

5. On the Issue of Training Researchers of Social Practice in the Framework of the Scientific School of L. S. Vygotsky, A. N. Leont'ev, A. R. Luriya[1]

Today, the ideas of the cultural-historical theory and activity approach are perceived as fundamental methodological principles, which allow to study the issues of social practice. Therefore, an important question is: what does it mean to study various kinds of social practice (e.g. educational practice) through the prism of the system of concepts of the cultural-historical theory and activity approach? The answer to this question is connected with the elaboration and organization of the Master's program "Cultural-historical psychology and activity approach in education". This program was elaborated and is run in Moscow State University of Psychology and Education and is aimed at training of specialists, capable of studying peculiarities and challenges of child development in education (Rubtsov & Guruzhapov, 2016).

In the framework of the first basic module "Methodology of psycho-pedagogical research: activity approach" of the Master's program, the students get acquainted with the theoretical challenges of the cultural-historical theory and activity approach. In the framework of this module, they are also introduced into the system of concepts of the

---

1. The experience of running a Master's program: «Cultural-Historical Theory and Activity Approach in Education».

cultural-historical school and get acquainted with the research conducted by Vygotsky's direct disciples and followers.

An important part of training is connected with studying methods of research and their application in the analysis of the challenges of social practice. Thus, the program's second module which is called "Methods of psycho-pedagogical research" is aimed at training the capacity of applying the methods of cultural-historical psychology and activity approach in analyzing challenges of the educational activity and various issues connected with its organization (interaction of participants, distribution of actions, roles, positions, processes of communication and reflection).

In this module, special emphasis is placed on the students' practical application of the method of double stimulation of Vygotsky-Sacharov. The content of this method often becomes the issue for serious discussions. I would like to note, that Vygotsky regarded acquisition of meaning in a meaningless word as the main way of child's development. Thus, it is impossible to grasp the specifics of the developmental act without understanding Vygotsky's idea on how meaning emerges in a child, how in the interaction between the child and adult a directed emotion emerges and finally how the child himself gains the meaning that originally the adult possesses.

In the framework of the third module: "Theoretical and experimental challenges in research on education and development" each student can choose one of the following fields of specialization: preschool education, primary education, secondary education and inclusive education. Education and development of children in each of these fields are connected with specific methods, however the fundamentals of the cultural-historical tradition and activity approach underlie all of them. The program presupposes that in the process of specialization the students will not only get acquainted with new approaches, but on the basis of the general methodology they will be also able to address a wide spectrum of research activities, aimed at resolving practical tasks of contemporary education. As a matter of fact, the courses of this module allow the students to acquire practical skills of working with children on various stages of their development and study the challenges of education in the system of concepts of the cultural-historical psychology and activity approach.

It is important to highlight the competences that the students need to succeed in our program. They include:

- capacity to plan and model new forms of joint leaning activity, corresponding with the zone of proximal development and the age of the students;

- capacity to conduct targeted psycho-pedagogical research on the specifics of the organization of the learning activity and to define new requirements to the organization of joint learning activity;

- capacity to fulfill new forms of organizing learning activity in teamwork (cross-disciplinary cooperation);

33

- capacity to assess the students' educational results, which are determined by the structure and general patterns of the organization of learning activity, as well as by age and individual differences;

- capacity to reflect on one's own professional achievements, perform professional development on the basis of the conducted psycho-pedagogical research.

Acquisition of certain research competences allows to speak of special professional actions, performing of which corresponds with the system of concepts of the cultural-historical theory and which are necessary for studying concrete challenges in organizing learning activity. In the most general way, this system is characterizing by something that we call "the general means of researching learning activity". Together with acquiring professional competences in the field of scientific and research activity, the formation of this means may be considered as the principal result of the Master's program "Cultural-historical psychology and activity approach in education".

Let me also speak of the system of special actions that are characteristic of this type of research in learning activity. It includes:

- spotting a fragment of the learning activity and a typical problem (challenge) of its organization and development;

- fixating and representing of the fragment of the learning activity in special sign-symbolic schemes and models with the aim of its transformation and analysis "as it is";

- modeling means and ways of organizing learning activity with the aim of creating new forms of joint work and spotting the "step of development" in the learning activity that marks the transition to a new, more efficient form;

- grounding the means and ways of changing the learning activity and defining the stages of constructing its new form;

- defining the roles and possible positions of the participants, who develop the learning activity in teamwork;

- control and assessment of the students' educational results, achieved in the process of development of the learning activity;

- assessment of the development of one's own professional achievements in the situation of professional communication, discussion and presentation of the research results in professional community.

One of the ways of assessing the development of professional actions in the framework of the master's program is represented by project-research tasks. These tasks are performed by the students at the very beginning and at the end of each module. At the same time,

it is necessary to note that assessment of the development of the professional action is a complex one. It is based on the opinion of the student's research supervisor, specialists of the educational institution where the student is conducting research and sometimes – parents of the children. The representatives of the professional community necessarily take part in assessing the students' achievements. The very process of conducting research also necessarily becomes the issue of discussion by the professional community. The assessment is also based on the results of the students' participation in various forms of scientific interactions (seminars, conferences, discussions) and on the results of the students' personal scientific activity (publications in scientific journals, reports, papers and presentations). The latter testifies of the students' personal achievements and is a part of the individual portfolio.

Thus, what factors contribute to the program's efficiency?

First, the disciplines of each module are aimed at the formation of the students' theoretical and methodological knowledge, necessary for conducting psycho-pedagogical research. They are based on the fundamentals of the cultural-historical psychology and activity approach.

Second, the formation of research competences in students is based on their profound practical work, which is possible due to an elaborated network of educational institutions that provide possibilities for traineeship and practical acquisition of efficient patterns of learning activity (kindergartens, schools, gymnasiums, centers of psycho-pedagogical support etc). Practical work in the institutions offering the best patterns of social practice is the key condition of training future specialists.

Third, the educational process of the master's program contributes to the development of the students' professional community and their inclusion into a vast system of professional communication, which is a necessary condition for the development of professional reflection.

Our experience testifies that specialists trained in the framework of this program are able to perform practice-oriented psycho-pedagogical research, study the challenges and specifics of the learning activity, model new ways of organizing learning activity of adult and children, which contribute to the development of children in the educational process. There is a strong demand for such specialists in various kinds of educational institutions, where development of the educational environment is one of the priorities of professional work. The program's graduates are able to study and solve the problems of developing educational environment on the basis of the ideas and concepts of the cultural-historical psychology.

Cultural-historical theory, especially its interpretation in the framework of the activity approach, is a grand contribution to modern science. At the same time, as V. V. Davydov noted: "Vygotsky's cultural-historical concept even in its interpretation in the framework of the activity approach is still not truly a theory, but rather a hypothesis. But, as you know, true science finds the source of its development in formulating theories and proving

their legitimacy for different areas of social practice. It is the challenge to young scholars – philosophers, logicians, psychologists, educators, culture studies experts – who are able in the nearest future (hard to say how many years from now) to turn this cultural-historical hypothesis into a full-scale truly fundamental modern theory".

References

Davydov, V. V. (1995). Report on the international conference: "Cultural-historical approach: Development of humanities and education". In *Last talks* (pp. 30–35). Moscow: Experiment.

Davydov, V. V. (2000). *Types of generalization in instruction: Logical and psychological problems in the structuring of school curricula. soviet studies in mathematics education.* Moscow: Russian Pedagogical Society.

Griffin, P., & Cole, M. (1988). A dialogue with future through today's activity cognition and communication. *Science*, 189–207.

Leontiev, A. N. (1981). The problem of activity in psychology. In J. V. Wertsch (Ed.), *The concept of activity in soviet psychology* (pp. 140–162). New York: M. E. Sharpe.

Luria, A. R. (1932). *The nature of human conflicts.* New York: Liveright.

Pyzirei, A. A. (1986). *Cultural-historical theory of L. S. Vygotsky and contemporary psychology.* Moscow.

Rubtsov, V. V. (2008). *Social'no-geneticheskaya psychologiya razvivayushego obrazovaniya: deyatel'nostniy podchod [soci-genetic psychology of developmental education: Activity approach].* Moscow.

Rubtsov, V. V., & Guruzhapov, V. A. (2016). Designing the master research program taking into account the results of approbation and implementation of the professional standard of the teacher. *Psikhologicheskaya nauka i obrazovanie [Psychological Science and Education]*, *21*(2), 12–21. doi: 10.17759/pse.2016210203

Rubtsov, V. V., Martin, L. M., & Hall, M. J. (1991). *Learning in children: Organization and development of cooperative actions.* New York: Nova Science Publishers.

Vygotsky, L. S. (1978). *Mind in society: The development of higher psychological processes.* Cambridge: Harvard University press.

Vygotsky, L. S., & Sacharov, L. S. (1998). Research on the formation of concepts: Method of double stimulation. Issue III. Subject of cognition. *General Psychology*.

Wertsch, J. V. E. (1985). *Culture, communication and Vygotskian perspectives.* Cambridge: Cambridge University press.

The sense and the meaning of cultural-historical theory of L. S. Vygotsky

Elena Kravtsova   ekravcva@gmail.com
Russian Academy of Education
Moscow, Russia

Abstract

L. S. Vygotsky's principal idea, lying in the base of cultural-historical theory, is the primacy of sense over meaning. There are serious reasons to believe that this part of cultural-historical theory was not completely understood both by his disciples and his opponents. That's why many Vygotsky's conclusions and discoveries remained untapped. while others were implemented in science and practice quite differently from what he suggested.

Vygotsky once wrote that features of the particular science deeply related to its method. That's why he introduced the experimental-genetic method (projective method in modern psychology), which allows modeling the processes of development.

One of the basic concepts of cultural-historical theory is the concept of "cultural development". A Cultural person, for Vygotsky, is the person, who can control not only their own behavior and actions but also their own psychic processes. On the one hand, modern psychology doesn't deny the role of volition in child's development. But on the other hand, the volition itself is typically understood as one's ability to submit to laws and rules. More than that – it's rather easy to create conditions where a person will submit to laws and rules, but it doesn't develop his ability to control himself.

In Vygotsky's opinion, there are natural psychic functions, which in the process of learning transform into cultural ones. In this context, the main goal of learning is to create conditions for developing person's ability to be the subject of his own behavior, activity and psychic.

Keywords : Cultural-historical theory; L. S. Vygotsky; Volition.

The ideas of L. S. Vygotsky, on the one hand, are very popular and in demand all over the world. Lately they have often mentioned and written about the unified school of L. S. Vygotsky, A. N. Leontiev and A. R. Luria. However, on the other hand, it seems that many of the ideas and thoughts of the author of the cultural-historical approach were not only, not developed by his students and followers, but left out of modern psychology as well.

To illustrate the above-said we can use some ideas concerning the relation between the meaning and the sense. One of the fundamental ideas of L. S. Vygotsky, which formed the basis of cultural-historical psychology, was the idea of the primacy of the sense in relation to the meaning.

In contrast to L. S. Vygotsky, A. N. Leontiev in his work insists on the primacy of the meaning in relation to the sense. This very understanding of the relation between the meaning and the sense has had a significant impact on the construction of the process of learning, understanding of the nature of development, finally, on the interpretation of the main concepts of cultural-historical psychology. This article will focus on the values that are attributed to cultural-historical psychology today, and those meanings that were left out.

The difference of these positions is clearly visible in the analysis of the concept of socialization. According to Leontiev's position where the meaning comes first, socialization is a gradual assimilation of different social norms and the construction of one's behavior in accordance with them. Antisocial behavior from this point of view is characterized by the actions which are against a certain society. These include different types of deviant behavior, and original, unusual and uncommon human reaction in different situations. For example, the researchers of creative people's behavior point out that an unusual and in some cases even anti-social behavior and actions are quite common among those individuals. In contrast, law-abiding citizens behave in a traditional way that can be characterized as social. Thus, the recognition of the primacy of meanings leads to the understanding of the process of socialization as a process of internalization in the sphere of social relations.

The position of L. S. Vygotsky about the primacy of the sense is realized in his observation that the baby initially is the most social creature. The idea that a baby is the most social creature, in fact, questioned the very idea of sociality. In this case, it becomes unclear what exactly is being socialized and what is the result of this process. If we consider the term "the most social creature" according to the general logic of cultural-historical concept, it becomes obvious that the "sociality" of the baby is determined by the position of "pro-we" in which an adult is superior to it. The activities of the adult together with the baby accompanied by a speech such as "we go" or "we cook porridge" from the very beginning make the child an active participant in adult life. We can say that, in some ways, already in the womb the child is a participant of the events involving his mother. A baby is a social creature because of the immediate proximity to adults, first of all to the mother.

If we analyze what happens to sociality as a child grows up, the most general answer to this question will be that sociality becomes absolutely different. If newborn's sociality

is something taken for granted, then as children grow up and develop, they also acquire sociality of a higher level and quality.

Thus, socialization in cultural-historical concept has as its basis the unity between the child and the adult, which Vygotsky referred to as "pro-we". But further sociality is connected with the ability of a child to emancipate and differentiate from the adult.

It means that **the child does not transform the external in the internal, doesn't adapt to external requirements but tries to confront the society in different ways.** Only in this case we can speak about the formation of authentic sociality. Only in this way children acquire a real sociality, antecedent forms which were given to them initially. This is the only way children become the subject of their activities, mind and life.

Socialization

Sense ——— Meaning	Sense ——— Meaning
↓	↓
Focused on the subject	Focused on the external rules
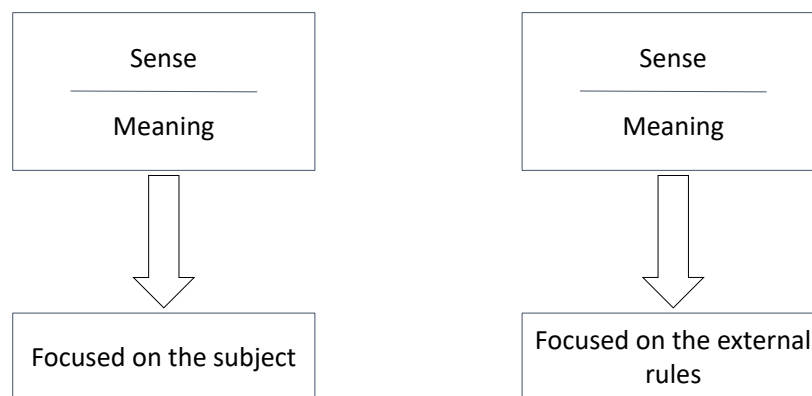
Thus, the recognition of the primacy of sense in relation to the meanings allows us to consider socialization as a process focused not on external rules and circumstances, but on the subject. A subject consistently masters mental functions and processes, primarily through the opposition to the society in relationship with other people. But sociality is as well linked to the ability of the subject to reflect and rethink about problem situations and is manifested in the means by which he or she becomes the subject of his or her psyche.

In the texts of L. S. Vygotsky, you can find the answer to the question, how a person becomes social and what gives the formation and development of arbitrariness. According to the author of cultural-historical psychology, it is a function of **imagination**.

Imagination was and still is clearly underestimated by psychologists. This is due to methodological and methodological difficulty of the study. In addition, insufficient knowledge of the imagination in comparison with other mental processes and functions is

connected to misunderstanding or failure to accept that the meanings are derived from the sense.

The processes of socialization and formation of arbitrariness, according to L. S. Vygotsky, are provided by the imagination. First, imagination provides the creation of an imaginary situation by a child in which he or she is always the subject of their own activities. In the imaginary situation, the child can do anything: they can perform adult activities, they can assess certain circumstances differently (A Witch is not wicked and terrible but old and sick), they can finally change themselves (in the imaginary situation I am not afraid, I'm not in pain, etc.).

Second, the imagination contributes to the formation and development of self-consciousness ("I"). In the process of development of the imagination a child has the power to oppose an adult or to act together consciously.

Third, imagination provides children not only with the ability to differentiate oneself from the surrounding world, but also helps to open a world of other people (society). If before the crisis of three years a child differentiated between "his or her" and "other people", however, they were perceived quite vaguely. A child built relationship (or avoided to build relationship) with someone specific (my grandmother or a stranger). Now he or she is able to communicate with different people, consciously realizing, thus, different relationships (you can beg a mother, but it's better not to argue with dad). In addition, social norms open to a child: it is good and it's bad, it is possible, it is not.

All this (the creation of imaginary situations, the consciousness of "I can do it by myself", the ability to identify and understand a certain society) provides a child with **self-realization**. Thus, his sociality suggests that a genuine entry into the society is possible only in the case when in the process of socialization, the subject is not subordinate to someone or something, and submits the external circumstances through their thinking and rethinking. So, a child who is eating slowly will not compete with an adult to be the fastest eater, he or she will say that the slowest one wins. Or, for example, Mark TWAIN's character, Tom Sawyer, who was forced to paint the fence as a punishment, managed to turn a boring thing into a very interesting and attractive activity.

The concept of socialization in relation to an individual means the entrance of the individual into society, the construction of behavior and activity of the individual in accordance with the laws and norms of a society. In some ways, it is possible to force the individual to learn the norms of society and to implement **adaptive behavior**. Unfortunately, this is the basis of a fairly large number of modern educational systems which implement the principle of A. N. Leontiev.

However, as experience shows, in this case, when there is no control, his or her socialization vanishes and he or she begins to misbehave. A striking example of this is not necessarily some crime but a very common phenomenon, when the class is quiet as long as the teacher is inside the classroom. The same happens in summer camps when the leader leaves the bedroom. In these and many similar cases, the subject manifests a socialized

Behavior

Sense		Sense
————		————
Meaning		Meaning

↓ ↓

| Self-realization | | Adaptive behavior |

behavior, not being the subject of this behavior. A real subject of this behavior is the society represented in the group of specific adults who according to their social role or their personal qualities set the social norm and cause other people to regulate their behavior in accordance with it.

If the subject has no experience in building their own social norms, someone else's one is not perceived as a norm as well and is considered to be a personal characteristic of a person. No wonder such statements of pupils can be heard: "I decided for her", etc. For example, once accessing children's psychological readiness to school education, I asked them to check which rope is longer. This task proved to be very difficult. The majority of children, hiding their hands behind their back, tried to determine the length of the ropes by eye. When they were given a hint that the rope can be measured, one boy said: "But why didn't you say that we need to measure it for you".

In the socialization through self-realization, a child gets the opportunity from to feel like a full member of society and not just a small "screw" in a complex system of social hierarchy. In this case, the process of socialization is the same and not opposed to the process of personality development in ontogenesis, because as L. S. Vygotsky pointed out, the subject acts personal when he or she feels as a source of their own actions and behavior.

So, if you take L. S. Vygotsky's position of about the primacy of sense in relation to the meaning it is necessary to create the conditions for purposeful development of imagination, which provides interpretation and reinterpretation, which in turn leads to mastery of themselves, their behavior, activity, psyche.

Moreover, the recognition of the primacy of the sense, allows us to return once more to the understanding of the meaning of learning in cultural-historical psychology. If you

focus on the sense for those who study, then learning becomes a process centered on the student. Not a teacher, not a program, not exams, only the one who learns. On the one hand, the call to make the student the center of teaching process is not new. However, on the other hand, because studying is dominated by the idea of the primacy of meanings, the student is certainly not in the center, and studying becomes something remote and vague.

If one of the most famous ideas of L. S. Vygotsky that learning leads development, is considered from the point of view of relationship between the sense and meaning, then it gives the key to understanding of the learning process itself and its results as well.

Firstly, training in the framework of cultural-historical theory is something of an individual nature, as the sense is individual. For example, good teachers know that if certain methods and techniques of teaching the child are not successful, it is enough to change them in the right direction to change student's attitude to learning and, consequently, learning results as well.

Secondly, teaching in the understanding of the author's cultural-historical concept cannot be not educational. Any teaching, according to Vygotsky, develops, otherwise it is not teaching, but training at best.

Thirdly, teaching oriented to the sense is continuous. In modern science and practice based on meanings, continuous education is usually associated with learning at different age stages. In cultural-historical the importance of human learning at different ages is not underestimated, but learning which is closely connected with life itself is considered to be the most important. In other words, focus on the sense, suggests that learning is not confined only to special classes or lessons, but included in all the processes of life.

Fourthly, Vygotsky thinks that the results of studying are not connected with the meanings that are easy to measure using knowledge and skills, but with the formation and development of higher mental functions. In other words, the effectiveness of teaching and learning is associated with developing the student's ability to master their own behavior, activity, mental processes and functions.

The difference in approaches to learning based on the sense or the meaning is clearly visible in the analysis of concepts, which, in many respects, became the trademark of the cultural-historical theory – the concept of the zone of proximal development (ZPD).

This concept is discussed in *Learning and mental development at school age*, published in 1935. Talking about strategies to build learning process, Vygotsky distinguishes two levels of child development – relevant, which is characterized by the fact what the child can do alone, and the zone of proximal development. However, he notices that the contents of the zone of proximal development can be characterized by the tasks that a child cannot solve independently, but can do it with the help of an adult. Very important, from our point of view, is Vygotsky's idea that what a child is doing with the help of an adult today, tomorrow he or she will be able to do by themselves.

Results of studying

Sense	Sense
———	———
Meaning	Meaning

Development of higher mental functions	Knowledge and skills
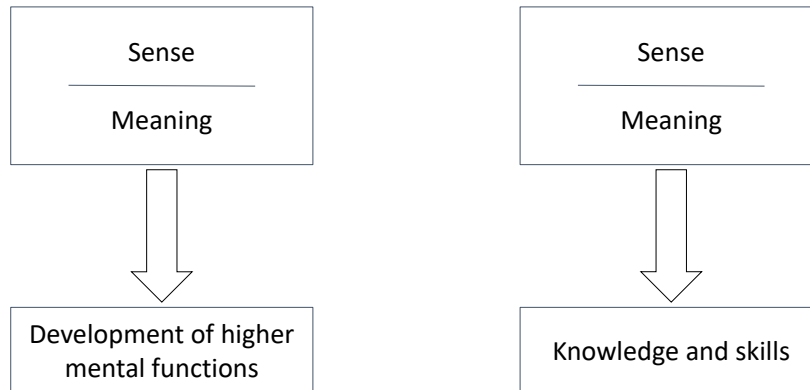
If we consider this idea of L. S. Vygotsky in the general logic of cultural-historical approach, then, firstly, it turns out that for Vygotsky learning is, first and foremost, communication. In other words, the concept of the zone of proximal development is Vygotsky formula and model of his understanding of the mechanisms of mental development in ontogenesis.

There is a certain current level of development, which is usual for a person. Through communication and with the help of communication with other people, he or she can rise to a higher level.

In addition, secondly, the concept of the zone of proximal development enables us to justify the importance and necessity of education cooperation. The implementation of the pedagogy of cooperation involves understanding that there is no clearly expressed position of the organizer of process oriented to the meaning; there is no confrontation between a teacher and students, but there is an educational team, including teachers, aimed at a solution of a problem together or performing a learning task.

All the studies of the zone of proximal development can be divided into two groups. The authors, who can be attributed to the first group, investigated the peculiarities of hints in learning. If a child is unable to solve the problem, one can give them a hint and if he or she now solves the problem, then it will be teaching and learning focused on a zone of proximal development.

Even a superficial analysis of this approach shows its inadequacy. Educators and psychologists know well that, for example, one clue leads to the solution of the problem, while the other does not change anything in the behavior and activities of the child. However, neither the solution of the problem using the hint nor the prompt itself clarifies

anything in the understanding and practical application of the concept of the zone of proximal development. A child may not solve the problem with a hint because he or she has problems with communication or because he or she doesn't understand something that an adult suggests doing. The same thing happens with the child who solves the problem using a hint, but cannot solve a similar problem independently.

The studies, which can be roughly classified to the second group as a rule, are devoted to the construction of developmental education in the traditional sense. Developmental education is considered to be an education focused on the zone of proximal development. However, L. S. Vygotsky zone of proximal development is a measure of **individual** development. In addition, according to L. S. Vygotsky, ZPD, as well as actual development has already formed, developed in the child. Thus, teaching focused on the zone of proximal development turns potential development (personal ZPD) into the actual development and nothing more at best.

Despite the difference in these two approaches it can be concluded that the authors, exploring the features of the prompts and the scientists who construct the learning process focused on the zone of proximal development, adhere to the theoretical and methodological setup according to which the meaning is of primary importance in the processes of development.

There is reason to make some conclusion that the zone of proximal development characterizes a certain space, one boundary of which is closest to the actual development of the child, while the other, is the most distant from the actual development. This means that, on the one hand, the zone of proximal development can be measured, and, on the other hand, that the focus on the zone of proximal development involves different ways of cooperation of teachers with students and students among themselves.

There are experimental studies indicating that the assistance provided to the child in solving problems that they cannot solve on their own, can "be measured" in accordance with the position of the communication. For example, with minimal assistance, the position is "independent". A little more help is given in the implementation of a position "equal", more help involves such positions as "superior" and "sub". Finally, the maximum help is provided when an adult occupies the position of "pro-we". Thus, it appears that we can distinguish 5 levels of the zone of proximal development. When the position is independent, as we already stated, the help was the minimum and this means that the content of the zone of proximal development is as close as possible to actual child's development. Next, there are levels of development- equal, superior, sub, and pro. If a child cannot solve the problem with assistance from the position of "pro-we", this means that this content is outside the zone of his proximal development.

Thus, the same content can be close to actual development for children of the same age, while outside the zone of their proximal development for others. There is experimental data that suggest that in addition to the zone of proximal development, there is the zone of distant development. It can't be reached by a subject even in collaborative activities (with

external support), but in many ways, it determines the individual aspects of the zone of proximal development.

The zone of distant development is formed (constructed) in the process of immersion of the subject in a certain environment, or an environment with specific content. A small child who finds himself or herself in speech environment earlier than his or her peers will start to understand the speech and speak. For example, a child whose close adults talk to a lot begins to speak before his peers who, for whatever reasons, are deprived of such a communication.

A child who watches an adult writing letters or reading them, is more psychologically ready to master the written language. In other words, his or her personal ZPD related to the written language is more developed, its boundaries are wider.

The recognition of the importance of the concept of the zone of distant development means that the problems of personal ZPD should be resolved by creating a special environment for its formation and by the ability of the subject to "plunge" into the environment.

The features of such environment and conditions of immersion of the subject in it are largely a subject of future research. However, there are some assumptions about the facts how such an environment should be constructed.

Let's take two examples: there are immigrants who have lived in America for about 20 years, who speak English sometimes even worse than when they first arrived in this country. Here is the presence of the language environment, but the complete lack of its influence on the development of linguistic competence among people of different age. Another example, a teenager, enamored of German cartoons, who has learned German watching them. Here there is the presence of the language environment too though not as active and rich as in life in an German speaking country. However, even not such a rich and active environment led to significant linguistic development of the adolescent.

The explanations such as the fact that the teenager had a motivation to learn the language, and the immigrants did not, doesn't work in the framework of cultural-historical psychology. In addition, there is a serious doubt that a teenager had a strong motivation to learn German.

If you analyze both of these examples in the context of the cultural-historical approach, it becomes clear that in one case there was proper communication, and in the other - there was not. Indeed, the immigrants who have not learned to speak English, either communicate only within their own family, or with the the same people as they are, not speaking English immigrants. With whom did the teenager communicate while watching cartoons? Well, it could be the characters of the cartoon, its creators, one of the characters, etc. The proof that it was certainly communication is the boy's focus on the **context** that determines the presence or absence of common semantic field.

So, environment is a communion, where the subject is focused on the context: phrases, actions, dialogue. However, the developmental nature of this environment is achieved only if there is a will effort by a subject. This way, a teenager, who didn't understand any German, had t make an effort to somehow understand the meaning of the words and actions of cartoon characters. He did not just watch the same movie many times, but replayed on the VCR the same piece to understand its content and meaning, and then watched the movie further. By the way, it is this very willpower which many immigrants lack and prefer to spend time in the Russian quarters and, as they say, "not to go to America".

So, on the one hand, it is possible to determine the level of development the zone of proximal development. At the same time, on the other hand, it can be concluded that the characteristics of the zone of proximal development are connected with the characteristics of the zone of distant development.

The features of the zone of distant development are in turn determined by the presence or absence of the environment in which the learner is immersed, and those will efforts, which he or she implements in this environment.

The analysis of the concept of environment in cultural-historical context allows us to conclude that it is directly connected with the culture in which the individual lives and develops. It is real people who surround the subject, as well as all ideal partners, including the ones who lived many years ago, who worked and created this area of knowledge. However, the environment itself does not create a zone of distant development. The subject has to experience it. For example, immigrants have no problems with foreign-language environment, but some of them struggle to avoid it. As the immersion in this environment requires certain will efforts.

In the texts of Vygotsky there is nothing about what the assistance of an adult should be aimed at, when the child cannot independently perform a task. It was found that the assistance in the zone of proximal development can be different – one helping the subject to cope with the content of a task and the other helping to accept the outside help. So, outside help can be directed to different aspects of the development of the individual - one directly connected with the contents, while the other is connected with communication and interaction with other people. Each of the allocated types of help solves a particular problem – "object" one to use different types of knowledge, skills, abilities, etc. in solving specific problems. Another one, "communicational", helps the subject to accept outside help in the case when the subject has problems with its adoption.

To illustrate this, we use an example of A. Bronfrenbrenner, who said that different family members differently build their relations with the child, for example, dad may prove to be "together" with a child – he plays with him or her, spoils, can forget that it's dinner time, when a mother is "superior" to the child. She's kind of an example and model of correct social behavior.

So, if the subject cannot accept outside help and use it to solve the task, then, is quite a fair conclusion that this content, which substantial assistance is directed at, is outside of

the zone of proximal development. If he or she can use communication to solve something or to fulfill, that content will be inside the zone of his proximal development.

In other words, the assistance in taking the hint and doing the task, which the subject cannot do, provides a transition from the distant into proximal development, or change the boundaries of the zone of proximal development.

For example, a child cannot solve a problem. An adult, first from the independent position, then increasing the help, tries to help him or her, but the kid never solves the problem. This means that the content of this problem or the ways to solve it are outside the zone of proximal development for the child. Now add another adult or older or more advanced child who, for example, asks: "What's wrong here¿' - and begins to help the first child to understand and accept what the adult offers. He or she can do it in different ways, for example, they begin to do something wrong deliberately and sometimes it is enough for the first child to solve the problem. It may be different. The second adult or a peer begins to do something together with the child, realizing the outside help this way. And again, the task that had previously been outside the zone of proximal development now moves inside the zone. Thus, there has been a change of the boundaries of the zone of proximal development. It has changed due to the increase and penetration of the zone of distant development.

This allows us to draw an important practical conclusion. An authentic educational teaching should focus on the zone of distant development. In this context, the more effective is multi-level, mixed-age learning. As a rule, the second and especially the third child in the family begins to walk and talk early, solves any problem. All this is due to the fact that they are immersed in an environment where someone is superior to them. At the same time, as a rule, nothing is required from them. Once we met two brothers, one of whom was at school and had homework to do (reading), and the other one played "school" next to him. It turned out that the second brother learned to read much faster and better than the older one.

It is important to emphasize that this education is more time-consuming to organize, but it allows to implement individualized instruction and to focus on the personal sense of each participant.

Last thing I wanted to stay in this article relates to the learning results oriented to the sense. According to the ideas of L. S. Vygotsky, such learning because of its educational nature, should lead to changes in consciousness. In general, according to Vygotsky, it is consciousness that should be the subject of the new psychology that he offered.

In modern psychology, different authors described three periods in which there is a qualitative change in consciousness. In any case, not claiming that there are only three such periods, we will try to analyze their common features. So, first of all, primary school age, when children begin to focus on letters and numbers and are willing to voluntarily give their will to the teacher. Then a senior adolescence, when yesterday's children begin

to exhibit the traits and characteristics of adult behavior. Finally, it is adolescence or early adulthood, when professional consciousness appears.

These different, not even related to each other periods of children's ontogenesis, in which qualitative changes in consciousness happen, are similar in activities which were previous to this change. So, children who have the consciousness of the primary school pupil played "school" with pleasure before that. Teens play adults and adulthood for a long time. Finally, boys and girls, just entering adulthood, are able to implement professional consciousness, for example, medical students: they find signs of those diseases that they study when their relatives or friends are ill. This is also a kind of a game, but the game "profession".

The connection of the game and changes in the consciousness is easily explained by the understanding of the game, which can be found in the texts of L. S. Vygotsky. Thus, he notes that when playing "hospital" a child» cries as a patient, and at the same time, is happy as a player. This means that in the game the child (adult) simultaneously implements two positions – the position within the game (the patient) and a position outside the game (player). As it was shown by studies in recent years, these two positions affect each other's development. In other words, with the position of a "player" a child (adult) implements the position of a "patient". During the game, some features implemented in the role of a "patient", for example, patience, ability to submit to another, etc. affect the personal characteristics of the child. He or she learns to be more patient, behaves and acts as it is required by the rules of the game.

Thus, the game that accompanies people's learning process throughout their life, ensures that some of the characteristics, properties, and meanings of human relations and problematic situations become the content of their consciousness. And to realize something, according to L. S. Vygotsky, is to master it.

This allows us to make several important conclusions. First, there is a point of view according to which there is some gap between playing and learning. However, if you build a student-centered teaching, learning, during which changes occur in the mind, it is impossible to do without a game.

Secondly, contrary to another common point of view that playing is only children's activity, in cultural-historical psychology playing is not limited to the preschool period of development, and accompanies people all their life.

Thirdly, the nature of the game allows, on the one hand, to identify specific, personal problems, and, on the other hand, allows you to use it to overcome a significant number of difficulties.

So, if following L. S. Vygotsky, we focus on the sense and build teaching and learning process and development of the child and the adult in the logic of cultural-historical theory, it will not be an exaggeration to say that we are just going to understand the ideas of L.

S. Vygotsky and learn how to implement them in practice. As a well-known Russian philosopher V. S., Bibler said, "Go back to Lev Vygotsky".

It's been 82 years since L. S. Vygotsky passed away. What did the author of cultural-historical psychology dream about? The creation of a new psychology, but he not only dreamed, he was also building. He was very worried that he was not fully understood by even his closest students and employees. For example, in the notebooks, he noted that A. N. Leont'ev makes a fatal mistake, taking the whole mentality to activity and its components.

In one of his letters, written in the last days of his life, he compares his fate with that of Moses, who knew that he himself would not see the promised land. According to Vygotsky, only going beyond the methodological limits of the old psychology will allow us to build a new psychology. This new psychology will be able to formulate and solve problems related to personality correctly, because it, unlike the old psychology, knows the cultural development of a child and the genesis of higher mental functions.

References

Leont'ev, A. N. (1978). *Activity, consciousness, and personality*. Englewood Cliffs, NJ: Prentice-Hall.

Vygotsky, L. S. (1956). Problema obucheniya i umstvennogo razvitiya v shkol'nom vozraste [Issue of learning and mental development in school-aged children]. In *Izbrannye psikhologicheskie issledovaniya [selected psychological works]* (pp. 438–452). Moscow: APN RSFSR Publisher.

Vygotsky, L. S. (1987a). Imagination and its development in childhood. In R. W. Rieber & A. S. Carton (Eds.), *The collected works of L. S. V.ygotsky, Vol. 1: problems of general psychology.* New York: Plenum Press.

Vygotsky, L. S. (1987b). Thinking and speech. In R. W. Rieber & A. S. Carton (Eds.), *The collected works of L. S. V.ygotsky, Vol. 1: problems of general psychology.* New York: Plenum Press.

Concept of Will as an Open Problem in Culture-Historical Context

Nataliya N. Tolstykh   NNVT@LIST.RU
Moscow State University of Psychology and Education
Moscow, Russia

Abstract

Outlines a new approach to the problem of development of will, emanating from the tradition of thought represented by Vygotsky and Bozhovich. The main conceptual development lies in drawing a distinction between two concepts – will (volya) and goal appropriation, self-regulation, executive cognitive control of behavior (proyzvolnost'). Both concepts emphasize the readiness and ability of an individual to pursue a goal. The distinction lies in the nature of that goal determination. In will, it is self generated and comes from the inner world of the individual while in goal appropriation, it is determined by an external source but is readily appropriated. A such distinction is supported by recent findings in neuroscience which describe the actualization of different brain structures depending on whether an individual acts upon will or willingly submission. Hence, the personality development is considered as a process of will development in which will and goal appropriation inter plays and progresses in specific stages paving the way for subjunctivization or becoming a true subject of that culture.

Keywords : Personality development; Will; Cultural-historical tradition; Subjectiveness.

Currently, both in Russia and other countries, interest in the cultural-historical tradition is focused primarily on mental development and tightly related problems, including cognitive development and developing education. However, the personality component of this development is still left in the shadows. A. Leontiev and L. Bozhovich, two closest associates of Vygotsky, developed original personality concepts based on his most prominent ideas. These personality theories remain as relevant and significant for Russian psychology as ever and, more importantly, still hold a potential for further development.

The author of this article spent the first ten years of her professional work at laboratory for personality psychology at Institute of Psychology. At that time it was managed by L. Bozhovich who dedicated last ten years of her life and creative work to this issue.

According to Bozhovich, she herself alongside her colleagues (L. Slavina, M. Naymark and others) continued the line of personality development research started off by Vygotsky. She used the following words to describe the last years of Vygotsky life's findings when he came closest to personality problem: "Vygotsky passed away before he could complete his studies on personality. But in his work, we see enough material for recreating such studies. The last chapter of his academic pursuits was all about developing affect as emotional decompensation and the point when it "meets" the mind – the challenge of emotional development and emerging of higher feelings. It looks like he considered it a key to understanding those specific system formations, that *higher mental (psychic) synthesis*, which "*shall be rightfully called a child's personality*", as he described it (L. I. Bozhovich, 2008, p. 359). Bozhovich, during decades of her experimental research, was looking for certain answers: What exactly is that "higher synthesis"? How does it manifest itself? How is it being developed in ontogenesis? All these questions were answered.

Bozhovich, in her definitions of "personality" always emphasized the basic ability of human on their way to becoming a person to "act independently, regardless the circumstances which have direct effect on them (and even challenge such circumstances), driven by their own deliberately taken goals. Such ability reflects proactive rather than responsive behavior type and makes a person a master of their fate and not a slave to the certain circumstances" (L. I. Bozhovich, 2008, p. 322). Notably, in her last works Bozhovich linked such inner freedom to the development of "functional system which in psychology commonly referred to as will" (L. I. Bozhovich, 2008, p. 322). She then concludes that will is not a special psychical function, but is a person's will structure, which can help us understand integrity of a person, that "higher synthesis" Vygotsky wrote about.

Description of will types that in Bozhovich's studies characterize the stages of personality development at different age are of particular interest.

According to Bozhovich the first stage (infancy and early childhood) marks *hypobulian* (a term introduced by Krechmer) development of will. A strong-willed behavior at this stage is cause by a "natural" need, which makes a child overcome the obstacles getting in a way of the desired goal. A child acts driven by contextually stronger motive. Any obstacles can only be of an external kind.

Pre-school aged children's behavior is categorized by what Bozhovich calls "involuntary goal appropriation", which makes them ignore their desires and act according to what's "necessary". This is, however, "not due to their ability to consciously control their behavior, but due to the fact that their moral senses have more propulsion than any other motives. This is what allows them to beat competing motives uncontrollably, unaware for children themselves" (L. I. Bozhovich, 2008, p. 340). From this perspective, one can say that the conflict between "I want" and "I shall" in pre-school children experience is in fact the conflict between the two notions of "I want".

In primary school age children develop *volitional behavior* as such, that very ability to perform a «classic» act of will. At this stage in a strong equally battle, but oppositely directed affective tendencies, a person (not necessarily of a pre-school age, but of the same level of personality development) tends to turn to an inner intellectual strategy, including reasoning, analyzing, considering consequences of an act. It results in propulsion being given to the weaker but more valuable motive. Willful behavior here is performed through conscious control of motivation. It shall be noted, that many books on the subject use this particular example to describe the phenomenon of will.

The ultimate development of will is what Bozhovich called *post-volition*, which represents such level of will development, when in order to achieve a goal no contradiction of motives happens, no self-compulsion or any other typical aspects of violation behavior in common definition of "will". In one of her works she would give the term a more poetic description as "inception of a perfect intention".

Illustrating the last stage in volition development, Bozhovich clams that "it emerges as a result of interiorisation of behavior control and shaping other higher psychical systems, representing enough propulsion within themselves to make a person act by will directly, past conscious self-direction. At this stage behavior starts to appear as involuntarily, irrational even. Thus, a person can rush to recue someone is a lethal danger or risk all for something he stands for. This is a "post-volition" as we call it" (L. I. Bozhovich, 2008, p. 362).

Post-volition marks the advanced level of personality development. It can only co-exist with harmonic mature personality structure, having strong moral compass, higher emotional education, set of lofty principles, etc. These conditions are essential to consider free choice an "easy task". You make up your mind and nothing can stop you from within to act on it. The harmonic personality structure is the key factor which Bozhovich links to unambiguity of two principal motivation levels: one stands for conscious and voluntary behavior, and another is responsible for involuntary, impulsive, irrational type of behavior.

In this respect, I would like to quote Alexander Zaporozhets, yet another academic from the close circle of Vygotsky's allies, who wrote: "It's common to complain that rational intentions and decisions are not practically implemented due to affect. However, we need to remember that human mind, as extraordinarily flexible and endlessly free as it, simply would put us into a great danger if any idea that comes to our mind would instantly stimulate us to action. Instead, the following fact is rather significant and feasible: before

an idea is supported by propulsion, a rational decision is required to pass a test by affect in relation with what personal meaning such intention holds for the subject in order to satisfy its needs and best interests" (Zaporozhets, 1986, p. 297).

In her works, Bozhovich showed the long way a human being must go through in order to achieve such advanced level of personality development that would allow them to match the stages of their mental freedom to the freedom of their actions and overall behavior. This is what according to her mean "becoming a personality".

But let us focus on the aspect of 'will' more directly. Will was the subject of the last, unfinished study by Bozhovich. Published snippets of the book and articles along with the in-life works by the same author (E. D. Bozhovich, 1995; L. I. Bozhovich, 1995) lead to suggest the following.

Firstly, the idea of "getting one's behavior under control" remain the most important in her works also being veritable refrain in Vygotsky's *The history of development of higher psychical functions*, which is hardly a surprise.

Secondly, what stands out is the close synonymic relations between the terms "will", "goal appropriation", "volition", "voluntary behavior", which in my opinion does not reflect that subtle and precise definition used by Bozovich in understanding a personality development process together with nuanced description of shaping one's volition and goal appropriation – different types of "will".

In order to solve the problematics of will and goal appropriation, Bozhovich takes Vygotky's logic for detecting the development of higher psychological functions, using the following line of reasoning: Voluntary behavior is a result of intellectual and voluntary processes turning natural psychological function into a higher function. "Voluntary behavior", she says, emerges from mediation of immediate need by mental processing, followed by intellectualization and voluntarization of propulsion in human's behavior. Resulting from these processes are functionalities, such as intentions, decisions, which are no longer needs or thoughts, but rather what we may call violations» (E. D. Bozhovich, 1995, pp. 338-339). According to this logic, we may assume, that *hypobulian* will, that Bozhovich associated with infancy, is the natural function which serves as a basis for higher psychical function. Providing voluntary behavior, its ultimate extreme represents the ability to post-volition which defines only a person highly advanced in personal development.

Some contemporary Russian authors engaged in cultural-historical tradition (Smirnova, 2015) prefer to draw a distinction between two concepts – will (volya) and goal appropriation, executive cognitive control of behavior (proizvolnost), using them to describe principally different types of behavior and abilities. Supporting this idea as a whole, yet not being entirely supportive about the offered definitions, we still consider this as a rewarding idea (Tolstykh, 2010).

Goal appropriation (self-regulation. executive cognitive control of behavior) can stand for an ability to control one's behavior, act on the conscious intention, to perform a certain

task, challenge, and use self-compulsion for it, more or less. In this sense, the term means what some international authors call "Victorian will".

Will, on the other hand, is better used to define intentionality coming from inner freedom, an ability to wish fearlessly, set life goals of your own, choose your life's demands and moral values. Another reason for using the term in this particular meaning it that in Russian the word for 'svoboda' (freedom) is tightly related to the word 'volya' (will). As Pushkin wrote "Happy is not what the world has to offer, but peace and will there is" (or maybe another translation "in the world there is no happiness, but there is peace and freedom") and he could hardly mean "Victorian will" as self-compulsion in any form. In modern Russian psychological context, well-understood 'will' is close to the concepts of "subject" and "personality subjectivness".

Proposed distinction of terms "will" and "goal appropriation" can contextually be aligned with ideas voiced by Leshly Ferber, an American psychologist. According to him the current concepts of will do not work because, in fact, there are two phenomenological realities of will which stand so much apart that only a general abstract meaning can be used to unite them (Farber, 1966, p. 7). Other authors share similar views on the subject.

Extra immediacy of the problem arises at seemingly the calmest stage of child development – primary school years. By far the majority of teachers and psychologists agree that this age marks the point where the key role is taken by goal appropriation as ability of putting one's behavior under control and acting in accordance with the regulation of a social institution, namely school, represented principally by a teacher. Nowadays, some nursery teachers in their best intentions practice discipline among younger children, telling them to obey the basic rules such as "sitting still with their hands on the desk". Nursery teachers believe that this skill facilitate child's adaptation to school system where the set of similar external rules and requirement expand ever greater. In any way, it is commonly suggested that both learning and personality development processes at primary school need to be based on voluntary behavior, including self-compulsion. In all fairness, some teachers and psychologists hold contrary opinion, suggesting that primary schools shall allow children to play and use the relative volitional behavior mechanisms. We consider both these views wrong.

In order to sustain our position, we need to look at voluntary behavior in terms of who's setting the goal – the person or somebody for them (a teacher, a parent or any other people). Our opponents see this as irrelevant. But we consider it exactly the thing of crucial importance for a well-formed learning and personality development.

A number of schools across Russia adopted the educational program called "Rostok" introduced by V. Stepanova and described in many publications, e.g. Stepanova and Tolstykh (2016). This work offers educational process which is primarily based on a children's free will. They gradually start to develop a code of behavior and ethics which allows shaping the ability to act voluntarily through self-control defined by setting a goal by themselves. Such process of will development can only exist within a special organization of educa-

tional system, where synergy-based coordination is provided by every single one in school community.

This method of will development proved to be very successful, resulting in higher creativity in children, their artistic skills and such. Longitudinal neurophysiological studies are another convincing testimony to the feasibility of this method. Comparison of EEG activities in various experimental cases by children, engaged in "Rostok" educational program and children with experiences of traditional learning shows not only the more advanced development of some parts of the brain, but also that such development differs significantly between tested groups (Knyazev et al., 2017).

References

Bozhovich, E. D. (1995). From notebooks by L. I. Bozhovich: Ideas about will development. In D. Feldstein (Ed.), *L.I. Bozhovich shaping a personality* (pp. 333–341). Moscow: Institute of Practical Psychology, Voronezh: MODEK Scientific Development and Production Center.

Bozhovich, L. I. (1995). Will development in ontogenesis. In D. I. Feldstein (Ed.), *Shaping a personality* (pp. 302–332). Institute of Practical Psychology, Voronezh: MODEK Scientific Development and Production Center.

Bozhovich, L. I. (2008). *Personality and its formation at the young age*. St. Petersburg: Peter.

Farber, L. (1966). *The ways of the will: Essays towards a psychology and psychopathology of the will*. New York: Basic Book.

Knyazev, G. G., Savostyanov, A. N., Bocharov, A. V., Slobodskaya, H. R., Bairova, N. B., Tamozhnikov, S. S., & Stepanova, V. V. (2017). Effortful control and resting state networks: A longitudinal EEG study. *Neuroscience*, *346*, 365–381.

Smirnova, E. O. (2015). On the problem of will and self regulation in cultural historical psychology. *Kul'turno-istoricheskaya psikhologiya [Cultural-Historical Psychology]*, *11*(3), 9–15.

Stepanova, V. V., & Tolstykh, N. N. (2016). Interdisciplinary relationships between social, developmental and educational psychology: Resources for development. *Social Psychology and Society*, *7*(1), 23–44.

Tolstykh, N. N. (2010). *Hronotop: Kul'tura i ontogenez [Chronotope: Culture and ontogenesis]*. Moscow: Smolensk.

Zaporozhets, A. V. (1986). *Selected works in psychology, Vol. II*. Moscow: Education.

Cognitive Psychology of Activity: Attention as a Constructive Process

Maria Falikman   FALIKMAN@ONLINE.RU
Lomonosov Moscow State University
National Research University Higher School of Economics
Russian Academy of National Economy and Public Affairs
Moscow, Russia

Alexander Asmolov   AGAS@MAIL.RU
Lomonosov Moscow State University
Moscow, Russia

Abstract

The problem of consciousness is one of the core problems in the contemporary cognitive science. Driven by the neuroimaging boom, most researchers look for the neural correlates or signatures of consciousness and awareness in the human brain. However, we believe that the explanatory potential of the cultural-historical activity approach to this problem is far from being exhausted. We propose Cognitive Psychology of Activity research program, or the activity theory-based constructivism as an attempt to account for multiple phenomena of human awareness and attention. This approach relies upon cultural-historical psychology and the concept of mediation by Lev S. Vygotsky, activity theory and the concept of image generation by Alexey N. Leontiev, the physiology of activity and the metaphor of movement construction by Nikolai A. Bernstein, transferred to the psychology of perception as image construction by a number of Russian researchers in 1960-es, and the understanding of attention as action by evolutionary cognitive psychologists of 1980-es. The central concept of our approach is a concept of task, defined by Leontiev as "a goal assigned in specific circumstances". The goal determines choice and use of available cultural means ("mediators") consistent with the circumstances or conditions of task performance, which in turn provide for the construction of processing units allowing for more successful ("attentive") performance and for the awareness of visual stimuli which could otherwise be missed or ignored. The perceptual task accomplishment is controlled at several levels organized heterarchically, with possible strategic reorganizations of this system demonstrating the constructive nature of human cognition.

CR✷RES

The problem of consciousness is one of the core problems in the contemporary cognitive science. Driven by the new horizons of neuroimaging, most researchers look for the neural correlates or signatures of consciousness and awareness in the human brain at various levels of biological organization. However, despite the tempting progress in this area, we believe that the explanatory potential of the cultural-historical activity approach to the problems of consciousness and cognition is far from being exhausted. At the same time, recent years of cognitive science development demonstrate the convergence of its research program with the basic principles of cultural-historical psychology and the activity theory, with the growing interest towards embodiment of cognition, its evolutionary aspects, its emotional regulation, and social and cultural determination (for the discussion of this convergence, see Falikman (2014b)). For instance, the cultural-historical activity theory is considered as a possible foundation for a metatheory of human cultural development (Cole & Packer, 2015).

Recently the historical evolutionary approach to the body-mind problem and to the understanding of consciousness has been proposed in Russian psychology (Asmolov, Shekhter, & Chernorizov, 2016). Departing from the critical analysis of the "mythology of neural correlates of consciousness" biased towards the "simple living" (reductionist) type of explanation, this approach treats consciousness as a product of evolution of complex purposeful living systems, not reducible to neural processes in the brain and possessing its own evolutionary significance in pre-adaptive tasks. Consciousness provides for the very possibility of "expectation of the unforeseen" (something which has never happened before and might never happen in the future), which in principle cannot be reduced to the previous adaptive experience and therefore, obviously has a constructive nature.

In the current paper, we propose the activity theory-based constructivism as an attempt to account for multiple phenomena of human awareness and attention. Constructivism in psychology is currently considered not as a unitary approach, but as a bunch of approaches grouping into at least three branches (Raskin, 2002): radical constructivism (e.g. Maturana and Varela (1987)), social constructionism (e.g. Gergen (1999)), and the theory of personal constructs (Kelly, 1955). Among cognitive psychologists, the constructive nature of cognition has been discussed since F.C. Bartlett's seminal works on the subject's activity and the role of schemata in remembering (Bartlett & Burt, 1933) through U. Neisser's ideas of perceptual cycle with the schema as its key internal part and anticipation as its function in the perceptual activity regulation (Neisser, 1976), up to the so-called cognitive embodiment (Varela, Thompson, & Rosch, 1991) and inactivism (e.g. O'Regan and Noë (2001)) with their basic idea of knowledge as a result of a subject's immediate sensorimotor involvement and constructive interaction with the world. Though the basic trend in the mainstream cognitive psychology was moderate rather than radical constructivism (Anderson, Reder, & Simon, 1998), since the beginning of the 21th century the ideas of embodiment as a part of radical constructivism and the evolutionary approach towards cognition have become widespread in cognitive science (Wilson, 2002), together with the "extended mind" idea closely related to Vygotsky's ideas of mediation and cultural-historical development (e.g. Malafouris (2013)). In Russian psychology, there are at least two modern constructivist approaches intrinsically inheriting cultural-historical psychology and the theory of activity

frameworks: the above-mentioned historical evolutionary approach (Asmolov, 1998) and the experimental psychosemantics of consciousness (Petrenko & Suprun, 2015).

The approach we propose in this paper also relies upon (I) cultural-historical psychology and the concept of mediation by Lev S. Vygotsky (Vygotsky, 1978), which has found its further development in the theory of systemic organization and dynamic localization of higher mental functions by Alexander R. Luria (e.g. Luria (1973)); (II) the activity theory and the concept of image generation by Alexey N. Leontiev (Leont'ev, 1978); (III) the physiology of activity and the metaphor of movement construction by Nikolai A. Bernstein (Bernstein, 1967), transferred to the psychology of perception through the "image construction" metaphor by a number of Russian researchers starting from the 1960-es (e.g. Zinchenko (1966); Zinchenko and Vergiles (1972)) up to the 2000-es (Velichkovsky (2002)), and (IV) the understanding of attention as action by evolutionary-oriented cognitive psychologists of the 1980-es (e.g. Allport (1987); Neumann, Heijden, and Allport (1986)). We assume that integration of concepts which have emerged within cognitive psychology with (I) the idea of the levels of task performance organization declared in the activity theory and the physiology of activity and (II) the idea of its mediated nature set forward in cultural-historical psychology opens the opportunities of new interpretation of human consciousness and attention and their constructive nature.

The cornerstone of our approach is a concept of task, defined by Leontiev as "a goal assigned in specific circumstances" (Leont'ev, 1978). This concept, which dates back to the classical psychology of consciousness, and to the Wuerzburg school of the psychology of thought in particular (Elliot & Fryer, 2008), became a core concept for Bernstein's physiology of activity and was successfully applied in the studies of visual perception and eye movements within the activity theory framework (e.g. Gippenreiter and Romanov (1972)). The task drives the construction of a multi-level functional system providing for the efficient performance, and determines what will be consciously perceived by the subject. The conscious goal guides choice and use of available cultural means (or "mediators") consistent with the circumstances or conditions of task performance, which in turn provide for the construction of processing units allowing for more successful ("attentive") performance and for the awareness of visual stimuli which could otherwise be missed or ignored. Among the most remarkable examples of such mediation are the variety of so-called "word superiority effects" in visual attention tasks Falikman (2008, 2011), which we will discuss below.

To further elaborate on the Bernsteinian framework, the perceptual task accomplishment is controlled at several levels organized hierarchically (cf. Velichkovsky (2002)). Only the top ("leading") level corresponds to the goal and is consciously represented to the observer. We propose that this leading level also determines the size of "perceptual units" available to the awareness. The "unitization" controlled by the leading level through top-down influences in the visual system could be based either on the observer's former experience or on the active strategy selected or built up by the observer to perform the task. This construction of new perceptual units provides for higher performance if it doesn't contradict to the task requirements.

Effects of perceptual units construction on the observer's perceptual activity (e.g. Falikman (2011)) demonstrate that attentional limitations experimentally demonstrated in cognitive psychology since 1950-es are not necessarily limitations of the "information processing system" in general (or its central "limited capacity channel"), but might rather refer to a specific level of perceptual activity organization, which takes on a role of a leading level in the observer's perceptual activity, but could in principle be overbuilt with another level as a result of the strategy applied by an observer to perform the task efficiently.

It has probably become clear that the concept of perceptual task is intimately related to the problem of attention, one of the central issues in psychology of cognition since the rise of classical psychology of consciousness (Wundt, 1896). The concept of attention is probably among the most ambiguous and elusive concepts in psychology, and the very existence of attention as a specific process with its own functions and mechanisms has been challenged a lot of times since the very first steps of psychology as a science (James, 1890) and up to the contemporary cognitive psychology (e.g. Pashler and Sutherland (1998)).

William James, who authored the famous formula "Everyone knows what attention is", proposed to distinguish two groups of the theories of attention: "cause theories" and "effect theories" (James, 1890), a distinction still relevant for cognitive psychology (Fernandez-Duque & Johnson, 2002). "Cause theories" consider attention as a separate process influencing information processing, explaining the effects observed in perceptual task accomplishment, and determining the subjective conscious representation available for the observer's report. On the opposite, "effect theories" treat attention as a by-product of information processing, which can be exhaustively explained from the architecture and functioning of the information processing system, or from the organization of the perceptual task accomplishment. Although the dispute between two types of theories is still far from being resolved. Our approach might be helpful in facing this problem.

In our experimental studies, we used a phenomenon described in the end of the 19th century in Wilhelm Wundt's experimental psychology laboratory by Cattell (1886). This phenomenon, known as the "word superiority effect", has later become a popular target for cognitive psychologists (McClelland & Rumelhart, 1981; Reicher, 1969; Wheeler, 1970). The word superiority effect refers to the better recognition of letters presented within words as compared to isolated letters and to letters presented within random nonword letter strings, when presentation is brief, or masked, or contains visual noise, etc. In the context of recent theoretical discussions, the word superiority effect can be considered as an example of top-down influences upon visual information processing. For us, it is a suitable phenomenon to demonstrate, how mediation and hierarchical structure of activity can be applied as explanatory principles for understanding human perceptual activity. The use of the native language words and letters as stimuli opens vast opportunities of hierarchical organization of visual information for an observer and wide opportunities for a researcher to study a variety of perceptual tasks using the same stimulation. Both letters and words are acquired quite early in the course individual development as a part of culture. Their process is highly automatized across a wide variety of conditions. At the same time, this type of stimulus material allows demonstrating perceptual system

reconstruction and reconfiguration depending on the task, especially if the task (as a goal under given conditions) violates habitual perceptual conditions and requirements, and, therefore, prompts reorganization of perceptual operations available in the observer's individual experience.

Our experiments on the word superiority effects using a variety of attentional paradigms, such as dual-task rapid serial visual presentation, spatial cueing, visual search Falikman (2011, 2014a, 2014b) show that embedding a letter into a larger perceptual unit or "chunk" leads, not only to a more efficient identification of this letter, a result repeatedly replicated in cognitive psychology, but also to a more efficient accomplishment of an attentional task regarding this letter. It is constructive perceptual activity, mediated by the word form, which provides for overcoming "central limitations" described in cognitive psychology and for constructing a conscious representation of a visual object which could otherwise have been lost by an observer. These results echo a constructivist concept of "operational units of perception" introduced within the framework of A. N. Leontiev's activity theory (for a discussion in English, see Zaporozhets (2002)).

We distinguish two types of mediation behind the word superiority effects in human visual perception and attention. They correspond to two types of perceptual units which might be constructed by an observer during the perceptual task accomplishment. We call them "structural perceptual units" and "functional perceptual units". Structural units rely on the observer's prior experience and on memory representations activated during the performance of the task and can thus take place without conscious regulation, even under inattention (Gorbunova & Falikman, 2010, 2011). Functional units are determined by subjective strategies of the perceptual task accomplishment and seem to be a certain mode of processing providing for the more efficient report on separate letters within words (Falikman, 2002). What's interesting, the same strategies of functional unit's construction can in principle be applied to random letters, leading to the same enhancement of processing. For example, in one of our studies (Falikman & Stepanov, 2012) we used a dual-task rapid serial visual presentation (*RSVP*) paradigm with letter-by-letter presentation of mid-frequency Russian nouns, at a rate about 9 letters per second. We have demonstrated that the robust lack of visual awareness known as "the attentional blink" (Raymond, Shapiro, & Arnell, 1992), normally observed in this paradigm, disappears for target letter stimuli embedded in words. Using word and nonword strings with instructions "to read words" and "to identify letters" in addition to an "attentional blink" inducing letter identification task, we have also demonstrated that this word superiority effect is due to the controlled strategy rather than to the automatic word processing. Finally, by introducing an extra probe stimulus in letter strings containing words, we have also shown that the attentional blink does not completely disappear but rather shifts towards the end of a to-be-reported word as a new functional unit of visual information processing. We hypothesize that in the dual-task rapid serial visual presentation, the subject's perceptual activity is internally mediated by the "word form" representation, which becomes a means of this task accomplishment.

On the opposite, when a target letter is embedded in the simultaneously presented word, the mediation seems to be external, and the use of words as cultural means of the

perceptual task accomplishment is more automatized. This hypothesis is supported by our experiments where we've demonstrated the word superiority effect under various conditions of inattention: e.g. within the "attentional blink" in a rapid serial visual presentation of simultaneously presented letter strings forming words and non-words (Gorbunova & Falikman, 2010), and after an invalid spatial cue redirecting the observer's attention away from the target letter string to the opposite side of the visual field (Gorbunova & Falikman, 2011). However, there is no word superiority effect if spatial attention is automatically redirected within words, as, for example, in the perceptual latency priming paradigm (Sinitsyna, 2009). The structural unit cannot be formed in this situation, as compared to spatial redirection of attention away from the word as a whole. We assume that this result reveals a difference between two types of operations distinguished by A.N. Leontiev in his analysis of the structure of activity (1978): "adaptive operations", which have never been consciously accessible and can be considered as adaptations to specific conditions or circumstances of the situation of task performance, and "conscious operations", or automatized actions which had previously been accessible for consciousness. Turning back to our studies of word superiority effects, whereas spatial shifts of attention seem to be basic "adaptive operations" deployed at one of background levels of perceptual activity regulation, construction of information processing units ("unitization") is a flexible "conscious operation" which can be deployed into a goal-driven act if necessary.

Last, but not least, when the word extraction (and thus "unitization") itself requires a separate goal-driven perceptual act, a situation typical of a so-called Muensterberg's selective attention test, in which words are embedded in a number of random letter strings (Burtt, 1917), an observer might avoid using a word as a means of perceptual task accomplishment, when a target is a separate letter within a word. In a number of studies of letter search in large letter arrays (e.g. Falikman (2014a)), we used a modified selective attention task. In the standard Muensterberg test, an observer has to find as many words in a letter array as possible within a limited time. In our studies, observers searched for prespecified letters in a large array of random letters which included words (24 Russian mid-frequency 6-letter nouns). Target letters were either always embedded or never embedded in the words. In the control condition, there were no words in the array. We discovered a dissociation of letter search efficiency (no statistically significant differences between the three conditions) and subjective representation of one's performance (drastic differences between the two experimental conditions, with words estimated as subjectively supporting search only in the first condition).

To understand this dissociation, we compared time-limited search for prespecified letters and search for words in the same letter arrays combining behavioral data and eyetracking (Yazykov & Falikman, 2016). Search efficiency differed in the two conditions: letter search proved much easier and faster than word search (for the same time interval of one minute, mean search performance was 75% for letters and 46% for words). The pattern of eye fixations also differed: when searching for words, observers performed more fixations both between and within words, drastically changing the search pattern as compared to letter search in the same arrays containing words. Therefore, words would

not mediate the observer's search for target letters, even though they might occasionally bias attention towards their locations.

Summing up the examples provided above, linguistic mediation of visual attention in perceptual tasks requiring letter recognition reveals itself through the phenomena which unambiguously show that embedding a target letter in a word allows reorganizing an observer's attention to enhance performance in the attentional task. Within cognitive psychology and cognitive neuroscience framework, we regard mediation as construction of a functional system providing for the efficient perceptual task accomplishment and setting a specific type of interaction between bottom-up and top-down processes in the hierarchically organized human vision. This functional system is aimed at constructing visual information processing units to accomplish the task more efficiently. The concept of "attention" with its effects on performance thus describes the operating mode of this externally or internally mediated functional system.

We believe that our studies establish a framework for the interdisciplinary research program which could be labeled Cognitive Psychology of Activity, and which integrates basic principles and concepts proposed by Vygotsky, Leontiev, Luria and Bernstein with current trends in cognitive science.

References

Allport, D. A. (1987). Selection for action: Some behavioral and neurophysiological considerations of attention and action. *Perspectives on perception and action*, *15*, 395–419.

Anderson, J. R., Reder, L. M., & Simon, H. A. (1998). Radical constructivism and cognitive psychology. In D. Revitch (Ed.), *Brookings papers on education policy* (pp. 227–278). Washington DC: JSTOR.

Asmolov, A. G. (1998). Historical evolutionary approach: Introductory notes. In A. G. Asmolov (Ed.), *Vygotsky today: On the verge of non-classical psychology* (pp. xix–xxix). New York: Nova Publishers.

Asmolov, A. G., Shekhter, E. D., & Chernorizov, A. M. (2016). What is life from the psychological point of view: A historical evolutionary approach to the psychophysical problem. *Voprosy psikhologii.*, *2*, 3-23.

Bartlett, F. C., & Burt, C. (1933). Remembering: A study in experimental and social psychology. *British Journal of Educational Psychology*, *3*(2), 187–192.

Bernstein, N. A. (1967). *The co-ordination and regulation of movements*. New York: Pergamon Press Ltd.

Burtt, H. E. (1917). Professor munsterberg's vocational tests. *Journal of Applied Psychology*, *1*(3), 201.

Cattell, J. M. (1886). The time it takes to see and name objects. *Mind*, *11*(41), 63–65.

Cole, M., & Packer, M. (2015). A bio-cultural-historical approach to the study of development. In M. J. Gelfand, C.-Y. Chiu, & Y.-Y. Hong (Eds.), *Handbook of advances in culture and psychology* (Vol. 6). London: Oxford University Press.

Elliot, A. J., & Fryer, J. W. (2008). The goal construct in psychology. In J. Shah & W. Gardner

(Eds.), *Handbook of motivation science* (Vol. 18, pp. 235–250). New York: Guilford Press.

Falikman, M. V. (2002). Word preference effect and the attentional blink: Who will have the upper hand? In E. V. der Meer (Ed.), *Proceedings of the forty-third kongress der deutschen gesellschaft fuer psychologie* (p. 324). Lengerich: Pabst Science Publishers. S.

Falikman, M. V. (2008). On the linguistic mediation of visual attention. *ISCAR, Ecologies of Diversities: The Developmental and Historical Interarticulation of Human Mediational Forms. Book of Abstracts.*, 62.

Falikman, M. V. (2011). Word superiority effects across the varieties of attention. *Journal of Russian & East European Psychology*, *49*(5), 45–61.

Falikman, M. V. (2014a). Attention and chunking in visual search among letter stimuli. *Journal of the Higher School of Economics*, *11*(2), 150–159.

Falikman, M. V. (2014b). Cognition and its master: New challenges to cognitive science. In *Cambridge handbook of cultural-historical psychology* (pp. 474–487). Cambridge University Press.

Falikman, M. V., & Stepanov, V. (2012). Chunking in rapid serial visual presentation: Consequences for visual awareness. *Neuroscience and cognition: Consciousness and cognitive control*, 33–34.

Fernandez-Duque, D., & Johnson, M. L. (2002). Cause and effect theories of attention: The role of conceptual metaphors. *Review of general psychology*, *6*(2), 153–165.

Gergen, K. J. (1999). *An invitation to social construction*. London: Sage.

Gippenreiter, Y. B., & Romanov, V. Y. (1972). A method of investigation of the internal form of visual activity. In R. MacLeod & H. L. Pick (Eds.), *Perception: Essays in honor of James J. Gibson.* New York: Cornell University Press.

Gorbunova, E., & Falikman, M. (2010). Word superiority within the attentional blink. *Journal of Vision*, *10*(7), 203.

Gorbunova, E., & Falikman, M. (2011). Is word superiority effect the same for attended and inattended words? *Perception ECVP abstract*, *40*(12).

James, W. (1890). *The principles of psychology new york, vol 1*. New York: Henry Holt.

Kelly, G. A. (1955). *The psychology of personal constructs. Vol I, II*. New York: Norton.

Leont'ev, A. N. (1978). *Activity, consciousness, and personality*. Englewood Cliffs, NJ: Prentice-Hall.

Luria, A. R. (1973). *The working brain*. New York: Basic Books.

Malafouris, L. (2013). *How things shape the mind: A theory of material engagement*. Cambridge, MA: MIT Press.

Maturana, H., & Varela, F. (1987). *The tree of knowledge. a new look at the biological basis of human understanding*. Boston: Shambhala/New Science Library.

McClelland, J. L., & Rumelhart, D. E. (1981). An interactive activation model of context effects in letter perception: Part I. an account of basic findings. *Psychological review*, *88*(5), 107–375.

Neisser, U. (1976). *Cognition and reality: Principles and implications of cognitive psychology.* San Francisco: W.H. Freeman.

Neumann, O., Heijden, A. H. C., & Allport, D. A. (1986). Visual selective attention: Introductory remarks. *Psychological Research*, *48*(4), 185–188.

O'Regan, J. K., & Noë, A. (2001). A sensorimotor account of vision and visual consciousness. *Behavioral and brain sciences*, *24*(5), 939–973.

Pashler, H. E., & Sutherland, S. (1998). *The psychology of attention* (Vol. 15). Cambridge, MA: MIT press.

Petrenko, V. F., & Suprun, A. P. (2015). Methodology of psychosemantics in the context of the philosophy of postnonclassical rationality and quantum physics. *Herald of the Russian Academy of Sciences*, *85*(5), 434–442.

Raskin, J. D. (2002). Constructivism in psychology: Personal construct psychology, radical constructivism, and social constructionism. In J. Raskin & S. Bridges (Eds.), *Studies in meaning: Exploring constructivist psychology* (pp. 1–25). New York: Pace University Press.

Raymond, J. E., Shapiro, K. L., & Arnell, K. M. (1992). Temporary suppression of visual processing in an rsvp task: An attentional blink? *Journal of experimental psychology: Human perception and performance*, *18*(3), 849.

Reicher, G. M. (1969). Perceptual recognition as a function of meaningfulness of stimulus material. *Journal of experimental psychology*, *81*(2), 275–280.

Sinitsyna, M. (2009). *Top-down influences upon visual information processing under metacontrast masking*. Master's Thesis. Supervised by Dr. M. Falikman. Moscow: Lomonosov Moscow State University.

Varela, F. J., Thompson, E., & Rosch, E. (1991). *The embodied mind: Cognitive science and human experience*. Cambridge, MA: MIT press.

Velichkovsky, B. M. (2002). Heterarchy of cognition: The depths and the highs of a framework for memory research. *Memory*, *10*(5-6), 405–419.

Vygotsky, L. S. (1978). *Mind in society: The development of higher psychological processes*. Cambridge: Harvard University press.

Wheeler, D. D. (1970). Processes in word recognition. *Cognitive Psychology*, *1*(1), 59–85.

Wilson, M. (2002). Six views of embodied cognition. *Psychonomic bulletin & review*, *9*(4), 625–636.

Wundt, W. (1896). *An introduction to psychology*. New York: Arno Press.

Yazykov, S., & Falikman, M. (2016). Eye movements in spontaneous and controlled word detection in letter arrays. *Psychology. Journal of Higher School of Economics*, *13*(2), 410–420.

Zaporozhets, A. V. (2002). Perception, movement, and action. *Journal of Russian & East European Psychology*, *40*(4), 53–93.

Zinchenko, V. P. (1966). Perception as action in perception and action. In *Proceedings of the 18th international congress of psychology.* Moscow.

Zinchenko, V. P., & Vergiles, N. Y. (1972). *Formation of visual images*. New York: Springer.

New Methodological View of Vygotsky

Stanislav M. Morozov   STANMOR@YANDEX.RU
Moscow State University of Psychology and Education
Moscow, Russia

Abstract

In order to see the true value of the cultural-historical psychology, one may need to view Vygotsky's scholarly endeavor as translational motion, in the course of which earlier developments become natural constituents of the later ones. During the first years of his academic career, Vygotsky introduced a number of important assumptions that he developed later in his theory of verbal thinking, which he had no chance to finish: the subject of Psychology is the process of people's interaction with their social environment; the driving force of the intrapsychic world's development is self-development which is based on a contradiction between meaning and sense; the person who gives birth to meanings is a totally new creature, i.e. a totally new subject of Natural Science. Careful examination of Vygotsky's ideas leads us to a number of assumptions that introduce drastic changes to our understanding of the subject of psychological research. Thus, Vygotsky's cultural-historical psychology seems to be a system that contains a significant methodological potential, rather than just a scientific theory.

Keywords : Vygotsky; Subject of psychology; Postnonclassical science.

CR⁎RES

The world psychological community draws ever more attention to the work of the remarkable Soviet psychologist L. S. Vygotsky. However, Vygotsky is often treated as a psychologist who has created, albeit interesting, but just one of many psychological theories. In our opinion, this approach to the cultural-historical theory is a consequence of a serious underestimation of Vygotsky and his followers, among whom I would give the first place to A. N. Leontiev.

Unfortunately, most psychologists turn to, of course, an important, but not the only, concepts created by L. S. Vygotsky at the turn of the 20s-30s the last century: interiorization, the highest mental functions, a zone of proximal development. Less attention is drawn to the theoretical propositions expressed by Vygotsky at the very end of life: in the book *Thinking and Speech* and, most importantly, in the last chapter of this book.

To understand the theory of speech thinking, L. S. Vygotsky's scientific activity should be viewed as a steady movement from an almost behavioral approach that is characteristic for Vygotsky, who arrived from Belorussia to Moscow in 1924 and became an employee of the Moscow Psychological Institute, to an existentialist view of the inner world of man, what was expressed in the last years of his life. Between these two points (the initial and final) is the period (1927-30), in which was formulated the above are so popular today concepts. But the author of cultural-historical psychology, he lived for another four years, which are considered by many psychologists as a simple quantitative development of ideas formulated before 1930.In our opinion, the movement of Vygotsky's scientific thought is not a transition from one (exhausted) position to another, i.e. from theory to theory. This movement is a progressive development, during which earlier developments become organic constituents of later ones. this implies that **it 's impossible to understand all the parts of Vygotsky's psychological system if we forget about the organic connection of all its elements.**

1. The subject of psychology in the theory of interiorization.

L. S. Vygotsky came to psychology in the years of severe crisis that shook our science. It was a time of enhanced searches of the subject area, which psychologists should deal with. There were new psychological schools, insisting on their rightness. I stress: the psychological schools, which modern textbooks tell, differ qualitatively from the traditional understanding of the term "scientific school". A scientific school in the traditional sense is a group of researchers who are engaged "part" of the subject area. Psychologists in the early twentieth century were argued about what the object of psychology is: consciousness, unconscious, gestalt, behavior, etc. Cultural-historical psychology also offers its own idea of what psychology should.

L. S. Vygotsky said: *it's not about the number of schools*. The fact is that these schools don't have an adequate methodological basis. To overcome the crisis, we need a new methodology, which can only be Marxism. In this way, Vygotsky has initiated the construction of the so called cultural-historical psychology.

In the first years of his work in Moscow, L. S. Vygotsky makes a number of important provisions, which later became the basis of his ideas about the subject of psychology:

- Qualitative difference of the subject of psychology.

L. S. Vygotsky came to Moscow as a researcher who had kept in the methodology of the Marxist version of Hegelianism. Vygotsky arrived in Moscow formed a researcher adheres to the methodology of the Marxist version of the Hegelian, and in the specific scientific field - a peculiar version of behaviorism. Today, such a set may seem eclectic, but the fact of the matter is that Vygotsky's behaviorism was based on the idea of including a person's consciousness in the reflex circuit. In Vygotsky's opinion, the task of psychology is to find qualitative differences in human reflexes. And really, the similarity of man with other living entities is the ability to respond to changes in the environment. However, human's reaction are qualitatively (and not quantitatively) different from those of a frog or amoeba. It means the need to search for special laws, which the person follows.

- Naturalness of the subject of psychology.

L. S. Vygotsky is convinced: psychology can only be a section of natural science. But not because psychology must engage of an objective subject with the help from experiment. Such positivistic views always caused Vygotsky serious doubts. Vygotsky denied the ideas of behaviorists who considered natural science as such a psychology that allows them to predict and control behavioral acts and gestalt psychologists who wanted to create a natural-science metatheory like physics. Vygotsky himself saw the scientific meaning of psychology precisely in the naturalness of its subject matter.

Under the naturalness of the object, L. S. Vygotsky understood his ability to self-development and the presence of two components in such a natural object: real and spiritual. Thus, according to Vygotsky, the subject of natural science is a living system. Apparently, such an interpretation should cause confusion among most modern representatives of natural science. However, such doubts, in our opinion, can be overcome by referring to Vygotsky's ideas about the method of psychology.

The method of psychology should be the analysis of psychological units, i.e. such tiny "particles" of the subject, in which the main properties (ie, attributes) of the subject of psychology were contained. At the same time, we musn't forget that L. S. Vygotsky's speech is not only about units, but also about the cells of psychological analysis, i.e. About the original forms of the inner world of man. Thus, we come to the notion of a man as a self-developing system that has received its present identity through the transformation of the oldest forms. And this means that any "particle" of live must contain the parent form of consciousness. We thus come to the peculiar panpsychism, for which it is not the presence of consciousness that is characteristic, but some qualities that it would be logical to call its parent forms. Thus, we come to the conclusion about **a living and spiritualized nature in all forms of its existence**.

- The inbornness of the subject of psychology.

In the theory of interiorization L. S. Vygotsky distinguishes two lines of the child's mental development - "natural" ("inborn") and "cultural" development. Often these two lines are interpreted by psychologists as a ratio between the biological and social, which leads to the conclusion that the creator of cultural-historical psychology believes that the child is born as a biological being that becomes social (cultural) in the process of socialization.

In our opinion, the relationship between the natural and the social in L. S. Vygotsky looks different. A newly born person with all its set of functions (including mental ones) is not at all a biological being naturalized, but biological. In order to understand what is at issue, it is enough to recall that Vygotsky contrasts the concepts "biological" and "natural": the subject of Marxist psychology is natural, but not biologic. Biological, of course, participates in the development of higher mental functions, but in so far as the social participates in the organic development of man. Let's pay attention to how Vygotsky carefully uses the terms "natural" and "biological" when he talks about mental functions: natural - yes, but never biological. Psychology should be regarded as a natural science, but not as the biology section.

Of course, all this does not mean denying the problem of the relationship between social and biological. Moreover, one can clearly say that the organic development of the child involves two "factors": biological and social. However, L. S. Vygotsky answers the fundamental question of philosophical anthropology - the question of the relationship between biological and social determination of activity - using the principle of sublation, developed in the philosophy of Hegel. In accordance with this theory any level of development is a carrier of content preceding levels. "Genetically" earlier content in shot form is contained in younger formations. Hence, in particular, that the whole history of mankind is present in all of us. But each of us has this story amid its personal, individual experience. The old is present in the new, but is present in a hidden form. Here grows development methodology which was used by Vygotsky throughout all his life in psychology. The principle of sublation determines the ratio of higher mental functions and natural mental functions. We can say that the lower, elementary processes and patterns that govern them represent the processes of sublation.

There are several levels, determining the functioning of higher mental functions. Firstly, is biological level. Indeed, no one has ever seen a man (with his psyche, consciousness), which would not have certain biological traits (biological mass, a certain way of organized physiological structures, etc.). Secondly, it is "organic", i.e. the same biological components, but already before us as "acculturation". This organic maturation plays of a role than the engine of progress cultural development. Finally, it is actually the level of cultural behavior, which determines the flow of cultural forms of human behavior and is inherently social. It is characterized by cultural development of man as man.

L. S. Vygotsky explains in detail his position on the relationship between the biological and social - the ratio, which for him was equivalent to the correlation of lower and higher forms of behavior, lower and higher mental functions: the biological is sublated, preserved

in the social, but not separated from the last as this ratio is often explained in modern psychological theories. Social, thus, is the dominant format of activity - a format that subordinates the biological.

All this leads us to the idea that the problem of "social or bio-logical" is not essential for the author of cultural-historical psychology. As a matter of fact, this is a problem of philosophical analysis, like any other problem of the correlation of "levels" of reality ("levels of the motion of matter", as Marxists call it). Man is neither biosocial, nor socio-biological, nor even biological education, but only social education.

2. The subject of psychology in the theory of speech thinking.

- Self-development of the subject of psychology.

By 1930, L. S. Vygotsky completed the construction of the theory of interiorization (part of which was the theory of higher mental functions). But the author of the cultural-historical theory lived another four years. And the rest of his time he devoted to the creation of the theory of an active, free man - the theory he set out in the last book, *Thinking and Speech*. Here Vygotsky does not limit himself to consideration of the process of interiorization, i.e. the transformation of the "external" into the "inner".

Apparently, the theory of interiorization he created does not fully satisfy the author. At the center of this theory is the "stimulus-tool", i.e. the instrument by which we mediate our interaction with nature. Having received the embodiment, the stimulus-tool becomes a sign, i.e. psychological tumor, mediating interaction of the components of our inner world. L. S. Vygotsky calls the inner world of man a psychological system, thereby emphasizing its integrity and non-additivity. Such a system, asserted Vygotsky, is subject to its inherent laws of dialectical formation, i.e. self-development.

But the theory of interiorization does not give an answer to the question: where does freedom begin, what are its sources? Hence L. S. Vygotsky's appeal to Hegel's philosophy. All nature, which, in the end, turns into an absolute spirit, according to Hegel, is a living organism. What is necessary, that the natural formation developed itself? Hegel believed that in every organism there are opposites that contradict one another. The struggle of such contradictory principles gives energy that allows the organism to develop. As Vygotsky says, if we find contradictory principles in the person himself, we will understand what freedom is. The subject of psychology is lively, and it must also contain contradictory formations. This is what Vygotsky begins to think about in the last years of his life. These reflections lead the author to construct a theory of speech thinking. Here the speech thinking is taken by the author as a model of the subject of psychology. In this process - in the process of speech thinking - there is some element that contains the qualities of the whole subject of psychology. Such an element, in Vygotsky's opinion, is value as a process of transition from thought to word and back, i.e. the process of transition from outside to inside, and vice versa. Thus, Vygotsky introduces, along with interiorization, another

mechanism - exteriorization. Not only from the outside, but also from the inner outside - that's what the psyche is.

What in this process contradicts each other? When we transform our inner world into the form of the external world, we produce exteriorization. For example, a person, telling something, expresses his inner world outward. The listeners react in some way to the text they hear, and the narrator perceives these reactions of listeners. The inner world of the narrator changes, when information returns to him. Any interiorization is accompanied by such changes. This change constantly and continuously happens to all of us.

But that is not all. We are constantly interacting with the world. Peace for man is always people and things made by people. We communicate with people. And in the process of communication, we understand each other. The question arises: what is understanding? For the answer, take a word. Let it be the word "cow". What image arises in our consciousness when we hear this word? Every person has his own image. Someone has a cow "out of the textbook", giving milk, someone - a village in which this person saw a cow, someone has footage from a movie, etc. But when we talk to each other, all these images do not spill out. The fundamental limitation imposed by nature on man is the impossibility of a complete expression of the inner in the outer (words in sound, as L. S. Vygotsky would say).But we hear the word and understand each other. Hence, in our inner worlds there is something that unites us - something in common. This means that in our inner world there are two components coexisting: what unites me with other people (this component is suggested by Vygotsky as significance), and what belongs to me alone (this entity Vygotsky calls sense). Each of us has its own internal image (meaning). But in the external embodiment, our images are not identical to each other, since the experience of each of us is unique: not everyone has a grandmother in the village and not all watched the famous movie, and if they did, they did not necessarily remember what the other person remembered. But if we are able to understand each other (and we are capable of), then there is something in our inner world that unites us all. Hence, our inner world is twofold: it has something purely individual and something common to all. It consists, as philosophers say (and some psychologists, such as E. Fromm), from a certain A and not-A.

- Integrity of the subject of psychology.

In accordance with the theory of speech thinking, the inner world of man includes two components: meaning and significance. The contradiction between significance and meaning is the very driving force behind the formation (self-development) of the inner world of man. But these two components are not something close. This is integrity, i.e. the quality of an object, by which, what we had not shared such a holistic subject, always in each part we find two contrary components, i.e. the sense and significance. Thus L. S. Vygotsky (along with Hegel, Marx, Fromm, Heidegger, etc.) casts doubt on the law of identity formulated by Aristotle and which became the basis of the scientific worldview for millennia. If you believe Hegel, Marx, Husserl, Fromm, Vygotsky, this is not so: And not equal to yourself.

- Sociality of the subject of psychology.

In the science of the nineteenth and early twentieth centuries, the atomist approach prevailed, according to which understanding is from simple to complex. We always consider social organisms to be more complex than biological organisms. Therefore, the traditional understanding of the subject of psychological research presupposed a transition from less complex biological elements to a more complex social whole.

L. S. Vygotsky resolutely passes from atomism to a holistic approach: to understand the biological, that is, the bodily component of a person we can only if we first examine the nature of the qualitative identity of the human being: first social, then biological - this must be the path of psychological research.

Thus, psychology should place at the beginning of its research not the consideration of the interaction of initially biological elements, in the process of their interaction generating the social essence of man, but the process of interaction of cultural and historical artifacts-an interaction that generates a new quality of human's parent forms, including its biological component.

The principle of development, which is fundamental in L. S. Vygotsky's theory, leads the author to another important thesis: man is only a social being. Of course, any proponent of the theory of development cannot ignore the biological component of man. But this does not mean that a person is a biological organism, which in the process of evolution has a new element - consciousness. In accordance with this logic, one could say that biological organisms are chemical elements with new biological constituents, and chemical elements - physical entities with chemical "additives". However, biologists have enough common sense not to call a frog a chemical-biological being, and chemists do not insist that the organic compound is a physico-chemical entity. The meaning of Vygotsky's theory, we believe, is that the status of a particular "subject" is determined not by its material components, but by those laws under which one or the other organic system. **Man is guided only by social laws, and that is why he is a social being.**

- A new method of psychology.

The inner world of man as a holistic formation is very difficult to know. The method of experiment is not suitable here. After all, the experiment is so conceived that it was possible to investigate some part of the subject. The experimenter purposely purifies the variables, i.e. decompose the whole into parts and study the selected "piece" of the subject. This "piece" of experimenters is called the "dependent variable". This variable should be properly "cleaned" so that no "additional variables" prevent us from "seeing" the selected part exactly. Clearing a variable means releasing it from all the influences of the external context, except those that are of interest to the experimenter. Researchers rarely think about the fact that among such discarded influences there are also those without which the organism under investigation simply does not exist in real life. These reflections lead L. S. Vygotsky to the necessity of constructing a special psychological method, which he calls the method of analysis by units.

A unit of psychological analysis is the minimal "part" of the subject of psychology, containing the basic properties of this subject. L. S. Vygotsky illustrates this definition by an example borrowed from Gestalt psychologists. When a chemist has to study water, he does not study all the water available on Earth, but takes a water molecule. Having studied its properties, we learn the properties of all other water molecules. The psychological unit Vygotsky calls meaning. A little later, he introduces corrections: not the meaning, but the experience - that's what the unit, which contains the main components of the psychological process. Experience is a significance that is "saturated" with a person's emotions - an "affective field", as Vygotsky calls it.

3. Prospects.

The uniqueness of the person is most fully indicated by L. S. Vygotsky in the theory of speech thinking, which was never completed by the author. Nevertheless, the available statements of the author of cultural-historical psychology allow us to outline the prospects for the further construction of psychological science.

- Postnonclassicality of Vygotsky's theory.

L. S. Vygotsky's cultural-historical psychology is not just one of the scientific theories, but a methodological system that contains a significant potential for transforming the foundations of the world outlook of mankind. This is - postnonclassical science, if you use the terminology of the Soviet philosopher Stepin (2000).

V. S. Stepin proposed a special periodization of the development of science. In accordance with this classification, the classical period of development of science is replaced by "nonclassical", and then - "postnonclassical" science. Stepin conducted a study of the formation of the physical science of the twentieth century, when the so-called quantum physics, the physics of elementary particles, began to be created. Based on a thorough analysis of the works of scientists of that period - and Stepin was engaged in literally line-by-line research of texts, archives, drafts - the Russian philosopher comes to the following conclusions. At the stage of classical science, the subject was interpreted as an object independent of the researcher, and its goal was to search for objective truth. Nature here is seen as a simple mechanism, a model of which are mechanical devices. The heyday of such a science - XVII - sec. half. XIX centuries: from R. Bacon and R. Descartes to E. Mach.

At the beginning of the 20th century, in science (first of all, in physics) a new nonclassical stage began. For this stage, it is characteristic that the researcher does not consider that the object exists by itself, regardless of the device by which the research is carried out. The device affects the results that we get. Such an "instrument" can be considered the scientist himself. Physicists have formulated this position in the form of the "principle of uncertainty" and the "principle of complementarity", when we can investigate either the mass or inertia of a particular body, depending on what the research setting is aimed at.

The next stage of V. S. Stepin gave the title *Post-non-classical science*. Post-non-classical science deals with complex self-developing systems. One of its key features is the humanization of the object of research, i.e. the inclusion of man in the evolution of the world process (the anthropic principle). In other words, the reality of post-non-classical science is relations, connections and processes, in which a person is included. For post-non-classical sci-ence, global evolutionism and systemic character are characteristic, which can be combined into the principle of systemic historicism, as well as processual. The main principle of such a science is holism, in which subject-object dualism is erased. If at the previous stages of the formation of science the object is regarded as independent of the subject, now science begins to work not with the objects themselves, but with the models of objects. The main goal of post-non-classical science is the adequacy of the theoretical model to the actual state of af-fairs. Therefore, the truth of the obtained theories can only be relative, and axiological factors are included in the explanation. In other words, the truth of knowledge is not associated with absolute truth, but with social significance.

The classification of the philosopher V. S. Stepin, who divided science into classical, nonclassical and postnonclassical, has a direct relation to a similar classification proposed by Elkonin (1989a, 1989b), who called the cultural-historical theory of L. S. Vygotsky non-classical psychology. Of course, Elkonin was not a professional science scientist, as Stepin, and his term was introduced, rather, by virtue of intuitive insight. In other words, the term "non-classical psychology" came to us as if from two sides. On the one hand, from a professional philosopher who has been dealing with this problem for many years. On the other hand, from a psychologist.

The L. S. Vygotsky"s theory of speech thinking is a leap into postnonclassical science. Entering into communication with people, we ourselves become an element of this situation. Not just we influence the situation from the outside, but we are inside. As an example, you can name psychotherapy, whose representatives - and, relating to different schools - often talking about therapist should consider himself as an element of the psychotherapeutic situation. A person becomes part of a psychological system. And this system should be holistic. For now - it is difficult to explain and in many ways incomprehensible organism. But this is the meaning of the term "post-nonclassical science": I do not just influence the subject of research, but I form a single whole with it. Perhaps, the post-nonclassicism of Vygotsky's theory is best clarified when considering his psychotechnical approach.

- Psychological practice as a psychotechnics.

L. S. Vygotsky believed that in the process of psychological work the internal processes of participants in psychological practice are united. Moreover, a person is always in a state of work, i.e. certainly produces a soulful engagement with the world with tools. But there is no better place to study a man than his workplace, because it is here that the essential forces of a person are revealed in a concentrated form. At the same time, one must bear in mind that the term "labor" did not mean that we, representatives of the consumer society, understand today. In the philistine mind, labor is understood as the process of carrying out some work for money (wages). Marxist philosophers have not analyzed this work. Labor from the point of view of Marxism is a process of transformation of nature. Work

is the process of creating artifacts, i.e. products of human activity. In this sense, we are constantly in the process of labor, a particular case of which is the ordinary daily work of man. It is here that a psychologist can find his subject in the most "pure", concentrated form. This is the logic of Vygotsky.

But the study of man in the process of labor should not be reduced to the identification of elementary labor movements, as the founders of European and American psychotechnics G. Munstenberg and V. Stern asserted. A psychologist who studies a person must "penetrate" the inner world of a person and try to modify his inner world together with him. How can this be done? Cultural-historical psychology does not give a detailed answer to this question, but L. S. Vygotsky still has some options for this answer.

At an international conference on psychotechnics, held in the early 30's, in the capital of Spain, Madrid, L. S. Vygotsky in the following way reveals the content of his understanding of psychotechnics. In his speech, the creator of cultural-historical psychology calls the study of higher mental functions in the child the main direction of Soviet psychotechnics. It turns out that everything we usually consider as a cultural-historical approach, for Vygotsky himself, is a psychotechnical approach. Psychotechnics for him - not the compilation sequence of the labor action, but the technique of working with the psyche. So psychotechnics must deal with the mediation, systemic, sociality of the inner world of man and the search for compensatory paths that help us overcome difficulties. This means that psychotechnics must form a correct image of the world for a person.

How to form such a correct representation? As an answer to this question, L. S. Vygotsky offers a theory of the zone of proximal development. In accordance with this theory, the student has the opportunity to learn something himself, but he can overcome more difficult questions only with the help of the teacher. What should the teacher do to help the student? Vygotsky believed that the role of the teacher is reduced to an adequate disclosure of the so-called scientific concepts. I think we should add one more point to this. The teacher must create sensible ways of assimilating scientific concepts. In other words, the teacher should be a methodologist, translating scientific concepts into a sensible-perceived form. In particular, P. Galperin argued in his theory of gradual formation of mental actions. Actually, this is the work of psychotechnics - the formation of the student's inner world through the use of sensible learning tools.

In the second half of 20th century an other psychotechnical method was offered by the famous American psychotherapist, one of the creators of humanistic psychology K. Rogers. He called this method - "empathy". Empathy is the penetration of the psychotherapist into the inner world of a person. And it is interaction in the course of interpenetration of spiritual essences of the psychotherapist and the client. As a result, there are two people in each: the client starts to reason as a psychotherapist, and the therapist - as a client.

- The generation of senses as an attribute of man.

An important thesis formulated in the context of the theory of speech thinking is the principle of self-development of the inner world, based on the contradiction between sense

and significance. Considering the human experience as a unit of psychological analysis, the author of cultural-historical psychology asserts that the subject of psychology is the process of transition from internal to external (exteriorization) and back (interiorization). The result of this process is a constant change of the scope of human senses.

Human experiences are "saturated" not only with its affectivity. Behind the affective field, says L. S. Vygotsky is the life of man. Thus, the unit of psychological analysis (and, therefore, the subject of psychological research) is the bearer of all the experience accumulated by man. Here, the main mystery of man is hidden: in fact, each of us is the bearer of meanings that constitute the existential characteristic of a person.

Thus L. S. Vygotsky comes close to the idea of the production of meanings as the most important function of man. Since the meanings are always unique, individual entities, we approach the issue of understanding and, in particular, **mutual understanding of people**. Apparently, **here we can find a field of possibilities for the introduction of psychology not only in the situation of interpersonal conflicts (this is still one of the spheres of application of the forces of psychologists-practitioners), but also in the system of interstate conflicts, which are based primarily on intercultural differences.**

The peculiarities of this mechanism will be revealed to us if we consider the following construct "value as the fifth dimension" formulated by A. N. Leontiev in a posthumously published article devoted to the category *Image of the World* (1983). We perceive the world, says Leontiev, in its spatial-temporal characteristics. But the world is always perceived in refraction through our meanings. If we perceive the world around us, then this world is not the same for each of us. Each person refracts the world, as if a kind of prism is placed between us and the world. The exteriorized "inner" world, socializing, returns to us and further individualizes our psychological system.

In the concept of "significance as the fifth dimension", Soviet psychology attempted to measure the ideal and material, extended and unextended substances, in the language of R. Descartes, to overcome the Cartesian-Lockean dichotomy, in the terminology of A. N. Leont'ev.

What does it mean to be the fifth dimension? This means that internal attitudes and semantic fields transform spatial and temporal characteristics so that they acquire unexpected and unusual characteristics from the point of view of an outside observer (and sometimes the subject himself). We find convincing empirical evidence of the idea of the "fifth dimension" in various scientific and parascientific studies. We note in this connection the empirical facts obtained in the course of experiments with persevered vision, the placebo effect, repeatedly obtained in the work on the evaluation of medicines, as well as the so-called parapsychological effects, distortions of perception of time in extreme situations.

- Interaction as an object of natural science.

The subject of psychology should be understood not as a collection of elements, but as a process that generates its elemental base. Not things that have a variety of qualities come into contact with each other, and in the process of interaction things acquire their qualitative certainty. Thus, cultural- historical psychology raises the question before the whole complex of natural sciences: isn't it time to change the initial attitude of all-natural science and to make human interaction researcher and study of nature the starting point of any research?

- Psychology in the system of sciences.

For L. S. Vygotsky, the basic principles are the evolution and sociality of man (this, in fact, allows us to call him a psychological system of cultural-historical). But this is not the two factors, through which a man. It is an integrated system, in accordance with the laws of which the inner world of human senses, which is the main distinguishing feature of the new natural education (let's call this education "people that generate senses" - "Homo sensum"), is a new, qualitatively different natural formation. This novelty consists in the novelty of the laws to which man obeys. Just as in the organic compound, which, of course, obeys the laws of physics, physical laws go to the background, leaving the primacy behind the laws of chemistry, and biological organisms obey the laws of biology, so the laws that govern a person make the laws of physics, chemistry, biology, etc. laws the second level. Hence the conclusion: in front of the psychologists there is a global task of **revising the ratio of the Sciences from the standpoint of the rule of laws that govern people**.

If we accept the foregoing, then we must admit that the theory of L. S. Vygotsky contains provisions that lead us to the conclusion that it is necessary to transform the entire modern system of views on the system of sciences. Traditionally, the main in this system was physics, as a science dealing with the fundamental elements of the universe, from which the universe "forms", including Homo sapiens. The culturalhistorical paradigm forces us to turn this belief to 1800: we will not come to a new knowledge until we analyze Nature as a product of its interaction with its new formation Homo sensum. Thus, psychology should become the science that will form a new picture of the world.

This position can be illustrated with the help of the well-known classification of sciences by J. Piaget and the similar conception of the Soviet philosopher B. M. Kedrov. These researchers believed that psychology is located in the center of the conditional triangle, the angles of which are social, natural and technical sciences. L. S. Vygotsky's theory allows us to assert that this triangle should from the plane become a spatial figure - a pyramid, the top point of which is occupied by psychology. Of course, such an approach requires a revision of the very foundations of the psychological science, which should turn from an experimental-theoretical into a philosophical-practical one, i.e. engaged in the comprehension of man in its integrity (activities, as called such integrity A. N. Leontiev).

*****

The development of cultural-historical psychology seems to us not a quantitative, but a qualitative leap that led L. S. Vygotsky to a completely new vision of the subject of psychology. It was this vision that he set out in the last book, *Thinking and Speech*. Moreover, in the concluding 7th chapter of this book a variant of cultural-historical psychology is presented, which allows us to speak about the transition of its author to a new stage in the development of the theory. The new building of the theory, which, we think, moved toward the existential interpretation of human existence, and remained unfinished. Moreover, it is difficult to say how such a theory could have been created in the conditions of the Stalinist tragedy that was approaching the Soviet Union in the 1930s century.

Our interpretation of Vygotsky's theory, rather, raises many questions than answers. This vision of the subject allows a new light on the relationship between the so-called natural and humanitarian sciences. L. S. Vygotsky tells us: the whole life of a person, the formation of his inner world, occurs by constructing the subject that "adapts" us to an ideal object. Science is only a particular case of this universal law. But even more serious conclusions can be drawn from the psychology of Vygotsky, if we ask ourselves questions directly following from that psychagogical (A. Kronfeld, M. Fuko) approach. One of the main questions: who can teach a new understanding of the world around us? In other words: what is the truth that should be passed on to the disciple? These questions, especially the latter, look utopian. But this does not mean that they are not relevant. And if modern education has allowed the use of the word "competence", then someone should respond to less complicated, and even more dangerous, questions: what competencies should a person have receiving modern, and not only psychological, higher education? Is education reduced to mastering ready-made technologies? Or these technologies should be used only in the context of ideological installations, i.e. in the context of the moral principles on which the existence of human society is built? Hence the direct question: are there any moral limitations for science? Thus, the questions posed in Vygotsky's theory directly lead us to the problem of the ethics of science. In short, Vygotsky's theory is an ideological paradigm that, if it ever overcomes those natural barriers that inevitably must exist in its path, can turn our ideas about man and the ways of its existence. This kind of psychotechnics, I think, can be called a natural-scientific postnonclassical psychology.

Thus, Vygotsky's cultural-historical psychology is represented not simply by one of the scientific theories, but by the postnonclassical methodological system, which contains a noticeable potential for transforming the foundations of the world outlook of mankind. Of course, the traditional thinking of our contemporaries is hardly ready for a rapid change in established opinions. Therefore, I think, L.S. Vygotsky will long be one of the most underappreciated thinkers of the 20th century.

References

Elkonin, D. B. (1989a). About the sources of non-classical psychology. In D. B. Elkonin (Ed.), *Selected psychological works* (pp. 475–478). Moscow: Pedagogy.

Elkonin, D. B. (1989b). Vygotsky today. In D. B. Elkonin (Ed.), *Selected psychological works*

(pp. 469–475). Moscow: Pedagogy.

Leontiev, A. N. (1983). Image of the world. *Selected Works in Psychology*.

Stepin, V. S. (2000). *Theoretical knowledge: Structure, historical evolution*. Moscow: Progress-Tradition.

The Perception of Art as a Higher Mental Function

Dmitry V. Lubovsky   lubovsky@yandex.ru

Department of Educational Psychology
Moscow State University of Psychology and Education
Moscow, Russia

Abstract

The concept of higher mental functions applied to the perception of artworks. Considering art as a system of means for mastering of emotions and feelings, the authorshows that this interpsychic system of means for mastering the feelings and emotions through the processing of aesthetic experience is a conscious, mediated by speech and arbitrary dynamic system of artistic images perception and the processing of aesthetic experience. Perception of artworks becomes arbitrary, if a person realizes the cultural norm of relation to the arts, representing the ability and desire of the viewer to see in the artwork of thoughts and feelings appropriate to the author.

The formation of art perception, like any other higher mental functions takes place in accordance with genetic law of cultural development according to which "Every function in the cultural development of the child appears on stage twice" (Vygotsky, 1983, p. 145). The author shows that the perception of art as a higher mental function is formed on the entire life through the perception of works of art and the assimilation of aesthetic experience.

The approach to the analysis of perception of works of art proposed by author can find application in different social practices, from art pedagogy to art therapy; it allows to select the period of development of this function in childhood and adolescence as requiring the greatest attention by teachers and parents. The approach is applicable also in a psychological counseling and art therapy for adolescents and adults.

The theoretical principles of L. S. Vygotsky's cultural-historical theory are being used ever wider. In particular, the notion of higher mental functions is used in areas where previously it was not used. Meanwhile, this concept, paradoxically, still is not used to the field of study where Vygotsky began to create cultural-historical theory on a material of the perception of artworks. "The central idea of the psychology of art, we believe the recognition of overcoming the material by art form or what is the same, the recognition of the art as a public technique of feelings" (Vygotsky, 1968, p. 12). In other terms, the art is a created by people and depicted in the culture as works of art and literature system of means for mastering of our emotions and feelings. But, obviously, the experience gained by the person from the perception of works of art cannot help her/him to process feelings and emotions, if the intrapsychic system of means for mastering the feelings and emotions wasn't formed through the processing of aesthetic experience.

The entire cultural-historical theory created by L. S. Vygotsky after his "Psychology of art", argues that this system of means for mastering the feelings and emotions is a higher mental function, i.e., conscious, mediated and arbitrary functional system for perception of artistic images and the processing of aesthetic experience. The awareness of aesthetic experiences is mediated by the word; this function is a system where the passion is inseparable from intellect in this structure and cognitive processes form a living system used by the viewer or reader for understanding of artworks. Perception of works of art becomes arbitrary, if it implements the cultural norm of the relation to arts, i.e. the ability and desire of the viewer to see the work of thoughts and feelings appropriate to the author's idea (Guruzhapov, 1999). An attempt to understand, the intent of the artist is a conscious effort, what makes the perception of artworks an arbitrary mental function.

The formation of art perception, like any other higher mental functions, takes place in accordance with genetic law of cultural development according to which "Every function in the cultural development of the child appears on stage twice, in two plans, — first social, then — psychological, first between people as an interpsychic category, then within the child as an intrapsychic category" (Vygotsky, 1983, p. 145). Like any other higher mental function, this kind of perception is formed over many years, in childhood and adolescence in the process of art education and throughout life, in the process of obtaining aesthetic experience.

The perception of works of art and the assimilation of obtained aesthetic experience develop this function throughout human life always when a person is drawn to art to resolve the problems of spiritual development. The formation of perception of artistic images as a higher mental function is one of the decisive conditions for acquaintance with the work of art became the encounter facilitating change itself. Any encounter with an artwork is initiating the experiencing as an internal activity, "by which a person is able to overcome certain (usually severe) life events and conditions, to restore the lost mental balance, in short, to cope with the critical situation" (Vasilyuk, 1984, p. 12), becomes a step in the development of mastering their emotions and feelings in case that the encounter as an event was completed and the resulting spiritual experiences are assimilated. But in order to meet the aesthetic experience took place, it is required that the person had, in addition

to passions, a system of artistic perception means allowing to perceive the emotions and feelings inherent by the author in the work.

The approach to artworks perception analysis proposed in this article can find application in different social practices, from art pedagogy to art therapy. This approach allows selecting the period of development of this function in childhood and adolescence which requiring the greatest attention by teachers and parents. The approach is applicable also in a psychological counseling and art therapy for adolescents and adults.

References

Guruzhapov, V. A. (1999). *How to teach children to understand art. essays on the psychology of the generation of the meaning of the paintings and drawings*. Moscow: RIA "My i mir".

Vasilyuk, F. E. (1984). *Psychology experiences. Analysis of overcoming critical situations*. Moscow: Izd-vo Mosk. University Press.

Vygotsky, L. S. (1968). *Psychology of art. 2nd edition*. Moscow: Iskusstvo.

Vygotsky, L. S. (1983). *Collected works in 6 volumes. Vol. 3. Problems of psychic development*. Moscow: Pedagogika.

Lev Vygotsky: From Theator to Psychology

Vladimir S. Sobkin   SOBKIN@MAIL.RU
Russian Academy of Education
Moscow, Russia

Abstract

The article presents the analysis of L. S. Vygotsky's works dedicated to the theater arts and is organized according Vygotsky's different life and work stages. Meanwhile, special attention is paid to the Gomel period during which a large number of reviews were written by Vygotsky and publishe in "Nash ponedel'nik" and "Polesskaia pravda" newspapers. It is shown that even at the beginning of his work, he was interested not only in a range of problems in art, but also psychological problems related to art perception and creativeness. Vygotsky's usage of structural concept ideas about the peculiar properties of literary text composition are also explored. Vygotsky analyzes the socio- psychological mechanisms of theatrical art effect. Furthermore, those areas which are widely used by Vygotsky in determining the characteristics of cast reincarnation are examined. Special emphasis is placed on the different elements of the actor techniques (speech, movement, emotional expression, acting personality and etc.). Materials are widely used in this study and help identify the socio- cultural context that defined Vygotsky's values at different stages of his work, related to his drama criticism and his formation as a professional psychologist.

Keywords : L. S. Vygotsky; Theater arts; Drama criticism; Sociology of art; Theater as a social phenomenon; Levels of structural text analysis; Acting activity; Psychology of the actor reincarnation technology; Theatrical action logic; Psychotechnics; Sign–meaning–symbol.

1. Vygotsky about Hamlet

L. S. Vygotsky's interest in theater was shown already at his youth. The most known is his work about Hamlet (1915-16). In this work, special attention is paid to an originality of the psychological the reader-critic's attitude towards the text of the play. In this early work, Vygotsky uses the special psychotechniques of interpretation allowing to consider the tragedy as the special "sign system" causing emergence of esthetic experiences. The original of "Nonclassical Psychology" of Vygotsky can be found in this position.

In reading Vygotsky's Hamlet, attention should be directed to three points that, in his opinion, characterize the unique position of the reader-critic: (1) that the defining juncture that prompts a reader's critique is not merely a positive axiological attitude toward a work but the special emotional state of "delight" [vostorg] with which a critique begins; (2) that the reader-critic should be connected directly to the work itself, never breaking away from the text, which is the sheet music that inspires him to play the melody of his own experiencings; and (3) that, with due allowance for the possibility of varying interpretations, the reader-critic seeks to approach the work not from the outside but "from the inside," conveying his own impressions and interpretations, which he holds to be uniquely correct. This last point in many ways defines the personal life stance that characterized Vygotsky's later scholarly oeuvre, "the desire to drink from one's own glass."

Proceeding from those principles, Vygotsky implemented a structurally complex way of analyzing Shakespeare's tragedy, in which he juxtaposed three basic parameters: the play's storyline [fabula], its characters, and its overall emotional atmosphere.

Here, Vygotsky reveals the various levels on which the tragedy is organized, demonstrating how the play's end brings the convergence of two channels in the action's development that are defined as machinations both political (the fathers of Fortinbras and Hamlet) and familial (Gertrude, Claudius, Hamlet). That aside, however, there is also another, "otherworldly" causality, in that Gertrude, Laertes, Claudius, and Hamlet function in the last scene as if they were already dead. It is a "long-drawn-out moment of dying," in which "the tragedy withdraws into death."

In this connection, I will comment on the areas of concern around which the semantic analysis of Hamlet unfolds:

1.1 The Distinguishing of External and Internal

This key topic is presented in two epigraphs selected from the tragedy for the etiud: "Words, words, words. . . " and "The rest is silence." "Words" are what happens onstage, the actions that the characters perform there. And "silence" is that which is associated with the appearance of the ghost, that which the witnesses to Hamlet's encounter with it (Bernardo, Francisco, and Horatio [sic: correctly, Horatio and Marcellus—Trans.]) swear to him they will never tell, that of which Horatio is not to speak when recounting the tragedy

that transpired at Elsinore. As Vygotsky put it, "the tragedy completes the circle" here, as it transitions into Horatio's tale, while still concealing its "secondary meaning."

1.2 The Second Birth

Hamlet's meeting with his father's ghost permits him to glance "beyond," confirming his vague forebodings and drastically transforming his conduct. This encounter is the act that brings about his "second birth." And this explains his strange behavior, which Vygotsky defines as mental automatism [psikhicheskii avtomatizm]—that is, a state wherein one's own thoughts, feelings, and movements are sensed as having been implanted by suggestion, arising under compulsion, and subordinate to an outside influence. Vygotsky expressly emphasizes that Hamlet's "insanity" differs fundamentally from Ophelia's.

1.3 The Prototypical Myth

Vygotsky's use of the term "Oresteia" in his text (which refers us to the myth of Orestes "whose guilt lies in his birth") is not a random choice. I will note that in structural terms, the myth of Orestes—who avenged the death of his father, Agamemnon, by killing Aegisthus, the latter's cousin who had entered into a criminal liaison with Agamemnon's wife and Orestes's mother, Clytemnestra—is an evident prototype (with allowances made for a whole series of inversions) for Shakespeare's tragedy. So, for instance, matricide is the primordial sin, and one that can never be forgiven. For this reason, the father's ghost (unlike in the plot of the Orestes myth) prohibits Hamlet from murdering his mother, thus emphasizing Hamlet's subjection to the ghost and his seminal (Vygotsky's expression [semennaia]) connection with his father.

1.4 The Triggering Mechanism of the Action: The Pantomime

Hamlet has to dispel his own doubts as to whether or not Claudius murdered his father. And in order for this to happen, a unique psychological situation must be created wherein the culprit is discovered—a situation that involves "catching the conscience of the king." So, on Hamlet's suggestion, a troupe of itinerant players stage a play called The Mousetrap. Traditionally, this is a central scene, which reenergizes the entire action's developmental momentum. The play-within-a-play is performed in pantomime.

When King Claudius fails this "test," Hamlet has no more reason to question the need for vengeance. Here it should be observed that in Vygotsky's analysis, the pantomime plays an important structural role, being a special mechanism of the anticipation of events that is built into "the machine of the tragedy" and triggers a predetermined outcome, the "automatism" of events, of the unfolding storyline. The tragedy is as inexorable as is the transfer of the throne to the young Fortinbras.

1.5 The Alignment of the Characters

While Hamlet is a tragic hero, Vygotsky observes, the rest of the dramatis personae are, by the nature of their experiences, dramatic characters. And particular analytical interest attaches both to their singular apprehensions of Hamlet (Vygotsky describing them each as one-of-a-kind mirrors—some convex, some concave, and each with its own focal distance) and to the characters' mutual correlations. Hamlet, Fortinbras, and Laertes are, for example, all their fathers' children. But Laertes avenges himself for the murder of his father quite differently from Hamlet. Fortinbras too has a connection with his father that differs from Hamlet's with his. A juxtaposition of Gertrude with Ophelia characterizes not only two differing female images but also specifies two differing types of attitude toward Hamlet. Claudius's position relative to the general development of the storyline is like no other: he is in essence a principal character who makes plans and thereby is all the while preparing his own demise, inasmuch as the play, as Vygotsky observes, has "a plan of its own." And Hamlet's wisdom lies precisely in grasping the play's plan, not in concocting his own plan for revenge. Finally, Horatio models the position of a spectator, an external observer of events as they transpire.

1.6 The Combination of Various Planes in the Storyline's Development

Here, Vygotsky reveals the various levels on which the tragedy is organized, demonstrating how the play's end brings the convergence of two channels in the action's development that are defined as machinations both political (the fathers of Fortinbras and Hamlet) and familial (Gertrude, Claudius, Hamlet). That aside, however, there is also another, "otherworldly" causality, in that Gertrude, Laertes, Claudius, and Hamlet function in the last scene as if they were already dead. It is a "long-drawn-out moment of dying," in which "the tragedy withdraws into death."

And finally, stepping outside the framework of the Hamlet tragedy, I will add that this analysis was an important semantogenetic [smysloobrazuiushchii] center for the development of Vygotsky's own personality.

2. "Theater and Revolution"

Vygotsky published his article "Theater and Revolution" [Teatr i revoliutsiia] in a collection titled Poems and Prose of the Russian Revolution [Stikhi i proza russkoi revoliutsii], which was issued in Kiev in 1919 and included works by prominent writers and poets from a variety of literary schools—Aleksandr Blok, Andrei Belyi, Natan Vengrov, Zinaida Gippius, Maksim Gorky, Nikolai Kliuev, Vladimir Mayakovsky, Lev Nikulin, Aleksei Remizov, V. Ropshin (the pen name of Boris Savinkov), Il'ia Erenburg, and others. The very selection of authors suggests that the compilers had something unique in mind, that being to demon-

strate an ambiguous understanding, and a sometimes diametrically opposed experiencing and artistic representation, of the Russian Revolution.

The article is divided into five sections. The first of which, in a search for historical analogues to the contemporary situation in the country, compares the singular features of the relationship between theater and society during the French Revolution with the prerevolutionary period in Russia. Vygotsky's recourse to history is important, as it attests to an already mature inclination toward viewing societal phenomena in a historicocultural context. That said, he was not only seeking direct analogues but also striving, in this brief analysis, to show the cardinal distinctions between the two situations. Whereas during the French Revolution the theater was a conduit for revolutionary ideas and "a rostrum for society... that ignited the fires of revolution," in Russia, he held, the theater's basic issues were being discussed not in the context of social transformations but in logical terms involving artistic and aesthetic experimentation.

The next substantive aspect of Vygotsky's analysis involves a discussion of the influence exerted by revolutionary social transformations on societal processes in the theater. Here he debates several important points relating to the sociology of art.

One relates to the lifting of prohibitions on an array of topics and works that had earlier fallen foul of heavy censorship — more specifically, the freedom to present erotica on the stage, the removal of prior religiously motivated bans, the opening of opportunities to criticize the tsarist regime, and so on. Meanwhile, though, Vygotsky astutely remarks that the lifting of prohibitions on previously taboo topics also plays into the introduction of a new type of censorship. Here he engages with the issue of the special filters and normative mechanisms that perform an important role in the processes involved in the sociocultural dynamic of art.

Another point relates to the role played by revolutionary transformations in the development of the theater of the national minorities. Since this article was written for a collection to be published in Kiev, the emphasis here is placed expressly on the development of the Ukrainian theater and the emergence of national theater schools and studios. The article gives special attention to a societal analysis of the theatergoing public, which is perhaps a central topic, since, from the sociocultural point of view, the inclusion of new societal groups into the life of the theater had set it on a special developmental vector. A new spectator, with his specific class- based, ideological frames of reference and expectations, influences not only repertoire policy but also the entire structuring of life in the theater (the theatrical idiom, the actor's and the spectator's experiential instrumentalities, the actor–character– spectator relationship, the criteria used to evaluate a work of theatrical art, etc.). This is the context wherein Vygotsky discusses postrevolutionary tendencies such as the new "workers' theaters" and the change in the class composition of the heatergoing public. And it is this that, in his opinion, "defines the kernel of the future theatrical revolution." (Vygotsky, 2015).

The article's third section contains a targeted discussion of the theater's new postrevolutionary repertoire policy. On the one hand, in Vygotsky's opinion, the foreground was

being increasingly occupied by didactically incriminatory critiques of the prior political order (plays about the House of Romanov, on Grigori Rasputin, etc.) and political satire on matters of current concern. And on the other hand, there were plays from the old repertoire that were primarily societal in their orientation (The Lower Depths [Na dne], The Wreck of the Nadezhda [Gibel' Nadezhdy], The Death of Danton [Smert' Dantona], The Fall of the Bastille [Vziatie Bastilii], etc.). Here too he shows himself to be a subtle theater critic, one who studies not only a performance's artistic idiosyncrasies ("what is happening on the stage") but also the unique emotions being experienced in the auditorium.

The article's fourth section is devoted to a substantive analysis of Mayakovsky's play Mystery-Bouffe [Misteriia-buff], which, in Vygotsky's opinion, is a genuinely new phenomenon that reflects a striving toward revolutionary transformations in the theatrical art. He accentuates a unique ("revolutionary") genre approach that combines the previously incompatible genres of mystery play and slapstick [buffonada]. While the mystery play assumes enclosure [zakrytost'] (by way of its genetic association with a "mystery" [tainstvo], in which only initiates are permitted to participate), slapstick, by contrast, is the open art of the streets, where the acting is exaggeratedly humorous and the spectator is directly addressed. While parsing in some detail the play's plot and the stylistic peculiarities of its language, Vygotsky is highly critical of it, demonstrating the incompatibility attendant on combining traditional allegories with contemporary topicality, since that combination is manifestly subject to the tendentious- ness of the societal requisition, the current ideological "market forces." And the result is that instead of being presented with the revolution's elevated spiritual ideal, we are regaled with nothing but "a bread roll hanging from a tree!"

And then, in the fifth and final section, Vygotsky transfers his analysis of the correlation between theater and revolution into the realm of forecast, asking, "What could happen in the art of the theater in connection with the Revolution?" In his opinion, changes were to be expected both in dramatic literature and in the reconstruction of theatrical forms ("new wine is to be poured into new wineskins"). From his point of view, "a heroic theater" would be expected to respond to the spirit of the grand societal transformations then transpiring. Here, however, he sees a fundamental sociocultural contradiction, in that, instead of new forms of theatrical tragedy making an appearance, it was the old forms — those that run counter to the transformations occurring in society — that were being actualized, developed, and disseminated: "That art is going not forward but backward, is crystallizing into its primitives, disintegrating into its elements, regressing from complex to simple. It is an indoor [komnatnyi] art in the full sense of the word" (Vygotsky, 2015). Despite that contradiction, however, the theater's future lies, from Vygotsky's point of view, in the creation of a monumental, awe-inspiring art for the whole people.

It is also extremely interesting in methodological terms, showcasing as it does Vygotsky's unique approach to research. His analysis begins with a search for historical analogues of the sociocultural phenomenon that interests him here, then moves on to study how that phenomenon functions in the contemporary reality, and to a related search for the societal sources of development and for new, "germinal" [zarodyshevye] forms of theatricality to match those developmental tendencies (Mystery-Bouffe), and concludes by suggesting a

transition to the "forecasting" of a form (theatrical tragedy) that may potentially prove responsive to those basic tendencies of development. Thus, even in this early work on the theater, Vygotsky quite distinctly displays an overall logic that defines the methodological uniqueness of his culturohistorical approach, which would later be implemented in his groundbreaking psychological studies.

3. Theatrical reviews

Vygotsky has written about 70 theatrical reviews which have been published in various newspapers, magazines and collections to the period. These works were unknown until recently and were not included in a scientific context. Meanwhile, reviews are of huge interest to understanding of sources and features of his cultural historical concept.

This material is unique. Over almost a year and a half (from September 1922 through December 1923), Vygotsky published sixty-eight theater reviews and notices in Gomel newspapers. Since several of them covered not one production but two (and sometimes three or more), simple arithmetic shows that in those sixteen months he reviewed more than eighty performances in Gomel, and that does not even include the reviews of individual touring companies and individual artistes. Those reviews offered subtle psychological descriptions of performances given by Ekaterina Gel'tser, Leonid Utseov, Nikolai Foregger, and Vladimir Maksimov (all landmark artistes of the day), by the Second MAT Studio, the Aleksandrinskii Theater company, the Krivoe zerkalo Theater and others, which in and of itself constituted an important contribution to the history of this country's culture.

On average, therefore, Vygotsky not only attended six performances every month (virtually on a weekly basis) but also wrote critiques of them. It is important to bear this fact in mind, since it attests not only to the young Vygotsky's general erudition, which the reader will learn from the reviews themselves, but also to the enormous amount of theatergoing experience he accrued while in Gomel.

It is important to consider that, as a theater critic, Vygotsky was expressly analyzing not only his own subjective experiencings but also the affective-semantic reaction of the audience. And this, incidentally, is a unique position, distinct from that of the ordinary spectator who as a rule registers only what is happening onstage.

Another extremely important circumstance is that during his numerous visits to the theater, Vygotsky came to grips with an abundant psychological phenomenology of inter-personal, social-role, and societal relationships, while also observing the manifestation of characterological and personal idiosyncrasies in various conflictive situations. From this also follows his understanding of the importance of the actor's psychotechnique, which is linked to an analysis of how logical and appropriate the actions taken in the proposed circumstances are (Konstantin Stanislavsky), which is, in turn, determined by the production's gender. But if gender is understood as a special axiological space (a chronotope, per Mikhail Bakhtin), it may be supposed that while attending those theatrical performances,

Vygotsky (already functioning as a psychologist) was not only registering the complex phenomenology of psychological manifestations that corresponded to mundane reality but also observing the possibility of engendering unique affective-semantic phenomena under the specific "experimental" conditions stipulated by the theatrical production's gender (its own special spatiotemporal organization). I will note that the reference to theatrical gender is of fundamental significance to Vygotsky, inasmuch as gender also supplies the elementary unit of his critical analysis. It may be concluded that in his practical theatrical criticism he is ascending from abstract to concrete. The key contradictions between the various organizational levels of an artistic work ("between material and form") also presents as a basic device that enables the implementation of dialectical thinking in the analysis of a work of art.

4. Levels of Theatrical Analysis

An analysis of Vygotsky's theater reviews brings up the fact that his critical evaluations are constructed around the theatrical spectacle's various organizational levels: the dramaturgy, the acting (utterance, movement, transfiguration [perevoplosh- chenie], etc.), the directing, the audience reaction. I will now pause to examine some of these points, conserning acting, in greater detail.

4.1 The Actor's Transfiguration

Since evaluations of acting occupy a central place in Vygotsky's review, they warrant a section of their own. The content of those evaluations is extremely diverse, touching on aspects as varied as an actor's individual idiosyncrasies, the actor's unique technique, how well he or she conforms to the character, the actor's role specializations [amplua] and their societal stereotypes, the character's active line of conduct, and so on. Since Vygotsky functions in his reviews primarily as a theater critic, the analysis of his opinions on acting are of interest especially in terms of the normative notions around which his evaluations are structured.

4.2 The Correspondence of the Character's Onstage Image to the Societal Stereotype, and the Actor's Role Specializations

In evaluating the image that the actor embodies, Vygotsky quite often correlates it to one of two types of societal presentation. The first, which lies on the earthbound plane, assumes a comparison between the character being played and a given stereotype of the everyday consciousness—age (old person, child, youth, etc.), employment (telegraph operator, chambermaid, officer, etc.), societal stratum (queen, servant, working man, etc.), and so on. Here, are some characteristic examples: "Actors cannot wait to act their title, and only then do they act their role as best they can"; (Vygotsky, 1923p) "And playing an old per-

son mostly comes down to just one thing—that old people slur their words." (Vygotsky, 1923n). And so, the critical evaluation, on the one hand, focuses on uncovering any lack of correspondence between the image being played and the societal stereotype embedded in the dramaturgical material. And on the other hand, it is important to emphasize that Vygotsky's evaluations quite often remark on another side of the actor's performance, where his talent enables him to overcome the weakness of the dramaturgical material: "She underplays the role's onstage image, it is true, but [. . .] with an inner grace and restraint, she avoided the crass and perilous parts." (Vygotsky, 1923k)

A unique type of societal presentation that Vygotsky relies on in his critical evaluations of acting lies directly on the theatrical plane and is associated with theatrical role specializations: comic, romantic lead, vaudevillian duffer, heroine, ingenue, tragedian, servant girl, and so on. In these cases, the evaluation is built on any discrepancy between the role specialization and the role he is playing: "Comedian he may be, but he is forever doing someone else's job in the wrong roles." (Vygotsky, 1922f).

I will note that Vygotsky's critiques juxtapose both the societal stereotype and the role specialization with the actor's individual personality:

All along the spectator could see that the weak-willed queen who cannot lose her temper and has no character should have been played not by Igoreva (who wants nothing more than to lose her temper) but by Erina, who cannot and should not play a play's energetic, most active heroine role. There would have been a good comedic reason for them to have traded places (Vygotsky, 1923p).

Important here is that the means of juxtaposition — of societal stereotype, role specialization, genre, and actor's individual personality — is in a certain sense comparable to the approach to analysis of role specialization in the theater taken in 1922 by Meyerhold in his "Table of Role Specializations" (Meierkhol'd, Bebutov, & Aksenov, 1922). This was a table of seventeen pairs each of male and female role specializations that lists the actor's necessary physical qualities, provides examples of appropriate roles, and characterizes the onstage functions, which ultimately made it possible to systematize dramatic works from various epochs (Grachev, Nistratov, & Sobkin, 1990; Sobkin, Nistratov, & Grachev, 1989).

4.3 The Evaluation of the Actor's Emotional Manifestations

I will note that the important thing to Vygotsky is not how well a feeling is outwardly portrayed but how internally justifiable that feeling is: "He has an authentic internal agitation onstage, an unfeigned, elicited energy. The point of departure for his acting not its outward form and expression but comes from within. . . You clearly sense that feeling being mustered up before your eyes, so much pressure and effort there is in it" (Vygotsky, 1922e). And he also remarks on the important need to create not a unidimensional but a complex gamut of feelings and experiencings: "But can an entire role really be maintained on just a tear? The upshot is tearfulness instead of suffering" (Vygotsky, 1922d).

In giving his attention to the sincerity of the actor's experiencings, Vygotsky as a theater critic is effectively employing the criterion coined by Konstantin Sergeevich Stanislavsky and expressed in his renowned "I do not believe you!" I will emphasize that the actual emotional response to what the actor is experiencing is paramount to Vygotsky the critic in his evaluation of the acting.

That said, there is another line to be taken in evaluating the actor's onstage emotional manifestations, which is to juxtapose them with the nature of what the characters are experiencing in the logic of the relationships stipulated by the dramaturgical material. The following are some characteristic examples: "This was a businesslike piece of reasoning, not Andreev's outburst" Vygotsky (1923h); "To play Dostoevsky at a normal temperature, say 36.6 or 36.8, is to undo him. But Sosin (Raskol'nikov) is before all else an actor whose temperature is normal. Dostoevsky's heroes are cut from a completely different spiritual cloth" Vygotsky (1922c). I will emphasize that here the sincerity, the "truth of feelings" is correlated with the extent to which they correspond to the work's style and genre (tragedy, comedy, melodrama, slapstick, etc.).

Vygotsky not only documents the influence exerted by that particular aesthetic principle ("to live on the stage, not to represent"), but also shows a special aesthetic sensitivity to the processes of the sociocultural dynamic of the actor's activity, in which technologization of the creative act tends to geld its psychological content and causes a clichto form. The aesthetic principle that focuses on the creation of a particular psychotechnique to show what the actor is experiencing forfeits its substantive momentum and leads to the technologization of the actor's activity, which then becomes encrusted with cliché and spins a cocoon around itself.

4.4 The Evaluation of a Role's Active Line

Vygotsky accords particular significance in his evaluation of acting to the active analysis of the idiosyncrasies of a character's conduct, which explains why the formulation "individuals in conversation instead of individuals in action" has a place in his reviews (Vygotsky, 1923f). He also discusses a wide range of issues associated with the active analysis of a character's behavioral idiosyncrasies: the motivation for their deeds ("the sublime psychological springs of that murder were never pressed" (Vygotsky, 1922a)); the motivational conflict in the role itself, which defines the unique nature of the character's experiencings (for example, a conflict between the need to behave as befits a queen's societal status and actions that are grounded in a woman's natural leanings); the correspondence of the behavioral logic to the psychological idiosyncrasies of the character's nature ("the comical look of a vulgar little old man who wants to make the woman he loves his kept mistress and his sudden chivalrous nobility toward her are ill-matched" (Vygotsky, 1923a)).

Issues pertaining to the analysis of a character's general line of conduct (which Stanislavsky called "the through-line of action") are examined separately. For example: "Just as there are poets who can write a couplet, a stanza, even a scrap of doggerel, who can create

only a tiny unit, one single passage but not a whole poem or a poetic narrative, so there are actors who can do one act, one scene, even one rejoinder" (Vygotsky, 1923b); "The acting fragments into episodic snippets portraying how people eat, drink, love, marry, wear their jackets" (Vygotsky, 1923m); "But to combine scene with scene into an act, and the acts into a role—that is beyond her" (Vygotsky, 1923b).

In the discussion of a character's conduct, special attention goes to the conflicts and contrasts that supply the role's developmental dynamic: "A role cannot be kept to a single note; two neighboring pieces of a role cannot be painted the same color. There have to be internal contrasts" (Vygotsky, 1922d).

I will emphasize that Vygotsky often uses the understanding of internal conflict less in describing the relationships between characters (which is important in mobilizing the spectator's apprehension of the performance, as opposed to the times when we come to the theater and all we see there is, to borrow Vygotsky's own expression, "a love so simple, open-mouthed" (Vygotsky, 1922e)) than in registering the development of the onstage image. And he understands development to be the dialectical removal of contradictions, an array of transmutations, a metamorphosis (reminiscent of the famous "caterpillar-cocoon-butterfly" example): "His path from apprentice to minister evokes one thing only, and that is a staunch objection: there is no metamorphosis, no transmutation, no piece of business, no counterfeiting, no splitting" (Vygotsky, 1922b). Attention should be directed to the fact that here we are up against Vygotsky's profound understanding of the actual process of development as a fundamental, qualitative change. And his ability to trace the subtle boundaries of the phenomenology of development is associated in content with the ideas on "the kernel of the image" that are encountered in the works of theatrical notables such as Stanislavsky, M. Chekhov, Evgenii Vakhtangov, Solomon Mikhoels, and others. It is important to bear in mind the understanding of the unique features of developmental phenom- enology that we encounter in Vygotsky's theater reviews when exploring his later works on psychology proper that touch directly on the problems of development, which are central to culturohistorical psychology.

And finally, it is important to draw attention to the range of issues associated with the role's tempo-rhythmic layout, its emotional score, the "blueprint of passion." This topic is intimately tied to issues pertaining to the actor's emotional manifestations, which were examined above (to "the living experience," to Vygotsky's interest in the living person rather than in a marionette). Moreover, it should be emphasized that the tempo and rhythm of a role (or, more broadly, of a performance) are important to Vygotsky's theater reviews, since his evaluations juxtapose them with the unique features of the action's organization in performances of varying genres: "The actors have only to convey the intrigue, unravel a tangled ball of amusing situations that take each other's place with lightning speed. This play [. . .] stands or falls on a sparkling gesture, a brilliant exit or entry, the rapid patter of the action" (Vygotsky, 1923p). And I will add in passing that here, Vygotsky the critic is also singularly preoccupied with his own "concurrent directing" of the performance he is watching.

4.5 The Actor as an Agent of Creativity

I mentioned above that the problems of emotionality — the sincerity of the feelings shown onstage, the psychotechnique applied to what is being experienced emotionally, the correspondence between what the character is experiencing and that character's nature, the genre, and so on — receive special attention in Vygotsky's theater reviews. That said, it is important to single out yet another aspect — that is, when the emotions are contextualized by the actor's creative commitment, which permits the acting to be viewed as an artistic deed, as an artistic fact: "There is something that makes it possible to distinguish the very worst picture from the very best copy, and that is creativity" (Vygotsky, 1923i). It was Vygotsky's opinion that an actor lacking the ability to be carried away, unwilling to make the "emotional outlay" comes to resemble an adult who "to divert the children imitates a dog—ungiftedly, conscientiously, assidously, and badly" (Vygotsky, 1923l). I will note that Vygotsky viewed an actor who holds back, who acts "with reticence, as if in rehearsal," (Vygotsky, 1923e) as a mere journeyman. To him, therefore, the "energetic" aspect (the energy outlay) characterizing an actor's onstage conduct is an important criterion for the manifestation of creative commitment

Another important characteristic that defines the actor's creative manifestations is his capacity to go in search of the miscellaneous personal idiosyncrasies that correspond to a given role, "the combining of notes" into an integral melody:

The actor's inventiveness, the role's dynamic, the melodic combination of notes, the scenic chord — there is little enough of that on our stages. It is all on one note. If we have a romantic lead, then he is nothing but saccharine, if we have a neurasthenic, he is only weepy. Hence the featureless monotony that has wrecked more than one good rendition (Vygotsky, 1922d).

In that connection, mention should also be made of his thoughts on the breadth of interpretive range [shirota ispolnitel'skogo diapazona] as an important characteristic of an actor's creative potential, and one that permits him to create a variety of images, from comic to tragic. I will add that Vygotsky pairs the actor's range with the uniqueness of the actor's capabilities, which are linked to the stylistic devices used to create an artistic image: "There are actors who offer photographs of roles; there are those that offer only passport data; there are those who fashion sculptural masks; there are those who sing their roles — and there are many, many other rooms in the theater's house." (Vygotsky, 1923d).

An important place in Vygotsky's evaluation of the uniqueness of the actor's individuality goes to psychological characteristics proper, such as inventiveness, intellectuality ("in his acting there is far more acumen and frigid observations" (Vygotsky, 1922c)), emotional mobility ("onstage liveliness and unforced mobility" (Vygotsky, 1922d)), daring ("no dread of uncouth and vulgar movement and tone" (Vygotsky, 1923f)), and so on. It should be emphasized that Vygotsky does not limit himself to documenting the actor's psychological characteristics in the role but sometimes also draws succinct and integral personal portraits of actors appearing on the Gomel stage. For example:

Utesov is a true master of the art of variety—the ditty, the dance, the caricature. His whistling, snorting, grunting, and free-floating malice in The Newspaper [Gazeta], which convey in satire the tone and spirit of the émigré press, are done penetratingly and with a clockwork perfection... Everything that makes a contemporary man of business and speculator funny is conveyed in such grimaces and wry faces, and with such heartfelt piquancy and profound intonations as to be infectiously amusing. Current events, funny stories, virtuoso technique — they are all here to serve this maestro of Odessan spontaneity, in life and in the theater (Vygotsky, 1923g).

The actor's uniqueness as an agent of creativity is, needless to say, most distinctly expressed through the relationship between actor and role: "It could be seen that the artist has something to say about the role, and he said it well and convincingly" (Vygotsky, 1923c). And this brings out an altogether singular topic in which two distinct junctures may be singled out. On the one hand, the very expression "has something to say about the role" is a manifestation of the stance of the actor as author, not only performing but simultaneously creating and interpreting the role and thereby defining the personal meaning that the actor ascribes to the onstage image he or she has created. And on the other hand, statements about the actor's relationship to the role ("the satirist is the prosecuting attorney of his role: he sets the spectators at odds with the leading men" (Vygotsky, 1923a)) are also distinct manifestations of the correlation between the idiosyncrasies of the actor's performance and the specific theatrical aesthetic. While in the theater of experiencings, the actor's authorial stance is "hidden" (is directly expressed in the image created), in the theater of Berthold Brecht, for example, the actor is estranged from his role and "delivers" it, like a speaker delivering a lecture. Another possibility is a ludic relationship —"I and the role"— as in Vakhtangov's famous staging of Turandot Characteristically, Vygotsky explicitly addresses the actor's unique inhabiting of such ludic relationships as "I and the role" in his article "In Reference to the Psychology of an Actor's Creativity" [K voprosu o psikhologii tvorchestva aktera] (Vygotsky, 1936).

It is important to emphasize that for Vygotsky the "actor/role" relationship was fundamental to an understanding of the unique nature of the onstage experiencings and to the ascertaining of the psychological idiosyncrasies of the actor's transfigurational psychotechnique.

4.6 The Actor's Role as a Generalized Semantic Image

A central juncture in the evaluation of acting in Vygotsky's reviews is the individual nature of the character created onstage. These are as rule highly concise characterizations that generalize the ultimate personal manifestations: "The nullity is raised to a colossal degree. This is a gleaming stupidity, a glittering nonsense, a brilliant, distended soap bubble, a heroic nonentity, and human folly of the first water" (Vygotsky, 1923o). And these evaluations are not infrequently structured on a contraposition of the desired ideal onstage image with the actor's real embodiment of it: "Sosnin emphasized only the baron's mundane traits, never conveying the eternal fog in head and heart, the magnificent nonsense, the

picturesque and touching defenselessness and helplessness of this chimerical figure. And what emerged was virtually all business, even evil" (Vygotsky, 1922c).

Thus, when discussing in his reviews the generalized portrait of a character presented onstage, Vygotsky, on the one hand, addressed the broader cultural context (criticism, advocacy journalism) and on the other, drew on his own understanding of the dramaturgical material and of any contemporary socio- political associations that may have been germane. I will note that reversion to contemporary realia not only "contemporizes" a production but also gives it a new and sometimes unexpected meaning. And that meaning is generated from neither more nor less than the rationale behind his critical evaluation of an actor's specific performance, in which he correlates the acting with the generalized ideal onstage image.

It is important to emphasize that focusing on the construction of a character's generalized image assumes penetration into the inner, deep-reaching meaning of what he does. Here Vygotsky distinguishes "the role's psychological layout" from the "simple, proximate meaning" of the character's conduct that the actor may be using as his guide: "Whereas she could not cope with the role's psychological layout, in which a calloused heart so long silent falls in love stormily, spitefully, painfully, she was in tune with its simple proximate meaning all along" (Vygotsky, 1923j). That said, the defining juncture in the analysis itself is the search for the character's contradictions—a principle that associates organically with Stanislavsky's approach, to which Vygotsky makes a direct and highly characteristic reference: "Stanislavsky has given his students a wonderful rule: 'A sweet ingénue playing a sweet role (Ophelia, for example) should play it manfully, for otherwise sentimentality and falsehood result" (Vygotsky, 1922c).

An overall analysis of Vygotsky's reviews shows that his generalized semantic evaluations of the onstage image created by the actor's focus on documenting the contradictions between those two differing levels, the first of which is associated with designating the divergences between the character's ideal onstage image and its actual embodiment on the stage, and the second, with uncovering the contradictions in the character's nature. An overall analysis of Vygotsky's reviews shows that his generalized semantic valuations of the onstage image created by the actor's focus on documenting the contradictions between two differing levels. The first one is associated with designating the divergences between the character's ideal onstage image and its actual embodiment on the stage; and the second level deals with uncovering the contradictions in the character's nature. Those contradictions may vary depending on the actor's creative intent: there may, for example, be contradictions associated with correlating the incompatible (an outward dim-wittedness and a most marvelous heart) or with the more complex creative mindset in which the personal essence that hides behind the mask (the role's secondary dimension) must be revealed.

This may perhaps mark a suitable end to my introduction, which only generally outlines the problems that Vygotsky broached in his works on the art of the theater. I will furthermore note that I have left virtually untouched for now issues such as theater management, repertoire policy, the problems of the national theater, and so on, to which Vygotsky also

repeatedly alluded in his reviews. Nor have I dealt with the extremely important and interesting question of the stylistic idiosyncrasies of his texts on the theater, which allow us to trace, on the one hand, his unique way of thinking with its distinct signs of mastery of the principles of dialectical logic's ascent from abstract to concrete, and on the other, the singularity of his axiological orientations, personal evaluations, critical judgments, and sense of humor. Those are points that I sought to unfold in my commentaries on Vygotsky's theatrical articles and reviews. I will emphasize that during the preparation of my materials, it was of primary importance to me to mark the substantive lines, the "unheard dialogue" that Vygotsky pursued when contemplating development in the theater, in art, and, of course, in psychology. And I will note that he conducted that intense dialogue amid postrevolutionary Russia's enormously powerful sociocultural shifts and trans- formations. In that state of axiological and normative uncertainty, his addressing of matters pertaining to art played, in my view, an important role in both his personal and professional self-definition.

A reader seeking a familiarity with Vygotsky's early works will, needless to say, choose the subject areas that match his own cultural and professional interests. But for me, at the risk of repeating myself, it was primarily important to center attention on the semantic junctures that were of personal concern to Vygotsky and to designate thereby the points of departure, the axiological baselines that determined how he would eventually come to be a professional psychologist and, more broadly, one of the twentieth century's foremost thinkers.

<div align="center">***</div>

Besides acting, analyzing art theater Vygotsky focused attention on the following aspects: dramatic text, direction, spectator reaction. In theatrical reviews of Vygotsky reveals a number of phenomenon of understanding of the text which are he used later in psychological works. Among them there are semantic generalization, semantic contradiction, emotional dominant.

In the analysis of histrionism special attention is paid to speech styles and speech behavior (the purposes, drives, speech actions). At the same time, the speech is regarded not in itself, but in comparison to other paralinguistic means of expressiveness (gestures, intonation, pauses, etc.) The psychological phenomena connected with the movement as means of emotional impact on the viewer are of special interest (emotionality of the movement, the detained gesture, etc.).

In general, the analysis of theatrical reviews shows that for Vygotsky distinction of ordinary and spiritual sense acted as the central opposition. Unfortunately, his followers this line didn't develop. The detailed analysis of this direction is presented in our book "Comments to Theatrical Reviews of Vygotsky" (Sobkin, 2016) and in first (and still only) volume of complete collection is composed (Sobkin, 2016).

References

Grachev, A. M., Nistratov, A. A., & Sobkin, V. S. (1990). Personazhi fil'ma v prostranstve teatral'nykh amplua. *Psikhologiia*, *14*(1), 24–33.

Meierkhol'd, V. E., Bebutov, V. M., & Aksenov, I. A. (1922). Tablitsa amplua. In V. Meierkhol'd, V. Bebutov, & I. Aksenov (Eds.), *Amplua aktera* (pp. 6–11).

Sobkin, V. S. (2016). L. S. Vygotsky and the theater: Delineation of a sociocultural context. *Journal of Russian & East European Psychology*, *53*(3), 1–92.

Sobkin, V. S., Nistratov, A. A., & Grachev, A. M. (1989). Personazhi fil'ma v prostranstve sotsial'nykh stereotipov. *Psikhologiia*, *14*(1), 38–44.

Vygotsky, L. S. (1922a). Gastroli solovtsovskoi truppy. *Nash ponedel'nik*(3), 4.

Vygotsky, L. S. (1922b). Khorosho sshityi frak. *Nash ponedel'nik*(13), 3.

Vygotsky, L. S. (1922c). Prestuplenie i nakazanie–zolotaia osen'–Na dne. *Nash ponedel'nik*(4), 4.

Vygotsky, L. S. (1922d). Revizor–flaviia tesini–tsena zhizni–pevets svoei pechali–ovod. *Nash ponedel'nik*(8), 3.

Vygotsky, L. S. (1922e). Uriel' akosta–groza. *Nash ponedel'nik*(12), 3.

Vygotsky, L. S. (1922f). 'Chernaia pantera'–'Volch'i dushi'. *Nash ponedel'nik*(10), 3.

Vygotsky, L. S. (1923a). Akademicheskie gastroli. *Nash ponedel'nik*(45), 3.

Vygotsky, L. S. (1923b). Blagodat'. *Polesskaia pravda*(1057), 4.

Vygotsky, L. S. (1923c). Dzhentl'men. *Polesskaia pravda*(1009), 3.

Vygotsky, L. S. (1923d). Evreiskii teatr: Benefis s.i. eidel'man. *Nash ponedel'nik*(36), 3.

Vygotsky, L. S. (1923e). Evreiskii teatr. Sil'va. A mensh zol men zain [A mensh zoll men sein] (Chelovekom nado byt'). *Nash ponedel'nik*(30), 3.

Vygotsky, L. S. (1923f). Gastroli truppy azagarovoi. *Nash ponedel'nik*(37), 3.

Vygotsky, L. S. (1923g). Gastroli utesova i foreggera. *Nash ponedel'nik*(46), 3.

Vygotsky, L. S. (1923h). Gastroli vtoroi studii MKhAT. *Nash ponedel'nik*(51), 3.

Vygotsky, L. S. (1923i). Gastroli 'krasnogo fakela': Sverchok na pechi–sobaka na sene–okean–pobeda smerti. *Nash ponedel'nik*(39), 3.

Vygotsky, L. S. (1923j). Kogda zagovorit serdtse. *Polesskaia pravda*(1056), 3.

Vygotsky, L. S. (1923k). Komediia dvora. *Polesskaia pravda*(1029), 3.

Vygotsky, L. S. (1923l). Korolevskaia bradobrei. *Polesskaia pravda*(1025), 3.

Vygotsky, L. S. (1923m). Krasnyi fakel. *Nash ponedel'nik*(38), 3.

Vygotsky, L. S. (1923n). Malen'kie kusochki teatra. *Nash ponedel'nik*(28), 3.

Vygotsky, L. S. (1923o). Nechaiannaia radost'. *Polesskaia pravda*(1058), 4.

Vygotsky, L. S. (1923p). Stakan vody. *Polesskaia pravda*(1053), 3.

Vygotsky, L. S. (1936). K voprosu o psikhologii tvorchestva aktera. *Psikhologija tsenicheskikh chuvstv aktera*, 197–211.

Vygotsky, L. S. (2015). Teatr i revoliutsiia [theatre and revolution]. *Kul'turno-istoricheskaya psikhologiya [Cultural-Historical Psychology]*, *11*(1), 86–90.

PART C:

DEVELOPMENT

Lev Vygotsky's Principle "One Step in Learning Represents a Hundred Steps in Development": From Idea to Practice

Viktor K. Zaretskii   zar-victor@yandex.ru
Moscow State University of Psychology and Education
Moscow, Russia

Abstract

The article reviews Lev Vygotsky's published works to trace the evolution of his understanding of child development. The authors believe that his assumption that one step in learning may mean one hundred steps in development, is as important as the two other keys postulate of the cultural-historical theory: the principle that learning precedes development and the concept of zone of proximal development. The authors provide a rational for utilization of these assumptions in the practice of development-facilitating psychological and educational assistance. A mechanism of this learning-development relationship is hypothesized. The article outlines a multidimensional model of the zone of proximal development illustrating the above mechanism. This model is one of the conceptual tools of the Reflection and Activity Approach helping children overcome learning difficulties and promoting their development.

Having given the account of how they proceeded "from the idea to the problem" and "from the idea to the mechanism", the authors provide case studies showing how this mechanism allows working with learning difficulties to trigger simultaneous improvement in multiple developmental dimensions. The article reports on the experience of running special Summer Schools for children with learning difficulties, implementing the "Chess for General Development" Project, and assisting orphaned children with severe somatic conditions. A case study of a female college student displaying signs of the learned helplessness syndrome is presented. The authors infer that Vygotsky's idea of a specific relationship between learning and development may be of fundamental theoretical and practical value, especially for working with children with special needs.

Keywords : L. S. Vygotsky; Cultural-historical psychology; Developmental psychology; Learning and development; Step of development; Zone of proximal development; Multidimensional model of the zone of proximal development; Reflection and Activity Approach; Agency; Reflection; Child-adult collaboration; Children with special needs; Psychological and educational support; Learned helplessness; Overcoming learning difficulties; Chess for general development; Counseling; Psychotherapy.

> Vygotsky argued that learning should
> precede development. However, such
> overtaking is rather odd as learning
> makes one step and development
> makes two or more. If a teacher is
> sensitive to a child's zone of proximal
> development, it will grow into the
> prospect of his unlimited development.

V. P. Zinchenko

> This constitutes the most positive
> feature of this new theory.

L. S. Vygotsky

Introduction

We have chosen the concluding remarks of our former article (V. K. Zaretskii, 2015) as the epigraphs hereto. That article attempted to prove Lev Vygotsky's "theorem" that one step in learning may result in a hundred steps in development (Vygotsky, 1982b). There were three reasons for writing an article on this subject. Firstly, in our opinion, this Vygotsky's idea received undeservedly little attention, just like his concept of the zone of proximal development (which is an area of action where the child - adult collaboration may bring about beneficial developmental outcomes). Surprisingly, although almost all Vygotsky's disciples and researchers of his legacy emphasized and attached value to his idea that learning preceded development, they kept silent about another idea.

According to that idea, learning did not just precede development but under certain circumstances resulted in a qualitative advance measured by many steps. The review performed in 2015 failed to find relevant references to this assumption in foreign literature. Although the number of references to Vygotsky's works amounted to tens of thousands according to Anne-Nelly Perret-Clermont, the researchers found no references to quotations and discussion of this idea, as if there were a peculiar conspiracy of silence against this assumption. For instance, "The Cambridge Companion to Vygotsky" had a chapter on "Thinking and Speech" which included the section called "Metaphor". However, the given statement was left unmentioned among the variety of Vygotsky's metaphors (Daniels, Cole, & Wersch, 2007).

Indeed, the Russian authors showed no inclination to mention this Vygotsky's statement either. David Elkonin, Vasily Davydov, Piotr Galperin neither mentioned, nor made any comments about it. The only two authors who laid emphasis on the idea were Lyudmila Obukhova (1995) who quoted this place in Vygotsky's works as important for understanding of development, and Vladimir Zinchenko, who gave an account of his understanding

of a special nature of the learning-development relationship in a short but brilliant essay about Lev Vygotsky (Zinchenko, 2011).

The second reason for writing that article dealt with objectives relating to practice of helping children with special needs. From this perspective, the question whether education of these children and, especially, children with a complex of disturbances and complications, might be designed so that their development could progress in quantum leaps, was vital rather than pertinent. If this mechanism existed, then such children as orphans with severe somatic conditions and corresponding developmental deficits would have a chance for normal development and actualization of their potential. Lack of this mechanism would most likely mean lack of the chance. One of the major directions of the authors' practice was facilitation of such children's development. Therefore, a search for evidence proving this Vygotskian "theorem" would make special sense.

The third reason related to "Thinking and Speech", Vygotsky's book recognized worldwide as one of his major works (please note, the book is also known as "Thought and Language" to non-Russian readers), and introducing the idea of a specific relationship between learning and development in Chapter 6. To be more precise, it related to the fact that up to then (2015), the book had been stimulating debate on an astonishing subject, namely, what was it about!

At first sight, this question was naïve, only at first sight, though. As a matter of fact, for one thing, Vygotsky's paradigm of the human mind and its development has remained far from complete. The nature of his publications showed that his research program had just started to develop during the last two years of his life. Secondly, Vygotsky's thought was exceptionally dynamic centering around several epicenters. This might explain why various authors, even his closest disciples and colleagues, viewed Vygotsky's work from different perspectives. David Elkonin who studied development all his life, believed that Vygotsky's main issue of interest was consciousness (rather than development). Alexander Luria, the author of an afterword to "Thinking and Speech" published in the second volume of Vygotsky's collected works, left the subject of development aside, making only a passing reference to significance of the zone of proximal development concept. Vygotsky's main book "Thinking and Speech" was labeled a book about "thinking", "verbal thinking", or thinking and speech development (Daniels et al., 2007; Leont'ev, 1990; Morozov, 2002; Vygotsky, 1982b). Gita Vygodskaya and Tamara Lifanova argued, ". . . This book is entirely devoted to development in general from beginning to end" (Vygodskaya & Lifanova, 1996). We quite agree with this statement. A review of the periods of Vygotsky's work provided evidence that development remained the main subject of his work throughout his ten-year professional career (V. K. Zaretskii, 2015). However, it took him quite a time to turn to this subject. In 1924-1929, the term "education" dominated the titles of his works relating to developmental issues, and the term "development" occurred only twice (among 77 publications) in 1928 and 1929. Both works discussed the issue of a child's cultural development[1].

---

1. It is interesting that Lev Vygotsky and Boris Varshava (deceased 1927) left the term "development" aside in their "Psychological Dictionary" (Varshava & Vygotsky, 1931) written and published in 1931.

In 1930, L. S. Vygotsky turned to the subject of development and this term appeared in the titles of his 25 writings (of 95 works written as of the time). One of Vygotsky's last texts introduced the idea of a hundred steps in development which might be considered as the last in a sequence of developmental concepts developed by him. Our previous article (V. K. Zaretskii, 2015) attempted to draw the readers' (and Vygotsky's admirers) attention to this assumption as especially relevant for the Vygotskian conceptual framework. We also attempted to discern a hypothetical representation of a crucial developmental mechanism in this image. We partially replicate the former line of reasoning in Parts 1 and 2 hereof. Part 3 provides case studies illustrating how the "mechanism" where one step in learning may lead to many steps in development, works.

1. From Problem to Idea

Assuming that Vygotsky's cultural-historical theory centered around the subject of human development and its conceptualization, we will attempt to reconstruct the journey Vygotsky's thought travelled to arrive at the idea which we believe to be pivotal.

Let us briefly clarify our understanding of his idea that a single step in learning may lead to many steps in development.

In our opinion, this statement contains three main perspectives.

The first idea designates the need for actual implementation of the assumption that learning precedes development.

The second represents the idea that learning "something special", something relevant for a given case, may trigger beneficial developmental effects in several dimensions simultaneously.

The third perspective deals with an implicitly contained – rather than explicitly verbalized – problem statement that learning can (and needs to) be performed in a way so that it could facilitate development. The question is how to do this?! What are the conditions that would make this effect possible? (In various contexts, L. S. Vygotsky argued that learning would not necessarily bring about development, and that development would not be brought about by any learning.)

Let's make an attempt to reconstruct how L. S. Vygotsky arrived at this idea.

At first, we would like to consider Vygotsky's decade-long journey through the lens of evolution of his developmental ideas. The corresponding review of Vygotsky's works has enabled us to single out five periods. Vygotsky's career in psychology is commonly divided into three periods: the first period of 1924 - 1927 years, the second period of 1928-

1931 years, and the third period of 1932-1934 years [(Daniels et al., 2007; Leont'ev, 1990; Morozov, 2002; van der Veer & Valsiner, 1991; Volikova & Glukhova, 2012), etc.][2].

However, from the perspective of our discussion, we single out two other periods relating to turning points in Vygotsky's conceptualization of development.

The first period: 1924–1927. L. S. Vygotsky started his psychological career. He focused on development and education of "mentally retarded and physically handicapped" children; introduced pioneering conceptualizations of psychology of children with special needs; defined the issue of development in terms of the learning objectives, socialization and professional education of children with various deficits. During the same period (1926), he wrote "Pedagogical Psychology" (Vygotsky, 1999) wherein he argued that the child's role in his/her learning and development was indeed significant. This period revealed three other lines of his conceptual thinking.

The first line of Vygotsky's thought reflected on the issue of consciousness. His essay (Vygotsky, 1982c) published in 1925 interpreted consciousness a connection between, interaction of "the systems of reflexes" - rather than "the connection of activities" as he defined it later). This perspective might have formed under the influence of Ivan Pavlov's and Vladimir Bekhterev's authority.

The second line of thought accounted for reflection on the difference between the human mind and the animal mind. It gave birth to Vygotsky's assumption that "the formula of human behavior includes the part that animals lack, that is: historical experience, social experience, and doubled experience" (Vygotsky, 1982c, p. 85).

The third line dealt with a search for the "signs" used by these new members of the formula to relate to each other. In 1925, Vygotsky introduced the corresponding formula having placed a plus sign between historical and social experience and having defined the result as "doubled experience".

The second period: 1927. It was the period of Vygotsky's self-identification within the framework of contemporary scientific psychology, as reflected by his key methodological work "Historical Meaning of the Crisis in Psychology" published for the first time in 1982 only (Vygotsky, 1982a)]. One should keep in mind that Vygotsky wrote it in a hospital bed having spent over six months there getting treatment for a virtually terminal diagnosis and showing no improvement (Volikova & Glukhova, 2012). The final part of the text carried an air of a testament, of instruction to the future generations of psychologists, of something that the author himself would have most probably had no time to do. However, Fortune gave him another 7 years of life and work.

"Historical Meaning of the Crisis in Psychology" was mostly devoted to the methodology of a new approach to psychology resting on philosophy and practice. It set a

---

2. The period of Vygotsky's work that culminated in "Psychology of Art" is sometimes designated as the first period of Vygotsky's legacy (Meshcheryakov, 2008). Herein, we start from his first works relating to developmental issues proper.

goal of developing some in-between, intermediate layer of concepts (in between materialist dialectics and realities under study). Vygotsky wanted to find a new name for this new science but eventually reserved the name "psychology" for it, emphasizing that it was to be "materialist" and "historical", though. Vygotsky considered historical materialism – which described the society development as a natural change of economic formations – to be a model for such science. Therefore, he argued that there was a need for developing concepts that would not only explain and describe the human psyche but also would help to master it. According to L. S. Vygotsky, the cause of the crisis and the driving force of development, respectively, had lain in a tremendous growth of applied psychology and emerging psychological practices.

He designated the practice of education as one of such practices. Confrontation with practice . . . compelled "psychology to reform its principles so that they may withstand the highest test of practice" (Vygotsky, 1982a, p. 387). And further: "The importance of the new practical psychology for the *whole* science cannot be exaggerated. The psychologist might dedicate a hymn to it" (Vygotsky, 1982a, p. 387) (Translation of the quotes adopted from Vygotsky, Lev. *The Historical Meaning of the Crisis in Psychology: A Methodological Investigation. In The Collected Works of Vygotsky*; Plenum Press, 1987).

The fact that Vygotsky prioritized the role of practice in development of the "new" psychology received wide recognition upon publication of "Historical Meaning of the Crisis in Psychology". We call the period covering the time when this writing appeared, "Vygotsky's self-identification", as he did not only set the goal of developing a new methodology, i.e. a system of "intermediate, concrete concepts appropriate for the scale of this science" (Vygotsky, 1982a, p. 419), but also identified himself with this methodology. We attempt to show that all his further work focused on developing such a conceptual framework that would allow for meeting objectives of his own practice.

His practice lay in the field of working with children with special needs. L. S. Vygotsky remained involved in this issue from beginning (since starting his career in psychology) till end. He kept focusing on three aspects: how normal development evolved; how abnormal early development evolved and how the conditions for reversing abnormal development could be created[3].

During these years, L. S. Vygotsky proposed an important assumption that development of normal and "defective" children (by the way, Vygotsky tended to avoid suchlike contemporary terms designating children with special needs) might be governed by the same laws and sought to discover those laws. As early as in 1924, he wrote that ". . . blindness is a normal rather than morbid condition for a blind person" (Vygotsky, 1983b, p. 68); that

---

3. The key points of Vygotsky's speech were discussed by the panel of the Narkompros (People's Commissariat of Education) Academic Council for Social and Legal Protection of Minors at their II convention in May 1924. Vygotsky - making his first steps in psychology at the time - reported on the work of three Sections (for the blind, the deaf, the retarded children). Nadezhda Krupskaya who was present at the meeting, proposed to facilitate implementation of the report's key postulates and emphasized the idea "that there is a need to find effective ways to bring education of defective children closer to learning and education in a general education school. . . to include these children in social and professional activity" (Volikova & Glukhova, 2012, p. 79)

"...Pedagogical Hygiene is right in advising that a blind child should be treated as if he were able to see" (Vygotsky, 1983b, p. 69); and that "...social education will overpower defectiveness. Then, it might be that people will hardly understand us if we say that a blind child is defective, but blind shall be they the name of a blind child, and deaf shall be they the name of a deaf child and *no other way*" (Vygotsky, 1983b, p. 72).

Coming back to Vygotsky's 1927-year's work (Vygotsky, 1982a), we would like to focus on one thread of Vygotsky's argument which could be considered as a clue to understanding the roots of his idea in some sense. According to Alekseev (1979), this thread of argument could actually serve kind of "modeling representation" for understanding of the learning-development relationship.

When assuming that there was a need of the new methodology, Vygotsky addressed Leon Binswanger's work (1922) which he turned to repeatedly throughout the text. He referred to Binswanger who had recalled "...Brentano's words about the amazing art of logic which makes one step forward with a thousand steps forward in science as a result" (Vygotsky, 1982a, p. 419) (Translation of the quote adopted from Vygotsky, Lev. *The Historical Meaning of the Crisis in Psychology: A Methodological Investigation. In The Collected Works of Vygotsky*; Plenum Press, 1987).

Seven years after, when discussing child (rather than science) development, L. S. Vygotsky wrote his famous statement that a single step in learning might mean a hundred steps in development. Clarifying it, he drew a direct analogy between science and child development. "Learning a new method of thinking or a new type of structure produces a great deal more than the capacity to perform the narrow activity that was the object of instruction. It makes it possible to go beyond the direct outcome of learning" (Vygotsky, 1982b, p. 230). Please keep in mind that this statement was given in Chapter 6 devoted to development of scientific concepts in children, which was written in 1934. In other words, both in 1927 and 1934, Vygotsky discussed scientific thinking – development of thinking in science in the first case, and development of "scientific" thinking in childhood, in the second.

The third stage: 1928–1931. Having recovered from his illness, Vygotsky – inspired and equipped with the idea of the new methodology – flung into work. Most writings of the time revolved around developmental issues. Most texts focused on working with various categories of exceptional children. In 1928, 22 works of 30 related to developmental issues (including 16 writings on development of exceptional children). In 1929, only 8 (of 18) works were devoted to development with half of them relating to normal development. In 1930, 21 writings of 30 touched on the developmental issues directly or indirectly (17 works were devoted to abnormal development). This period ended in 1931 culminating in "The History of Development of Higher Mental Functions", the epoch-making work with a self-explanatory title partly reflecting Vygotsky's 1927-year's conceptualization of psychology as a historical science (Vygotsky, 1983a). "The History" gave a methodological clue (the new logic, according to Brentano) allowing for taking a new perspective on child (human) development, consciousness and the specific nature of the human psyche versus the animal psyche (the line of Vygotsky's polemic with behaviorist and Gestalt-psychologists). It

also provided a practically-valid method of research implying that research should be performed through learning.

Importantly, the phrase "cultural development" appeared in the titles of Vygotsky's articles in 1928 for the first time and constituted the beginning of the third period, which ended with the first mention of the word "history" in the title. From that moment on, the new psychology developed by Vygotsky became indeed "cultural-historical".

The fourth period: 1932 – March 1933. During this period, Vygotsky led fundamental experimental research resting on the new understanding of the human higher mental functions development (studies of attention, memory and cognition). Seemingly, the period ended with Vygotsky's final speech at the conference on the 23rd of March 1933 (the speech was published in Volume 4 of Vygotsky's Collected Works in "Problems of Age"), where Vygotsky introduced the notion of "zone of proximal development" as a crucial construct for understanding of the child's development as of a human being, a social creature (Vygotsky, 1984). *From that moment on, the conceptual framework of the cultural-historical theory was complete with emergence of the concept integrating an array of Vygotsky's groundbreaking ideas on the specific nature of the human development, on the human consciousness, on the role of culture and the child's interaction with other people, namely, the concept of the zone of proximal development.*

The fifth period: March 23, 1933 – June 11, 1934. It was the times when every day counted. It was the times of a struggle, an emerging hate campaign, a terminal natural threat (his illness) and a social threat just as serious (Volikova & Glukhova, 2012). Both the "Biological" and the "Social" turned on Vygotsky and his cultural-historical theory. Those who used to extol Vygotsky, started subjecting him to fierce and unjust criticism. A while later (only two years after his death), his books would be withdrawn from libraries and destroyed. His articles would be excised from journals, and the surviving publications would be provided for reading only upon special permission. Still, it would happen later (1936 – 1956), and during the fifth period, Vygotsky was going through cultural and existential self-identification again, just like at a critical time in 1927, no matter what the "social situation" was. He started developing a research program based on the conceptual framework he had created. It is evidenced by the titles of his articles belonging to the period. We list them in the same order they appeared in Vygotsky's bibliography in Gita Vygodskaya' and Tamara Lifanova's book (Volikova & Glukhova, 2012): "The Problem of Age", "The Problem of Development", "The Problem of Consciousness", "The Problem of Learning and Development in School-Age Children", "The Problem of Development in Structural Psychology", "The Problem of Development and Retardation of Higher Mental Functions" (Vygotsky's last speech given 6 weeks before his death). Two other works – "The Problem of Child Development in Arnold Gesell's Research" and "The Problem of Speech and Thinking in Piaget's Theory" – published in 1932 (please note that our periods partly overlap) and relating to the books by Arnold Gesell and Jean Piaget – may as well belong to this list. Lev Vygotsky was never to realize the program he had outlined. It became the goal of his associates and disciples, and then their disciples and so on. Boris

Elkonin has argued that today the fifth generation of adherents of the cultural-historical psychology works in Russia (V. K. Zaretskii, 2015).

The life journey of Vygotsky's ideas was not simple. He remained virtually banned in the USSR, and unknown to foreign psychologists until 1956.

After the ban was lifted (we can imagine how much courage and effort his disciples had to invest to have it removed just a few years after the infamous Pavlovian Session), the first Vygotsky's publications started to appear. "Thinking and Speech", his main work, came up in 1956. "The History of Development of Higher Mental Functions" followed in 1960. In 1962, "Thinking and Speech" was translated into English and then into other languages. In the 1980s, 6 volumes of the Collected Works of Vygotsky were published. This collection was far from complete, but it gave an idea of the tremendous work he did over 10 years granted to him.

Consequently, cultural-historical psychology became increasingly popular. In the 1990s, the International Society of Cultural and Activity Research (ISCAR) was founded[4]. The authors participated in two ISCAR's congresses – in San-Diego (2008) and Sydney (2014), and noticed a positive trend: whereas in 2008 the congress welcomed representatives of 45 countries, as many as 62 countries were present in 2014!

What was the secret of such rapid growth of the popularity of Vygotsky's concepts? Was it really due to publishing the Russian edition of his Collected Works only?! We believe that the 1980s–1990s became a meeting point of two factors that brought about this "chemical reaction". This roaring response was somehow catalyzed by an essential feature of the cultural-historical theory. This was why "the chemical reaction" produced such a "vigorous release of energy".

The 1980s–1990s was the times when:

For one thing, unpublished writings of Vygotsky came up together with the opportunity to read authentic editions of his original works (it is important as Vygotsky's ideas have been frequently misrepresented, either intentionally or not).

For another thing – and this factor is most important – there was a surge in demand for psychology in various fields of practice. In other words, Vygotsky's times had come back but had completely changed their quality. The end of the 1980s saw the appearance of publications on academic and applied psychology (Etkind, 1987); ergonomics (a neoclassical complex practice-focused science utilizing psychology as its basic constituent) (V. K. Zaretskii, 1989); psychological practice (Vygodskaya & Lifanova, 1996), etc. Foreign practical psychologists flooded into Russia translating Western approaches.

It seemed that the concept that had been developed over several years by a small group of very young people (their leader Vygotsky died before he reached 38) a few decades ago,

---

4. In 2014, in Sydney, ISCAR's Executive Committee decided to rename the association as the International Society of Cultural-historical Activity Research without changing the abbreviation)

at a different historical time, and had lain still on the Spetskhran shelves[5], would fail to compete with methods and approaches intensively and continuously developed by many generations of researchers and practitioners[6].

Nevertheless, the cultural-historical psychology turned out to be even more than merely competitive. It started to successively win new and new fields of practice re-conceptualizing them, enriching its own conceptual framework which – from the very beginning – rested on philosophy and practice as formulated by Vygotsky in his 1927's work (Vygotsky, 1982a) (this integrative nature seems to be the core feature of the cultural-historical psychology).

Only few concepts and theories turned out to be useful for actual practice, even though there were many concepts describing mental processes and theories providing brilliant explanations of the latter[7].

Cultural-historical psychology was one of "useful" theories, as Vygotsky created it as a practical tool (he called his approach "instrumental", by the way). The heuristic potential of Vygotsky's concepts unfolded gradually. This journey could be traced on the example of the "zone of proximal development" (ZPD) which has travelled an amazing path from some marginal general aspect of the cultural-historical concept (frequently left unmentioned in psychological literature) to a major methodological principle in neuropsychology (Akhutina & Pylaeva, 2008; Glozman & Soboleva, 2016), developmental education [(Davydov, 1996; El'konin, 2008, 2015; Rubtsov, 2008; V. K. Zaretskii & Gilyazov, 2017, 2016b), etc.], special education (Korobeinikov, 2001), and psychotherapy in recent years (Kholmogorova, 2015; Kholmogorova & Zaretskii, 2011)[8].

Today, the ZPD concept is used as a fundamental principle (or a point of reference) for developmental diagnostics and education (remediation and development) of children. Still, implementation of this principle has posed a serious challenge in terms of methods and techniques to be employed. This is the point when the methodological issue of the philosophy-practice relationship has come up implying the need for development of an intermediate – as Vygotsky put it – level of effective concepts that would designate the object of efforts, and would equip a practitioner with methods enabling him/her to handle this object effectively.

---

5. Spetskhran – the Russian abbreviation for restricted access collections and archives in the USSR
6. Of course, Vygotsky's works did not merely lie on the shelves and suffered annihilation. His disciples, relatives and close people saved all his texts, synopses, and notes, and kept on doing what they had started with their Teacher. This feat – alongside the conceptual cultural-historical power of the approach itself – is the crucial factor ensuring that Vygotsky has become known worldwide as the founder of a new approach in psychology.
7. The authors faced this methodological challenge as early as at college, when no existing concept of creative thinking turned out to be useful for meeting the objective of "developing creative thinking" or, at least, facilitating the process of creative task solving (V. K. Zaretskii, 2012).
8. In 2014, the author and Alla Kholmogorova made a presentation on "The Zone of Proximal Development in Education and Psychotherapy" at the ISCAR congress in Sydney. The first response of the congress participants was, "Well, all that's missing is Vygotsky in psychotherapy!" Nevertheless, the attitude to this issue had changed, and the presenter was eventually elected to the ISCAR Executive Committee.

Vygotsky developed his theory as a practical tool, and its inherent (initially planned) focus on practice seems to have determined the rapid growth of its popularity and relevance on the cusp of the 20th and 21st centuries. So far, the cultural-historical theory has continued extending its scope of practical application and deepening its theoretical concepts. Specialists conversant with Vygotsky's concept keep uncovering it for themselves unveiling its hidden potential (see for example (Kholmogorova, 2015; Kholmogorova & Zaretskii, 2011; V. K. Zaretskii, 2008)).

The same thing happened to the ZPD concept. The end of 1990s and the beginning of 2000s welcomed the groundbreaking publications on the learning-development relationship viewed through the lens of ZPD [(Belopol'skaya, 1997; Kravtsova, 2013; Obukhova & Korepanova, 2005; Tsukerman, 2006; V. K. Zaretskii, 2007b). ZPD ceased to be considered as a plane of action. Rather, it was viewed as a complex multidimensional space wherein the idea of one step in learning triggering several steps in development, suddenly acquired a deep operational (i.e. practice enabling) meaning. This idea of the multidimensional ZPD found its first application in the field that Vygotsky started his practice with, namely, research into exceptional children's development and search for ways to facilitate this process.

The question whether educational, psychological, counseling and psychotherapeutic work with exceptional children could be designed so that one step in learning would facilitate many steps in development, has become critical in this field. As a matter of fact, there is no alternative way for these children, but this path opens feasible prospects to them, and the experience shows that it is possible. The question is, what the prerequisite conditions are? How can one conceptualize a hypothetical mechanism ensuring that the child-adult collaboration produces a quantum leap in development?

2. From Idea to Hypothetical Mechanism

This mechanism's functioning may be explained using the multidimensional model of ZPD. This model was developed in Reflection and Activity Approach (RAA) for the purpose of supporting children's development so that they could overcome learning difficulties [(V. K. Zaretskii, 1998, 2007a, 2007b, 2008, 2009, 2012, 2013, 2015; V. K. Zaretskii & Gordon, 2011; V. K. Zaretskii, Smirnova, Zaretskii, Evlashkina, & Kholmogorova, 2011; V. K. Zaretskii & Zaretskii, 2015), etc.]. As may be inferred from this statement, we are speaking about a helping practice. This help is provided in the course of learning as the child gets the adult's assistance when coping with his/her learning difficulties. Furthermore, the help targets facilitating the child's development rather than working on the challenges alone. Importantly, this model is based on the understanding of ZPD as a specific space of the child-adult collaboration. Developmental benefits brought about by this space may exist within certain limits only, and outside these limits, according to Vygotsky, this interaction is useless and may even be harmful to the child. The multidimensional nature of the model makes it special.

RAA arose as an approach that integrated practices of helping children with learning difficulties based on innovative approaches of teachers who succeeded in working with all categories of "difficult" children (V. K. Zaretskii, 2013). From 1996 till 2002, the authors sponsored a project named "Summer Schools for Children with Special Needs". The schools gathered teachers and other specialists who had fruitful experience of working with various categories of exceptional children. The term "RAA" was introduced to describe the practice that had emerged during the Summer-School sessions provided by the Russian Language teacher Natalia Abasheva and the psychologist Victor Zaretskii in 1997 (V. K. Zaretskii, 1998). Later, this practice was thought over and extended, and the scientific rationale for it was formulated. RAA today is an approach to research and practice with specific theoretical and methodological principles resting on the Russian schools of developmental psychology (L. S. Vygotsky, P. J. Galperin, V. V. Davydov, D. B. Elkonin, N. G. Alekseev etc.), and techniques for their implementation (V. K. Zaretskii, 2013).

What follows is a brief account of the essence and the content of this approach. We show how this approach views the mechanisms of the learning-development relationship within the framework of the child-adult collaboration; what conditions RAA provides to facilitate development and what factors contribute to this.

The starting point in RAA is a view that any challenge that arises in learning is a resource for development. Such challenges may include errors, difficulties, misunderstanding, incapability (really existing or imagined by the child), persistent academic failure, educational neglect etc. However, such challenges may be also due to natural factors relating to limited health capabilities, e.g. disability.

The challenge that has arisen in the course of learning tells the adult that the child is unable to do something by him/herself. Thus, the child's task falls beyond the limits of his/her ZPD, according to Vygotsky. Alternatively, if the task is within the child's ZPD, it endows the adult with an opportunity to arrange the process of his/her interaction with the child so that the child could make this "step in development". RAA identifies and provides the rationale for several conditions that enable the child to make this step-in collaboration with the adult, i.e. in practice, learning may precede development (V. K. Zaretskii, 2013).

Here is a brief account of these conditions.

The first prerequisite condition is contact. The adult establishes meaningful and emotional contact with the child, wherein the child feels protected, supported and accepted by the adult; feels him/herself at ease communicating with the adult; understands the meaning of his/her activity and why the adult's participation is necessary. The failure to establish this contact hinders fulfillment of the other conditions.

The second condition is, that development will occur if the child takes the position of a fully-fledged and legitimate agent of overcoming difficulties and reflecting on this activity.

The third condition implies that the child-adult interaction throughout this activity is collaborative, with the adult acting as an assistant to the main protagonist, that is, the child.

The fourth condition is that development results from the child's autonomous activity and his/her reflection of it carried out with the adult's help and support.

The fifth condition assumes that the child makes a step-in development through "owning" modes of action implemented in cooperation with the adult (interiorization, according to Vygotsky (1984)) and through reflecting on his/her own and shared modes of action.

The sixth condition indicates that in the course of joint activity aimed at overcoming a challenging situation, development may emerge in several areas simultaneously. In other words, "a single step in learning can represent a hundred steps in development" (Vygotsky, 1982b, p. 230).
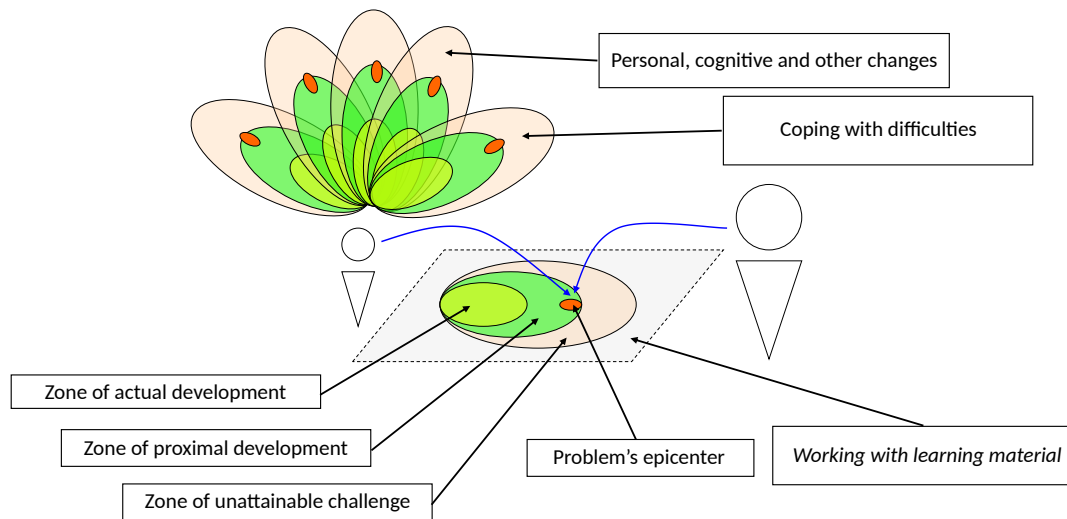
Figure 1. ZPD as a generality of dimensions of potential developmental steps. The diagram represents a challenge as a developmental resource and illustrates Vygotsky's assumption that one step in learning can represent a hundred in development (V. K. Zaretskii, 2013)

We illustrate the latter assumption and the essence of RRA with a diagram representing multidimensional – rather than two-dimensional – conceptualization of ZPD (Figure 1), which has been developed by a number of Russian psychologists [see for example: Belopol'skaya (1997); Kravtsova (2013); Obukhova (1995); Tsukerman (2006).

As follows from Figure 1 (this diagram is informally called "a flower"), development can be represented as a unique event in the child's life when a challenge creates the context for expanding the boundaries of the zones of actual and proximal development in several vectors simultaneously, and a new quality emerges. The child starts unfolding like a flower, hence the informal name of the diagram.

A detailed description of the diagram and specific examples of the steps in development (may it be at least several if not a hundred), follow.

The main idea of the approach is reliance on such resources as the child's sense of agency in learning, reflection and personal development. Correspondingly, the adult's task is to help the child feel him/herself an agent in his/her activity and its reflection; to be the child's partner-coworker; to enable the child to enhance his/her own resource. As the child requests, the adult's help when he/she can't fulfill the task him/herself, that is, within his/her ZPD, the adult can assist the child so that the child fulfills the task; understands what he/she could have done him/herself, what the adult has helped him/her with and what he/she needs to learn to fulfill suchlike tasks by themselves in the future. The approach received its name after two major processes performed by the learning child as an agent of activity.

Reflection and Activity Approach (RAA) is a system of principles and techniques facilitating the child's development in the course of his/her collaboration with the adult and peers, which relies on supporting the child's sense of agency in terms of his/her activity, reflection, awareness, reforming and constructing modes of action.

Learning-related development occurs through interiorizing the modes of joint actions. Developmental dynamics represents continuous expansion of the zones of actual and proximal development in terms of various dimensions of individual progress on the plane of learning and on other planes where various capabilities and personal qualities develop.

From the perspective of RAA, help is defined as support provided by the adult to facilitate the child's sense of agency and processes relating to implementation, reflection, restructuring and constructing modes of actions.

The child is viewed as the adult's coworker and partner, and, therefore, the actual lesson is a result of their co-creative activity. Teachers using RAA are guided by the general idea of the approach, its principles, limitations implied by the position of a coworker, the idea of providing help through reflection, as well as by some recommendations as to techniques. However, it should be reiterated that the actual process unfolds as spontaneous, creative and placing the teacher him/herself in the position of "a developing adult".

The adult's task is to identify learning-related ZPD; provide learning tasks matching the child's abilities so that it could be clarified what the child can/can't do by him/herself, and provide specific help. If the child's learning difficulties relate to deficits in "other dimensions", then the adult's assistance facilitates progress in these dimensions as well.

The dimension of "the ability to cope with one's difficulties" is crucial for children – especially children with persistent difficulties in learning or disabilities – as this dimension deals with development and enhancement of the child's sense of agency. Lack of experience of independent coping with various life (and learning) challenges can result in self-feeling similar to a phenomenon of learned helplessness introduced by Seligman (1992). Learned helplessness may be caused by repeated fruitless attempts to act within the

zone of unattainable challenge in children who faced educational neglect; or, alternatively, by overprotection for children with disabilities when the adult allows the child to perform no independent actions even within his/her ZPD. Learned helplessness may become a factor suppressing progress in other dimensions as it hinders realization of the prerequisite condition – that is, developing the child's sense of agency in learning, self-development, self-actualization and self-effectiveness (Bandura, 1977). Lack of the sense of agency prevents activation of the major mechanisms that are responsible for the onset of simultaneous progress in several dimensions regulated by the child's activity.

We believe that utilization of RAA to create conditions for development of the sense of agency and coping skills to overcome learning and life difficulties, represents a relevant and valuable resource, especially in terms of inclusive practice[9], which is used only episodically so far.

During the joint activity with the adult, the child starts to understand what he/she can do autonomously, and which tasks would require the adult's help. Above all else, the child starts to see progress day by day. He/she feels that the limits of his/her abilities get expanded and – most significantly – becomes aware of the enabling factors.

This idea was very clearly articulated by a second-grader who had just missed being sent to a school for mentally retarded children due to consistent academic failure. When a counselor (who observed the principle of collaboration and supporting the sense of agency) wondered whether the child would make the following task independently or together with the adult, the boy said, "We will make this exercise together, and I will try to make the next one by myself". Of course, a 9-year-old child diagnosed with "developmental delay" is unable to explain what the factors are, that enable him to do what they used to do together, by himself. However, he knows the meaning of interacting with a counselor and sees the results of this: today he autonomously does things that he used to do together with the adult yesterday (just like Vygotsky put it). Contextual gains, small victories over mistakes and difficulties, conceptualization and changing of the modes of action, reflection on the previous and current experience somehow breach the totality of the learned helplessness. The child gets a space for action - even though very narrow at first – where the child is successful and where the efforts invested bring about actual results (understanding causes of a mistake is nevertheless a positive outcome as it becomes clear what one needs to work on, what cause shall be eliminated).

Children whose learning experience has been mostly negative, who get used to being unsuccessful tend to exhibit signs of learned helplessness when learning. Perhaps, this is why, "the therapy with success" is most efficient and instructive for them. We give a detailed account of how one may work with learned helplessness. It is worth mentioning that equivalents of the learned helplessness syndrome of different severity may be found not only in children with disabilities who are used to their limitations and do not seek to overcome them, but also in nondisabled children who display persistent academic failure,

---

9. It reminds us of the goal set by Nadezhda Krupskaya in 1924 to the participants of a meeting devoted to education of "defective" children when Vygotsky made his report (Volikova & Glukhova, 2012).

come from troubled families and have nobody to help them cope with challenges. These children are often promoted from one grade to another so that grade retention could be avoided. Furthermore, these children find "work-arounds" themselves (cribbing during tests, avoiding speaking in front of the class, skipping lessons), or reconcile themselves to their failure to change their situation for the better and make no attempts to improve it at all. This behavior (lack of useful activity) and the mode of experiencing the challenging situation (feeling helpless, unable to change anything, feelings of futility of efforts, self-doubt and lack of desire to do anything) make the situation traumatizing, potentially harmful for healthy mental functioning. Learning recedes into the background, and its psychotherapeutic potential (Kholmogorova & Zaretskii, 2011), i.e. the possibility to facilitate fruitful personality change (personal development) staying within the framework of learning, comes to the foreground.

In this context, the problem's epicenter lies on the plane of the learned helplessness syndrome rather than on the plane of concrete modes of action. This syndrome needs to be specifically addressed by the adult (not necessarily a psychologist but a teacher or a parent). In this case, the plane of learning and the plane of learned helplessness swap places in some way (Figure 2).
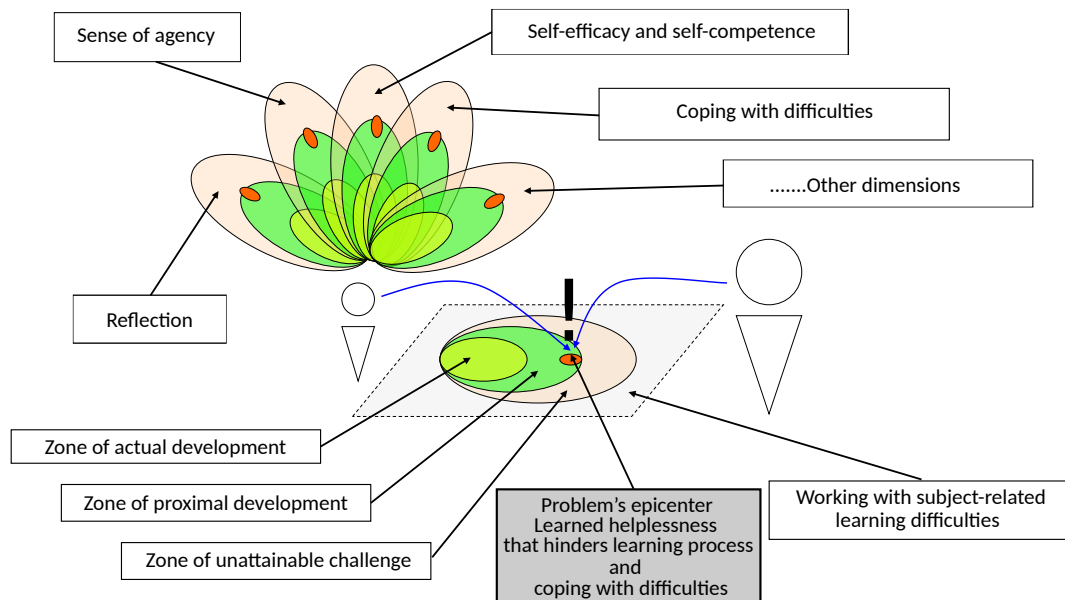
Figure 2. The multidimensional model of ZPD illustrating the case when the problem's epicenter lies on the plane of personality rather than on the plane of concrete modes of action

Assistance targeting learned helplessness initiates improvement in the related dimensions (agency, reflection, willingness and ability to cope with difficulties, self-competence, meaning etc.). Figure 3 indicates the moment when these dimensions start changing by changing their color respectively.
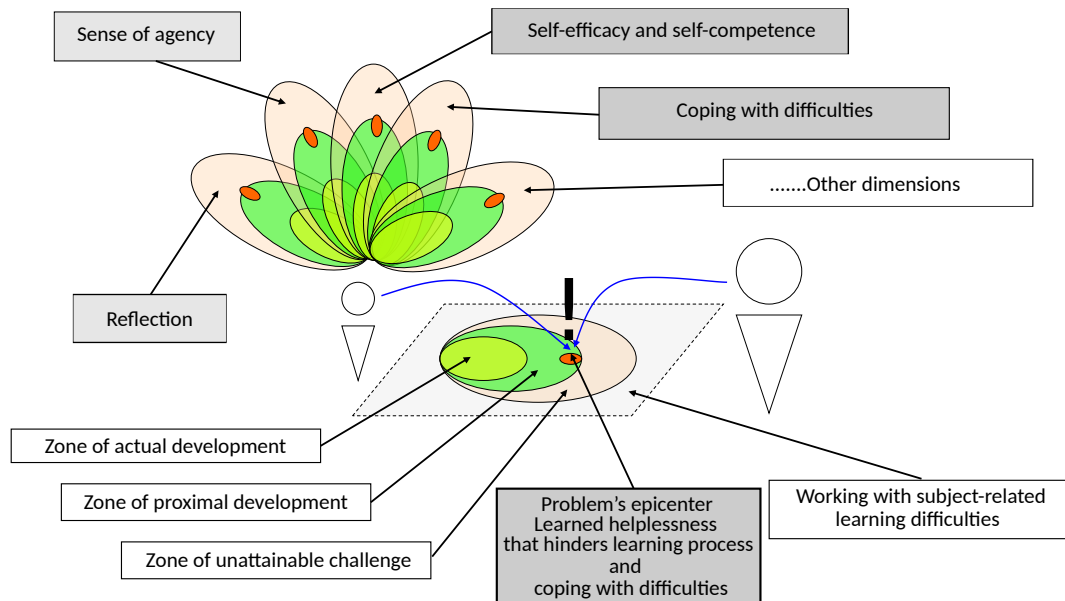
Figure 3. The multidimensional model of ZPD illustrating the point when the improvement in the learned-helplessness-associated dimensions starts (V. K. Zaretskii, 2015)

On the one hand, these dimensions - or exclusion of their resources when coping with a challenge, to be precise – depend on the past experience that resulted in learned helplessness which oftentimes manifests itself as a loss of capacity to do even simple, doable things. On the other hand, "exclusion" of these resources reinforces learned helplessness and feeds the person's self-myth that he/she is incapable of this kind of activity.

If the child ceases investing efforts to overcome some learning difficulties, it may jeopardize his further development. This way of experiencing the challenging situation may entrench itself. Should another situation and another learning activity take place, the child may repeatedly view him/herself as incapable. His/her own activity may become selective; the life space may start narrowing and he/she may become a psychotherapy client, as the child's mental health may come under threat.

So, how may the personality qualities be developed through activity? For one thing, activity itself is not as important. It may be an activity involving insuperable difficulties, or it may be some neutral activity, e.g. a game of chess. The child who is being engaged in playing chess, may be quite skeptical about his/her ability to be successful in it. However, what if the activity is performed so that the success is inevitable?! We emphasize and focus the child's attention on the fact that our joint activity is always a success. As a matter of fact, success itself may be different. If the child learns something, then it is a learning success. If he/she has failed, but he/she has been able to reflect on the mode of action and has become aware of the cause of failure, then the success lies in awareness, in a deepened understanding of what he/she does and how he/she does this.

This focus on the content of activity distracts the child from hard feelings of helplessness and sets a positive mood even when there are no achievements in the activity itself. At the same time, it enables the child to get used to this activity. The child is indeed getting used to it as if he/she were walking carefully, feeling the ground to understand whether there was no danger to walk in that direction. The main challenge is to begin: to involve the child in activity whereas he/she firmly believes that investing efforts makes no sense. Here "another thing" comes into play. For another thing, the contact established between the child and the assisting adult becomes – in a way – more important than activity itself. If this contact is deep, emotional and meaningful, if the relationship is built on collaboration, if the child tends to trust the adult (even when the child mistrusts him/herself) and believes him, these may be the decisive factors in overcoming learned helplessness. If the child is resistant or irresponsive to suggestions to start doing something giving an excuse of "Nothing is going to work", then, if the contact is good, the adult can always say, "Do you think that you will fail? And I think differently. I can help so that you will make it. Do you believe me? Then let's try". Then the art of helping and arranging lessons comes into play. If the child has realized the line between his/her zones of actual and proximal development, reassured himself that he/she can do things autonomously, then this experience will become a source of inspiration empowering the child, enhancing tolerance to difficulties and making efforts meaningful. So, according to Vygotsky, tomorrow the child will autonomously do things he/she does together with the adult today.

The littlest success may revive improvement in all the mentioned (and unmentioned) dimensions producing the effect when one step in learning results in one hundred steps in development.

3. From Mechanism to Supporting Development

Practitioners facilitating child development do encounter cases of "wonderful transformation" when a child suddenly makes a giant step in development and does things that seemed to be impossible a moment ago.

Christel Manske, who has devoted over 40 years of work to children with Down syndrome, autism and attention-deficit/hyperactivity disorder (ADHD), relies on the principles of cultural-historical psychology. In her lectures and writings, she gives accounts of the cases from her practice when even a short conversation brought about dramatic change in lives of people she interacted with (Kolomeitsev & Manske, 2015; Manske, 2014).

Lebedev (1996), one of the four members of the first team of the famous Novosibirsk Habilitation Centre "Borozdin's School", reported that during a public lesson in Krasnoyarsk (broadcasted on the local TV), he offered a girl to catch the ball and she started using her right arm which – according to the girl and her mother – had not "worked" before.

In the 1990s, Ogoniok (a Russian magazine) published several accounts of the Borozdin's School experiences including sections called "Evidence of Miracle". In his "Sketches on

Habilitation Education", Borozdin (2000), the founder of the school, gave an example of "one step-in learning" which for Lucy B. was shaped as learning a couplet of a song, "Cornflower, cornflower! You are my favorite flower. Tell me when your pale blue eye will burst open in the rye". One couplet equaled one step. However, the thing was that the girl had neither talked, nor sung, nor understood a word of this song as of the onset of her classes on the 1st of June, 1991. She sang this song articulating words clearly, without mistakes, and with full understanding of what she was singing about, exactly that day twelvemonth (June 1, 1992). One can only imagine how many developmental steps she made within this "single step in learning"! Interestingly, Aleksey Borozdin called his lessons "music therapy" in this work (Borozdin, 2000, p. 31).

Giving an account of his studies on development of elementary mathematical concepts (measure, unit, number), Piotr Galperin (Galperin, 1998) indicated that learning mathematics resulted in the change of operational cognitive schemata relating to an object: the child ceases conceptualizing objects syncretically (focusing on a "strong", eye-catching feature) and starts conceptualizing them as having various aspects, each measured by its own unit. The developmental leap occurring at that point results in disappearance of Piaget's phenomena.

In our Summer Schools for children with special needs and learning difficulties, which based in a summer camp called "Gagarinets" in the Nytvensky District of Perm Krai, Russia, we frequently witnessed dramatic improvement in many children as early as during first days in the camp. For example, the first Summer School in 1996 gathered different specialists (teachers, psychologists, artists) who were aware that there hardly was any chance to achieve significant outcomes for these children as far as bridging gaps in academic knowledge and coping skills was concerned, for 18 days (with only 13 days of academic training). Therefore, they set a major goal to endow every child with an opportunity to feel him/herself successful in something and regain their self-confidence. As Margarita Gordon, one of the Summer School organizers, noted, "The collaborative fulfillment of this goal brought about "miracles" when buds which seemed sleeping or even faded, opened to form bright and beautiful flowers. Nearly all children in the Summer School acquitted themselves well during a lesson or some activity. Should such breakthrough occur during one lesson, all the other teachers noticed at once that the child started to work better, to show interest or even active engagement. Furthermore, his/her status among classmates improved" (Gordon, 1996, p. 396).

This account had been given ten years before the multidimensional "Flower" diagram appeared (V. K. Zaretskii, 2007b). However, as you can see, the image of an unfolding flower reflects the multidirectional process of the quantum change, excellently. The above quote shows that children who have experienced success in some kind of activity ("one step in learning") and who regained their self-confidence (one of the doubtless epicenters within the space of the developmental dimensions), enjoyed improvement in several dimensions, including interpersonal interaction with other children, simultaneously.

Ch. Manske compared the child's developmental leaps with a butterfly's life cycle, "Just like a butterfly starts life as an egg turning into a larva and then a pupa, children experience

developmental leaps during their ontogenesis, which result in a complete restructuring of their psyche" (Kolomeitsev & Manske, 2015, p. 120). Furthermore, "if a tiny step in learning had initiated a developmental leap, it happened . . . .because it was appropriate" (ibid). Manske considered that those learning steps were "appropriate" that "matched the structure of a relevant stage of mental development" (Kolomeitsev & Manske, 2015, p. 145). Speaking in terms of the multidimensional model, it can be assumed that an "appropriate" step is a step made in the problem's epicenter.

The problem's epicenter in a key dimension blocks the ability to progress in other dimensions and becomes an insuperable obstacle for development. When the child has broken through it, energy gets released immediately and progress in other dimensions starts. This process might be figuratively described as "a hundred steps in development".

4. Summer School Experience

Part 2 hereof has given a theoretical account of how learned helplessness blocks any activity and discounts the significance of any coping efforts, and what effect overcoming learned helplessness may have for development. We faced the reality of this phenomenon in the Summer Schools.

Thus, in the Summer School-1997 – the one where N. Abasheva and the authors started using the term "Reflection and Activity Approach" (V. K. Zaretskii, 1998) designating the practice of helping children overcome learning difficulties while studying Russian – we achieved significant outcomes working with the nine-year pupils of a local school. As their school teachers confessed, the academic advancement did not matter for the grade promotion. The pupils were promoted from one grade to another so that they left school as soon as possible, as the teachers neither had energy nor saw any point in teaching them. The gaps in their education were disastrous. Four of the seven pupils who came to the Summer School made over 100 errors in a 186-word dictation. One of the pupils wrote "ni na shto" (*Russian* "for nothing") with seven (!) mistakes. Another one wrote "dioblyje tni" instead of "tioplyje dni" (Russian "warm days") and failed to find the mistake independently during the error analysis. Another boy merged all prepositions and conjunctions with other words, and a girl asked to remind her of how the letter я ([ya] – the last letter of the Russian alphabet) was written. We became aware that we faced total illiteracy, the experience of persistent failure (8 years at school taught these kids nothing) and senselessness of the learning activity as it was. All this produced the effect of learned helplessness. We found support only in the fact that the children came to the Summer School voluntarily because the organizers invited solely those kids who wanted to learn and overcome learning difficulties. Therefore, they *wanted* to learn and to attempt to change something in their life. It was the only visible resource for joint activity at the start.

Their ZPD implied the following: (1) to involve them in the activity, i.e. writing a dictation (during this stage, we managed to clarify the significance of our lessons and the dictation, in particular, and endow these with meaning for the kids); (2) to analyze their

failures; (3) to chose a mistake they would correct assisted by a teacher and a psychologist, (4) to develop their own unique mode of action that would ensure preventing this mistake (V. K. Zaretskii, 1998). During the last stage, they tested the new mode of action. This "trial" showed that everyone was able to correct one mistake and to learn how to prevent it. However, this mistake did not differ from others. If one was able correct this mistake, then all the others could also be managed. It inspired children who regained self-confidence, and reassured themselves that collaboration with counselors to overcome learning difficulties was useful.

One step in learning Russian (correcting one mistake, learning one rule, one mode of action) produced changes in many dimensions: self-confidence; making meaning of learning; readiness to invest effort, readiness to act by oneself; readiness to accept help; understanding the line between their zones of actual and proximal development, i.e. awareness of when the help was needed; reflection (shaped as consistent self-improvement and improvement of one's modes of action; establishing a connection between efforts invested and outcomes, between modes and failures, between mode amendment and disappearance of failures etc); attitude to the self and the future (they said "We will enter college", and some children did enter and graduate from Perm universities, it happened several years after and at quite mature age though). This list might be continued, especially if we were to account for the kids' individual progress.

Nevertheless, what was the most striking for us was what happened later. By some quirk of fate, no teachers who worked with these children came to the Summer School. We taught them Russian exclusively. However, as their ninth school year showed, they achieved success in all the other subjects too. They got fairly earned "Bs" rather than "conditional Cs", and their efforts resulted in subsequent successful academic performance in various vocational schools and even colleges in Perm. Russian as a subject is, of course, very important, as knowledge of Russian means more than being literate and knowing rules, it also means understanding the discourse and other people, it is the culture of expressing thoughts. Still, even being an important condition for success in other subjects, it is not sufficient. We assume that the children were able to translate the experience they got during the Russian lessons to other school subjects and activities due to two factors. Firstly, their sense of agency in relation to learning and life overall emerged and started strengthening. Secondly, they improved the dimension of "the ability to cope with challenges" implying both the ability to invest efforts (do one's best) and to seek help from others if one's own abilities are limited. Besides, this dimension involves the ability to learn implying both knowledge accumulation and changing and refining one's modes of action in collaboration with another person.

5. Implementing "Chess for General Development"

The "Chess for General Development" project has become one of the practices supporting development through learning (Razuvaev & Zaretskii, 2004). The project rests on Nikita Alekseev's idea proposed as early as in 1979, that "Chess is a created-by-God material or

a model for development of the ability to act in one's head" (Alekseev, 1990, p. 45). The attempt to implement this idea was made as late as in 2004 after N.G. Alexeev's death, when a group of enthusiasts started to promote an idea of including chess in school curriculum in Satka (a city in the Chelyabinsk Region). They started chess classes that targeted building a methodology of teaching chess to facilitate general development. The lesson design and the methodology rested on the following concepts: principles of cultural-historical psychology (L. S. Vygotsky); the system of the stage-by-stage formation of mental actions (P.Y. Galperin); the idea of reflection-based lesson design (N.G. Alekseev); principles and techniques of establishing collaborative relationships, providing support for overcoming learning difficulties and implementation of one's plans by means of RAA (V.K. Zaretskii).

The main idea of the project was to design and give chess lessons in a specific way so that they developed the ability to perform "in one's head" so that it could be translated to other activities in other school disciplines. As it was the pupil who was to become an agent of the conscious translation of the ability, the learning procedure activated such factors as "the sense of agency" and "reflection" The process was centered around developing the child's ability to mentally move a piece, i.e. to do chess problems in his/her head, and the whole process represented the stage-by-stage formation of actions constituting this ability. Initially, all actions were performed on the material plane, and later, an action was translated to the ideal plane[10] according to the principles of the stage-by-stage formation of actions.

The progress was made within every pupil's zone of proximal development, i.e. the lessons were individually focused. The setting was two 45-minute lessons a week. The first participants of the experiment were Satka-school second graders and Primary and Secondary school teachers who had shown interest in the project and an opportunity to learn new educational approaches and wished to become co-developers of the method (as the method did not exist at the time). The first pilot class received chess lessons for three years (from the second till the fourth grade). Later, the children followed the usual Secondary School curriculum.

The class consisted of neighborhood children, no preliminary selection was performed. An array of psychological assessment tools was used to monitor the children's progress. They included cross-sectional assessment of attention, memory, verbal and nonverbal intelligence, performance and the ability to perform mental operations. The researchers carried out cross-sectional testing in two classes of other schools in order to assess the effects of chess lessons. Children in one class demonstrated lower average levels of the functions tested, children in the other class exhibited higher levels.

The findings of a comparison study showed that in the beginning, the chess project participants outstripped their peers as far as their development rate was concerned, and

---

10. wo Teacher's guides "To Development through Chess" and "Chess for General Development" and "The Workbook for Children and Teachers" emerged as tangible outcomes of the chess project implementation. They were published in 2016 (V. K. Zaretskii & Gilyazov, 2017, 2016a, 2016b) with support of the German-Russian Chess Foundation, Satka/Russia, created by the enthusiast Matthias Draeger. Alexey Chernysh, an IT specialist and a psychologist, developed software to support the learning process.

by the end of the academic year they showed better results as to development of memory, visual memory, attention, performance, internal plane of action (as measured by two tests), nonverbal intelligence (Veresov, 2015). Later, the chess learners were compared to their peers from other classes, with positive effects of chess lessons for development of various functions being consistently confirmed. Unfortunately, the methods chosen allowed for monitoring and registering changes in no other dimensions.

Still, we have good grounds to hypothesize that these changes might as well have emerged. For instance, the diagnosis of "a delay in mental development" was subsequently removed for some children. The parents reported that their children became more organized and independent. The teachers indicated that the children made attempts to do problems mentally during other lessons, Mathematics, for example. The transition from the primary to the secondary school resulted in no decrease in academic performance in the pilot class (such decreases usually take place due to critical changes in the learning process and an emerging need to adjust to them). A curious story happened during a City math test ran by a new teacher, who did not know the story of the pilot class. The test included a problem for advanced learners, which was optional for the pupils tested. The teacher was amazed when all the pupils solved this problem, even those who failed to solve all the mandatory tasks...

In 2014, the pilot class pupils finished the secondary school. Five pupils (chess project participants) were awarded "gold medals" for exceptional academic performance. It was the best result in the city and the Chelyabinsk Region taking into account schools providing advanced secondary education. The average score on the Unified State Exam in this class was significantly higher than in Russia. Another pilot class where pupils were taught by other teachers (both as far as chess and school subjects were concerned) finished school in 2016. 21 of 25 children who entered the first grade, finished school, six pupils were awarded "gold medals", and one girl finished school having only one "B" (with "A-s" in all the other disciplines). Taking into account the fact, that there was no preliminary selection of children in neither of the pilot classes, these results stimulate thinking on what factors have ensured this outcome.

What was the role of "Chess for general Development" in this outcome? One of the first-pilot-class pupils who finished school in 2014 and continued her education at college in Chelyabinsk gave the following answer to this question, "Chess has taught me think logically. Before doing something, I think everything over carefully, visualize possible outcomes... Chess helped me so that when working on a task, I visualized the plan of action, various options as to performance and potential outcomes. Then I chose the most appropriate one. It helped me avoid unnecessary mistakes. I still keep vivid memories relating to chess. I recall how we studied in groups, every group had its teachers, we learned to do chess problems in our heads... "

The chess project is underway. It is too early to draw conclusions as at this point, one may only hypothesize what aspects of these lessons produce the general developmental effect. However, it can be assumed that this effect relates to three specific aspects of the chess lessons.

The first specific aspect is their focus on developing the ability to act "in one's head", which is the crucial new formation at this age, i.e. the work is done in the "age-related epicenter". Efforts targeting development of this quality, individualized tasks accounting for every child's ZPD help to form it on the basis of chess and to translate it to other activities.

The second specific aspect is supporting the child's sense of agency in relation to learning. There is evidence that the child's sense of agency in learning facilitates both child development and benefits learning itself (V. K. Zaretskii et al., 2011; Y. V. Zaretskii, 2013).

The third aspect deals with supporting the child's reflection on his/her own and joint activity performed in collaboration with the teacher. Reflection process takes place at the beginning, at the end and in the course of a lesson as may be necessary to conceptualize challenges, their causes and coping strategies. For instance, during every lesson children were offered to focus on what they were able and unable to do by themselves; on what help they needed; and what challenge was worth dealing with during the following step. It allowed children to perform appropriate objective assessment of their abilities; to monitor changes in the ZAD and ZPD boundaries; to make an informed decision when choosing the task complexity; to accept the situation as it was rather than experience failure as a trauma; to monitor the dynamics of changes and to be aware of a crucial role the teacher's assistance played in these changes, which would be impossible unless the teacher were there. Indeed, the last point implies understanding of the value of cooperation and seeking to build such relationships in life.

6. Experience of the "Visiting Dunno" Centre

The Centre "V Gostyakh u Neznayki" (*Russian* "Visiting Dunno"; Dunno, or Know-Nothing, is a character created by Nikolay Nosov, a Soviet children's writer; hereinafter the "Visiting Dunno" Centre) was created by the "Deti.msk.ru" Charity Fund founded by Father Alexander Men in 1989 (Lina Saltykova has been the Fund's President since its foundation). Until 2012, the Centre's organizers used to focus on the issues of arranging treatment and sustenance for children, creating emotionally healthy environment to "warm them up" (many children experienced severe trauma in the past). In 2012, they set a goal of establishing educational facilities for their little residents. The Centre invited teachers and psychologists using RAA for overcoming learning difficulties (V. K. Zaretskii, 2013) among other specialists[11].

---

11. When the Fund Officers invited the authors to a conference devoted to education of orphaned children with disabilities and severe somatic conditions (September 2012), the first response was that RAA could hardly solve the problems of these children. For one thing, we had never worked with these children before. For another thing, pedagogy and psychology seemed to be helpless there due to a whole host of problems caused by orphanage, disability, life style, lack of social experience and related developmental delays. However, Vygotsky's idea that learning could be structured so that one step in learning would produce multiple steps in development, did offer hope to us. It goes without saying that we also accounted for a unique Russian experience of educating the blind and deaf-mute children. This experiment was led by Ivan Sokolyansky and Alexander Meshcheryakov. The author eye-witnessed the miracle of this

Currently, all residents of the Centre receive school or home-school education despite severity of their condition, and get additional assistance from invited teachers, psychologists and tutors.

Below, we give an account of progress achieved by Pasha, a resident of the Centre, to illustrate beneficial effect of learning on the children's development. Pasha's example is exceptionally illustrative of the changes that may be brought about by breaking through the problem's "epicenter", namely, learned helplessness reinforced with an "objective health condition" resulting in to natural limitations.

Pasha has a diagnosis of arthrogryposis. It means that, among other things, he has muscular dystrophy. Pasha has a very limited range of movements. He can raise his arms, use his leg to propel a wheelchair, perform trunk movements. His head movements and speech are intact. After his birth, Pasha travelled from an infant orphanage through an orphanage for older children, to a hospital, and since 2010, he has been a resident of the "Visiting Dunno" Centre.

Regular video recordings made by the "Visiting Dunno" Centre's specialists registered a turning point in Pasha's life that happened when he played chess and that triggered an avalanche of changes, including those in personality.

When chess lessons started at the beginning of 2013 in the "Visiting Dunno" Centre, Pasha got keen on them and became a very dedicated chess learner who quickly achieved certain progress.

Once he was offered to give a mate in one move. He realized at once that a mate was to be given by the queen and said whereto (which square) the queen was to be placed. A counselor playing with him suggested that he should move the queen by himself. Pasha answered, "I can't". The counselor responded, "I think, you can". Then Pasha contrived to raise his arm and grasped the queen with two fingers. The arm and the queen moved down. Pasha took a careful sight and – with the second wave of his arm – moved the queen to the corresponding square. Indeed, some pieces fell down at that moment, but the game was ended with checkmate. A week later, Pasha ate by himself (he invented a mode of action that allowed him to eat soup and the second course pressing his elbow on a spoon or a fork lying on a plate). Then he started to expand the range of his actions. He started using orthoses which helped him move on his legs rather than in a wheelchair. Six months later, he could kick the ball and started playing soccer with his peers. He started going to school. He set a new goal – to become independent and self-sustaining. He started to train his arms, expressed a wish to "attempt to learn to play the piano" and, indeed, he found a way how to do it. At first, he learned to play on the black keys, and then on all the other. Two years after, he learned to attend to himself autonomously; bridged the gap with the peers as far as academic performance was concerned; had various hobbies and became one on the best chess players at school. Table 1 gives an account of Pasha's progress for three years.

---

experiment himself as he worked in one laboratory with Alexander Suvorov, a deaf-blind participant of that study and Ph.D. in Psychology.

Table 1

Pasha's Progress

Pasha, 13 years old (2013)	Pasha, 16 years old (2016)
Hardly did anything by himself.	Lived independently at an apartment.
Received no school education before, but was accepted to the fifth grade.	Had a roommate.
Able to write and to draw holding a pen or a pencil in his mouth.	Attended to himself, seeks help if needed.
	Consistently invented new ways "how to do something".
Sang, as he had an ear for music and a good voice.	Believed that he could do anything.
Read no books	A ninth-grader.
Used orthoses reluctantly as moving in them required much effort.	Learned to play the guitar and the piano.
Did not play chess.	One of the pest chess players at school.
Learned helplessness due to his physical condition.	Played soccer wearing orthoses.
Attempted to expand the range of physical capabilities made by means of surgical interventions.	Actor in a performance staged with the Centre's children by Natalia Shumilkina, a stage director of the Russian Academic Youth Theatre, where he sang, played drums and harmonica.
	Planned to work as a commentator on the radio as in that case "no one would make a fuss about his legs and arms" and his voice was OK.
	Did regular exercise to develop motor functions (doctors who witnessed his achievements said that the planned surgical interventions would not bring about such good results, and performed no surgeries so far).
	Read "White on Black" by Rubén David González Gallego. Liked Serge Yesenin's poetry, started reading Goethe's "Faust".

The main new formation that emerged during Pasha's play and learning activity seems to belong to "the sense of agency" dimension. Since the moment when Pasha set on becoming independent and discovered it for himself that it was all about modes of action, that he needed to look for them, show initiative and persistence, Pasha has started challenging himself and others. The author recalls that he wrote that he wanted "to try to learn to play the piano" in an individual project for the Summer School 2013. When asked how

he was going to play the piano with his non-functioning fingers, he said, "Well, one can always try!" There was nothing to say against this logic. Eventually he learned to play the piano, and, moreover, the guitar and the drums. Pasha's life attitude is characterized with a fully-fledged sense of agency. He seeks modes o actions that ensure self-sustaining and independent – in the future – life style for him in an active and aware way.

7. Case Study: Student M.

When employing RAA to assist with overcoming learning difficulties, a counselor usually needs to invest special effort to activate, support and strengthen learners' sense of agency (V. K. Zaretskii et al., 2011; V. K. Zaretskii & Zaretskii, 2015; Y. V. Zaretskii, 2013), especially when the latter have a complex of persisting failure, practically undistinguishable from learned helplessness. Such learners fail to cope with the challenge without the adult's support, but are often unwilling to accept help. Another experience of failure, especially when one has invested significant but futile effort, is a painful step that a person is reluctant to make. The conflict experienced by the person in that case may be briefly described as the desire of the impossible. If this conflict persists, it affects the person's development in a most traumatizing and destructive way. The secondary changes in the person's personality, behavior and affect occur. Then, the person may need psychotherapeutic help rather than psychological and educational counseling.

In our opinion, Igor Grinshpun provided a very precise definition of the difference between psychotherapy and counseling in his lectures on the history of psychotherapy. "If the client, let us say so, has an internal resource for problem-solving and psychological help consists in supporting him and assisting him with opening this resource, then it is likely to be counseling. If the resource is insufficient, and there is a need of creating it and a need of a lasting deep dialogue and accompanying this person, of joint progress within this dialogue, then it is likely to be psychotherapy. Nevertheless, it is very difficult to differentiate between these two within an actual process" (Grinshpun, 2015, p. 176).

The case of M. described in the authors' article in memory of P. Galperin (V. K. Zaretskii, 2012) clearly confirms the fact that sometimes it is hard to differentiate between these processes. Alternatively, it shows that virtually any activity may enable development.

Before discussing M.'s case, let us recall the place in Vygotsky's "Thinking and Speech", Chapter 6, where he conceptualized the relationship between learning and development. We would like to give a complete quote. "A single step in instruction can represent a hundred steps in development. This constitutes the most positive feature of this new theory. This theory teaches us to see the difference between instruction which provides only what it provides directly and instruction which provides more. Learning to type may not change [italics added] the general structure of consciousness. Learning a new method of thinking or a new type of structure produces a great deal more than the capacity to perform the narrow activity that was the object of instruction. It makes it possible to go beyond the direct outcome of learning" (Vygotsky, 1982b, p. 230) (Translation of the

quote adopted from Vygotsky, Lev. *The Historical Meaning of the Crisis in Psychology: A Methodological Investigation*. In *The Collected Works of Vygotsky*; Plenum Press, 1987, but for the last sentence excluded from the English source).

As we can see, L. S. Vygotsky's reasoning did not concern new formations here, and he was very cautious in his judgment, "Learning . . . may not change general structure. . . " Nevertheless, it follows that it may change under some conditions?! The article in memory of P. Galperin (V. K. Zaretskii, 2012) gives a detailed account of an example when it was learning to type that led to a breakthrough in development (Student M.)[12] This breakthrough became possible due to formation of an error-free 10-finger touch typing motor skill after 18 lessons.

. . . November 200. . . , student M. came to me with a request to become an academic adviser for her Master's thesis. All the previous advisers had refused to work with her. She received only 7 points ("C", almost "D") for her penultimate fourth-year Term Paper. I did not understand how she had managed to pass exams as her speech was incoherent. Then, I noticed her unique tactics of "handing initiative over to a teacher": at the most responsible point when she had to say something specific, she got agitated, coughed, cleared her throat and the teacher unwittingly started answering his/her own questions, and M. agreed to these answers readily. This examination tactics enabled her to go through 4 years. . . Term papers were a challenge for her, as she had to produce a written text then. I don't know what sort of papers these were, but as I have already mentioned she got a score of 7 (a conditionally positive grade) for the last one. M. came to me upon advice of her friend, my former student who used to have difficulty writing, too. Under my guidance, she had eventually prepared quite a decent Term Paper which could have made a good Master's thesis the year after, she had missed the deadline though. . .

M.'s desire to become a certified psychologist, willingness to work, hope that I would help her (even though we had never met before) appealed to me. What worried me was her low expertise and complete self-distrust. I based my work with M. on the principle that it was the process that was to be supported, the person had to proceed with the content by him/herself depending on his/her abilities and within his/her ZPD. . .

. . . As there was little time left till the thesis defense, and M. had never announced that she had wanted to work on a certain subject, I offered her to test a new questionnaire we were developing at the time. Work with the questionnaire would allow for gathering a large volume of data, and statistic analysis would enable her to get valid results. The essence of this work was quite clear, so describing results would not become a challenge. . .

Nevertheless, M. failed to defend her thesis during the first year of working on the subject as she never wrote a line with her hand. She did a tremendous job of processing the results; she got valuable research findings and even reported them at a student seminar, but there was no text at all. Right before the defense date, after a hard decision had been made to postpone the defense for another year, she emailed me one page of original text. . .

---

12. As the author was the student's academic adviser, it is more convenient to present a case study in the first person.

The same happened the next year. She kept on doing enormous amounts of technical work refining forms of research findings representation. When discussing the subject, she showed understanding of what her work and findings meant. However, she produced no text. By spring, the situation became threatening. I warned her openly that I was ready to work with her test, poor as it was, but that I refused to write or to dictate the text for her as it was against my principles. . . By the middle of April, M. made a sudden statement that she failed to write the text as she typed very slowly, with two fingers. I responded that I knew the Galperin-Malov's method and could teach her error-free ten-finger touch typing at the speed of 90 signs per minute. . . She agreed, having expressed her doubts that she would learn something though. . .

Having made patterns representing a keyboard of her laptop, we proceeded to the stepwise development of the skill of touch typing with ten fingers. . . It is difficult to say whether it was a stage-by-stage skill development process or "psychotherapy with activity", as I continuously perceived something usually called "learned helplessness". M. said that she had "been confusing right and left, top and bottom all her life", that she would never be able to learn it. We put stickers with the arrows showing "up", "down", "right", "left" on the laptop's screen. She could say, "I am moving the second finger of the left hand upwards" and move the fifth finger of her right hand downwards, without noticing that her movement failed to match her words. One of the main assumptions of the stage-by-stage formation is, "The action has to be performed correctly, without mistakes, from the very beginning". It was impossible to follow this principle as the action consisted mostly of mistakes despite the fact that she had the orientation basis for action in front of her. I was aware that the roots of her problem lay in the personality-related aspects of her thinking, and that reflection might help to overcome this personality-related barrier. However, things that seemed good in theory, were hard to implement into practice. . .

We failed to meet the deadline of seven hours. I suspected that despite my instruction to do nothing at home, M. tried to learn the keys, and was worried sick that she failed to memorize it. She believed my explanations that there was no need learning the keys as the framework of action would allow for involuntary mastering of its modes. Nevertheless, she didn't guide herself with these explanations. . .

A quantum leap occurred during the eighteenth hour of work (we practiced almost every day for one hour) when she travelled the distance from performing on the count of four (we used a metronome) to performing on the count of one, i.e. she started typing slowly but firmly with her ten fingers, without errors, at a speed of 60 signs per minute. It was the last of our "typing lessons" as we achieved the required result although it took us two and a half times as long as usually. . .

However, the text of the thesis was still lacking, although the main obstacle seemed to have been eliminated. It meant that there must have been another reason for M.'s failure rather than a low speed of typing. I assumed that this "another reason" was the deepest self-distrust, belief that she was unable to write anything that would make sense. A desire to become a psychologist no matter what it would take and self-distrust were fertile ground for an internal conflict paralyzing her own creative initiative, and still prompting her to find "bypass routes". As a matter of fact, when, a year earlier, I had been able to persuade her to postpone the defense, the decisive argument had been, "Would you feel yourself a certified psychologist if the text was written by someone else and you

receive a "C" for it?" It turned out that M. found it important both to have a degree and feel herself a psychologist, i.e. a fully-fledged specialist . . .

The situation cleared up in a few days before she had to hand the thesis in for review, and the text was still lacking. M. needed a single night to write 53 pages of the original text using the typing method she had mastered. For one day, the work on the text was completed. As an academic adviser, I edited the text. The reviewer gave M. an excellent grade (14 grade points). M. had to make a spontaneous presentation of her thesis as she failed to prepare the text because of the technical failure of her laptop . . .

Overcoming of learned helplessness, and understanding of the fact that she wrote the thesis using someone's help but by herself enabled M. to start learning new activities. She mastered quilling and then toy sewing. She needed no teachers, as she learned using on-line descriptions of activities. Her professional career after graduation from college was quite successful. She started her career as a nursery educational psychologist, and quite soon, having gone through a complex selection procedure, she became a managing director of a family and children support centre.

This case shows that it was the success in learning the typing skill that became the turning point in our interaction. It was with this breakthrough when a gap in the "I-want-but-I-can't" conflict appeared. This gap emerged in the "I can't", "I can if the process is arranged properly". No matter that it was nothing more but the touch-typing skill, the success in learning achieved at the background of serious internal doubts, brought about an amazing psychotherapeutic effect. This effect of the general development resulted from a dramatic change in the problem's epicenter that hindered and prevented progress in all other dimensions, save for the "bare" desire to become a psychologist unsubstantiated by resources.

It is difficult to say whether the counselor helped to "grow resource", or "the resource utilization skill" emerged, but M's collaboration with the counselor brought about an important event, namely, her first learning success in many years, which facilitated breaking the blockade built by learned helplessness. It was not about motor skills, of course. The lesson she learned was how to proceed from "I can't" to "I can". Thus, this case confirms the idea that any activity is a developmental resource.

<div align="center">***</div>

If we compare such notions as "learning", "helping to overcome difficulties" and "psychotherapy", we will see that the line between them is most likely to be of a historical nature. They have something in common – they are all helping practices that facilitate building of the person's resources needed to cope with difficult life circumstances. Practitioners who provide these kinds of help frequently use the terms designating them as synonyms. They switch their roles easily. For instance, a teacher may become a psychotherapist or an assisting counselor. As it has already been mentioned, Aleksey Borozdin calls his music lessons "music therapy", and Ch. Manske emphasizes a therapeutic effect of appropriate learning steps. Cognitive-behavioral therapy devotes much time to teaching the client, developing

his/her coping skills so that they could manage their thinking and mental states. The assumptions of the cultural-historical theory – namely, one implying that learning precedes development, and another one relating to the zone of proximal development as a space of shared activity ensuring provision of the needed, available and effective help, - allow for using the cultural-historical principles in counseling and psychotherapy (Kholmogorova & Zaretskii, 2011).

Accordingly, let us return to Vygotsky's idea that prompted us to write this article. The assumption that on step might mean a hundred steps in development, made Vygotsky's disciples and researchers focus on the learning-development relationship. Nevertheless, whereas the issue of development had always been in the focus of his attention throughout his ten-year academic career as evidenced by his published writings (please see Part 1 hereof), he took much less interest in the issue of learning. Only one work of 274 references listed by Volikova and Glukhova (2012) had "learning" in its title, and discussed the learning-development relationship. In his "Thinking and Speech", L. S. Vygotsky addressed the issue of learning-development relationship when analyzing and criticizing Kurt Koffka's theory. When he discussed development from "his own perspective", e.g. while introducing the concept of ZPD, he used different terms. He spoke about the adult-child collaboration, about the process in which the adult passed on and the child adopted the cultural and historical experience. Learning is obviously only one of the forms that ensure transfer of experience. It is a specially arranged activity providing for translation of cultural patterns.

The concept of collaboration is broader. Moreover, any collaboration is possible within any activity, not necessarily learning. From this perspective, if we bring together two lines of Vygotsky's thought on development (one relating to learning, and one relating to the adult-child collaboration in the process of transferring and owning the cultural and historical experience and development of specific human types of activity therein), then there is every reason to change the original statement for "*one step in child-adult collaboration (interaction) may give a hundred steps in development*". Then, we may translate Vygotsky's ideas from learning on to other types of the child-adult interaction, including psychotherapy and counseling as helping practices provided by the adult for the purpose of solving life (in addition to learning) problems. However, this poses another question. Why do we speak only about the child when discussing development and collaboration? Perhaps, we could go further and imagine that it is not the child but another adult who develops through adoption of the cultural and historical experience, in collaboration with other people getting help to overcome challenges? Perhaps, this vector of Vygotsky's thought could be considered as falling within the zone of proximal development of cultural-historical psychology itself.

Afterword

We would like to conclude by sharing another brief line of reasoning rather than ending with questions. Let us imagine three lines. The first line is a trajectory of the cultural-historical psychology. Vygotsky's contemporaries opposed it vigorously (save for a narrow

circle of his closest colleagues and disciples), criticized, prohibited, and relegated it to oblivion. . . Later, it was re-discovered, proclaimed to be a game-changer for research and practice, and put into action. Many postulates of the cultural-historical theory became standards of thought and practice. The second line is the concept of the zone of proximal development. During Vygotsky's lifetime, this concept was exposed to severe criticism, denial and then oblivion along with the cultural-historical theory. When Vygotsky's name and texts found their way back to the cultural space, it took some time for ZPD to take its place in the system of the Vygotskian developmental ideas.

At first, it was ignored and its value was denied. The concept remained a subject of ridicule and attacks as bad as accusations of plagiarism, even in the texts published as late as in the XXI century. Later, a new understanding of this concept's essence and value emerged. Vygotsky's isolated statements relating to ZPD and its role in developmental assessment and pedagogy joined together to form the integral whole. The ZPD's heuristic potential for practice unfolded, and the practice worldwide got reformed so that to account for the deep meaning inherent in the ZPD concept. The third line is L. S. Vygotsky's idea that a single step in learning may represent a hundred steps in development. No one paid any attention to this idea in Vygotsky's lifetime. Consequently, it remained completely ignored. Throughout decades, no one attached any significance to it. Those who laid emphasis on it, e.g. Obukhova (1995), accounted for the meaning that stemmed from the context. Namely, it was believed that one step in learning that changed the structure of cognitions might reform the whole system of consciousness, and, within this framework, as L. F. Obukhova argued, "the teaching may be pennyworth, and the developmental result may be worth a dollar" (Obukhova, 1995, p. 188). However, if we bring together this statement and one of Vygotsky's last ideas that ZPD might be translated to the personality as a whole, to most various aspects of its development, then a new meaning, a new framework will emerge, that is, the image of multiple interrelated dimensions of potential development, each having its own ZPD. The epicenter of this framework may be not only age-related or lie within the cognitive structures. It may lie on any of the dimensions designating the endless space of personal development. Therefore, any activity is a potential resource for development, and breaking through the epicenter by means of this activity may trigger progress in other related dimensions. Ch. Manske argued, "In chaos theory, the flap of a butterfly's wings may set off a tornado" (Kolomeitsev & Manske, 2015, p. 120). In a similar fashion, any developmental deficits, any difficulties of a given child have something "typical" and something "unique". An event that would trigger breaking through the problem's epicenter and change the whole configuration of dimensions, may happen in any activity, depending, first and foremost, on the child's individual features, on the specific characteristics of the social context of his/her development.

Should it repeat the trajectory of the two former lines, this Vygotsky's idea will become a standard of scientific thought and practice relating to creating conditions for personal development at any age and no matter what difficulties he/she has that necessitate providing him/her with psychological, educational, counseling or psychotherapeutic help. Utilization of this mechanism will become an "as-a-mater-of-course" aspect of the professional psychological practice. Hopefully this day will come anytime soon . . .

References

Akhutina, T. V., & Pylaeva, N. M. (2008). *Preodolenije trudnostei ucheniya: neiropsikhologich-eskii podkhod [Overcoming educational difficulties: neuropsychological approach].* Saint Petersburg: Peter.

Alekseev, N. G. (1979). Metodologicheskie printsipy analiza kontseptual'nykh skhem deia-tel'nosti v psikhologii [Methodological principles of analyzing conceptual schemata of activity in psychology]. *Problemy metodologii v ergonomike [Methodological issues in Ergonomics]*(17), 104–125.

Alekseev, N. G. (1990). *Shakhmaty I razvitije myshlenija [Chess and cognitive development].* Moscow: Vyschaya Schkola.

Bandura, A. A. (1977). Self-efficacy: Toward a unifying theory of behavior change. *Psychological Review, 84,* 191–215.

Belopol'skaya, N. L. (1997). Otsenka kognitivnykh i emotsional'nykh komponentov zony blizhaishego razvitiya u detei s zaderzhkoi psikhicheskogo razvitiya [Assessing cognitive and emotional components of zone of proximal development in children with impaired mental function]. *Voprosy psikhologii [Questions of psychology]*, 4(1), 19-25.

Borozdin, A. I. (2000). The problem of activity in psychology. In L. I. Borovikov (Ed.), *Uroki muzykalnoi terapii v shkole borozdina [Music therapy lessons in Borozdin's school]* (p. 245). Novosibirsk: Isdatel'stvo NIPKiPRO.

Daniels, H., Cole, M., & Wersch, J. V. (2007). *The Cambridge Companion to Vygotsky.* Cambridge: Cambridge University Press.

Davydov, V. V. (1996). *Teoriya razvivayushchego obucheniya [The theory of developmental education].* Moscow: INTOR.

El'konin, D. B. (2008). *Detskaya psikhologiya [Child psychology].* Moscow: Moskovskii tsentr "Akademiya".

El'konin, D. B. (2015). Pedagogicheskaya ideya razvivayushchego obucheniya [Pedagogical idea of developing training]. *Sovremennost' i vozrast [Modernity and age].*, 26–28.

Etkind, A. M. (1987). Psikhologiya prakticheskaya i akademicheskaya: raskhozhdeniya kognitivnykh struktur vnutri professional'nogo soznaniya [Practical and academic psychology: differences of cognitive structures within professional frame of reference]. *Voprosy psikhologii [Questions of psychology]*(6), 20–30.

Galperin, P. Y. (1998). Obucheniye i umstvennoje razvitije v detskom vozraste [learning and intellectual development in childhood]. In *Psikhologija kak objektivnaja nauka [Psychology as objective science]* (pp. 357–388). Moscow, Isdatel'stvo "Institut Prakticheskoy Psikhologii": Voronezh, NPO "MODEK".

Glozman, Z. M., & Soboleva, A. E. (2016). *Kompleksnaja korrektsija trudnostej obuchenija v shkole [Integrative remediation of learning difficulties in school].* Moscow: Smysl.

Gordon, M. M. (1996). Opyt pervoj letnej shkoly dl'a detej s osobennostjami razvitija [First summer school for children with special needs]. In *Podkhody k reabilitacii detej s osobennostjami razvitija sredstvami obrazovanija. Sb. nauchnyh trudov i proektnyh materialov. [Approaches to rehabilitation of children with special needs by means of education]* (pp. 391–402). Moscow: Institut pedagogicheskih innovacij RAO.

Grinshpun, I. B. (2015). Istorija psikhoterapii. Lektsija 1. Vvedenie v istoriju psikhoterapii [History of psychotherapy. Lecture 1. Introduction to the history of psychotherapy].

Konsul'tativnaja psikhologija i psikhoterapija. [Counselling Psychology and Psychotherapy], 23(2), 175–207.

Kholmogorova, A. B. (2015). Rol' idei L. S. Vygotskogo dlya stanovleniya paradigmy sotsial'nogo poznaniya v sovremennoi psikhologii: obzor zarubezhnykh issledovanii i obsuzhdenie perspektiv [The role of L. S. Vygotsky's paradigm for the development of social cognition in modern psychology: a review of foreign studies and discussion of prospects]. *Kul'turno-istoricheskaya psikhologiya [Cultural-historical psychology]*, 11(3), 25–43. doi: 10.17759/chp.2015110304

Kholmogorova, A. B., & Zaretskii, V. K. (2011). Mozhet li kul'turno-istoricheskaya kontseptsiya L. S. Vygotskogo pomoch' nam luchshe ponyat', chto my delaem kak psikhoterapevty [Can the cultural-historical psychology of Vygotsky help us better understand what we are doing as psychotherapists]. *Kul'turno-istoricheskaya psikhologiya [Cultural-historical psychology]*(1), 108–118.

Kolomeitsev, P., & Manske, C. (2015). *Kazhdii rebionok osobennii. illyuziya defekta [Every child is exceptional. Illusion of a deficit]*. Moscow: Nikeya.

Korobeinikov, I. A. (2001). *Narusheniya razvitiya i sotsial'naya adaptatsiya [Developmental disorders and social adjustment]*. Moscow: PER SE.

Kravtsova, E. E. (2013). Kul'turnoistoricheskie osnovy zony blizhaishego razvitiya [Cultural-historical foundations of the zone of proximal development]. *Psikhologicheskii zhurnal [Psychology Journal]*, 22(4), 42–50.

Lebedev, V. A. (1996). Vspyshki v prostranstve zhizni [Flares in the space of life]. In *Podkhody k reabilitacii detej s osobennostjami razvitija sredstvami obrazovanija. Sb. nauchnyh trudov i proektnyh materialov [Approaches to rehabilitation of children with special needs by means of education]* (pp. 382–391). Moscow: Institut pedagogicheskih innovacij RAO.

Leont'ev, A. A. (1990). *L. S. Vygotskii [L. S. Vygotsky]*. Moscow: Prosveshchenie.

Manske, C. (2014). *Ucheniye kak otkrytije [Learning as discovery]*. Moscow: Smysl.

Meshcheryakov, B. G. (2008). Vzglyady Vygotskogo na nauku o detskom razvitii [Vygotsky's views on the science of child development]. *Kul'turno-istoricheskaya psikhologiya [Cultural- historical psychology]*(3), 103–112.

Morozov, S. M. (2002). *Dialektika Vygotskogo: vnechuvstvennaya real'nost' deyatel'nosti [Vygotsky's dialectic: the reality of extrasensory activity]*. Moscow: Smysl.

Obukhova, L. F. (1995). *Detskaya psikhologiya: teoriya, fakty, problem [Child psychology: theories, facts, problems]*. Moscow: Trivola.

Obukhova, L. F., & Korepanova, I. A. (2005). Prostranstvennovremennaya skhema zony blizhaishego razvitiya [Space-time diagram of the zone of proximal development]. *Voprosy psikhologii [Questions of psychology]*(5), 13–26.

Razuvaev, J. S., & Zaretskii, V. K. (2004). *Shakhmaty dlja obshchego razvitija [Chess for general development]*. Moscow: Mir detstva.

Rubtsov, V. V. (2008). *Sotsial'nogeneticheskaya psikhologiya razvivayushchego obrazovaniya: deyatel'nostnyi podkhod [Socialgenetic psychology of developing education: the activity approach]*. Moscow: MGPPU.

Seligman, M. E. P. (1992). Power and powerlessness: Comments on "cognates of personal control". *Applied and Preventive Psychology*, 119–120.

Tsukerman, G. A. (2006). Vzaimodeistvie rebenka i vzroslogo, tvoryashcheje zonu blizhaishego razvitiya [Child-adult interaction: The creation of zone of proximal

development]. *Kul'turno-istoricheskaya psikhologiya [Cultural-historical psychology]*(4), 61–73.

van der Veer, R., & Valsiner, J. (1991). *Understanding Vygotsky: a quest for synthesis*. USA: Blackwell.

Varshava, B. E., & Vygotsky, L. S. (1931). *Psikhologicheskii slovar [Psychological dictionary]*. Moscow: Gosudarstvennoje Uchebno-pedagogicheskoje izdatel'stvo.

Veresov, N. N. (2015). Eksperimental'nogeneticheskii metod i psikhologiya soznaniya: v poiskakh utrachennogo (stat'ya vtoraya). [Experimental genetic method and psychology of consciousness: raiders of the lost (second article)]. *Kul'turno-istoricheskaya psikhologiya [Cultural-historical psychology]*, *11*(1), 117–126.

Volikova, S. V., & Glukhova, O. V. (2012). Dinamika urovnja razvitija poznavatel'nyh processov uchenikov nachal'nyh klassov, uchastvujushchikh v proekte "Shakhmaty dlja obshchego razvitija" [Developmental dynamics of learning processes in primary school children participating in chess for general development project]. In I. G. Sukhin (Ed.), *Aktual'nye problemy prepodavanija uchebnoj discipliny "Shakhmaty" v obshheobrazovatel'nyh shkolakh i detskikh sadakh rossii i drugikh stran mira: materialy mezhdunarodnoj nauchno-prakticheskoj konferentsii: Sbornik tezisov dokladov [Contemporary issues of teaching chess in schools and nurseries in russia and world-wide: International conference book of abstracts]* (pp. 27–31). Moscow: Satka.

Vygodskaya, G. L., & Lifanova, T. M. (1996). *Lev Semenovich Vygotskii*. Moscow: Smysl.

Vygotsky, L. S. (1982a). Istoricheskii smysl psikhologicheskogo krizisa [historical meaning of psychological crisis]. Voprosy teorii i istorii psikhologii [Questions of theory and history of psychology]. In A. R. Luriya & M. G. Yaroshevsky (Eds.), *Sobranie sochinenii v 6-ti tomakh [the collected works in 6 volumes]* (pp. 291–436). Moscow: Pedagogika.

Vygotsky, L. S. (1982b). *Myshlenie i rech' [Thinking and speech], Vol. 2*. Moscow: Pedagogika.

Vygotsky, L. S. (1982c). Soznanie kak problema psikhologii pove deniya [Consciousness as a problem for the psychology of behavior]. *Pedagogika*, *1*, 78–98.

Vygotsky, L. S. (1983a). Istoriya razvitiya vysshikh psikhich eskikh funktsii [Genesis of higher mental functions]. In *Sobranie sochinenii v 6-ti tomakh [The collected works in 6 volumes] V.3* (pp. 5–328). Moscow: Pedagogika.

Vygotsky, L. S. (1983b). K psikhologii i pedagogike detskoi defektivnosti [Psychology and pedagogy of children's defectiveness]. In T. L. Vlasova (Ed.), *Osnovy defektologii [Foundations of defectology]. sobranie sochinenii v 6-ti tomakh [the collected works in 6 volumes]* (pp. 62–84). Moscow: Pedagogika.

Vygotsky, L. S. (1984). Problemy detskoi (vozrastnoi psikhologii) [problems of childhood (developmental) psychology]. In *In sobranie sochinenii v 6-ti tomakh [The collected works in 6 volumes] V.3* (pp. 243–432). Moscow: Pedagogika.

Vygotsky, L. S. (1999). *Pedagogicheskaya psikhologiya [educational psychology]*. Moscow: Pedagogika Press.

Zaretskii, V. K. (1989). Ergonomika v sisteme nauchnogo znaniya i inzhenernoi deyatel'nosti [Ergonomics in the system of scientific knowledge and engineering activities]. In *Metodologicheskie problemy proektnoi deyatel'nosti v ergonomike [Methodological problems of design in ergonomics]* (pp. 8–20). Moscow: VNIITE.

Zaretskii, V. K. (1998). Ob opyte refleksivnodeyatel'nostnogo podkhoda k organizatsii korrektsionnykh zanyatii po russkomu yazyku [Using reflection and activity approach

for arrangement of remedial lessons in russian language]. In *Metody i sredstva reabilitatsii detei s osobennostyami razvitiya i invalidnost'yu [methods and tools for rehabilitation of children with special needs and disabilities]* (pp. 86–90). Moscow: IPI RAO.

Zaretskii, V. K. (2007a). O chem ne uspel napisat' L. S.Vygotskii [What Vygotsky didn't have time to write]. *Kul'turno-istoricheskaya psikhologiya [Cultural-historical psychology]*(3), 96–104.

Zaretskii, V. K. (2007b). Pomoshch' detyam s trudnostyami v obuchenii v opore na zonu blizhaishego razvitiya [Helping children with learning difficulties in relying on the zone of proximal development]. Materialy mezhdunarodnoi konferentsii "kul'turno-istoricheskaya psikhologiya: sovremennoe sostoyanie i perspektivy razvitiya". In *Cultural-historical psychology: current situation and prospects of development. proceedings of the international conference* (pp. 111–119). Moscow: OOO "ALVIAN".

Zaretskii, V. K. (2008). Evristicheskii potentsial ponyatiya "zona blizhaishego razvitiya" [Heuristic potential of the concept of the "zone of proximal development"]. *Voprosy psikhologii [Questions of psychology]*(6), 13–25.

Zaretskii, V. K. (2009). Zone of proximal development: What Vygotsky didn't have time to write. *Journal of Russian and East European Psychology*, 47(6), 70–93.

Zaretskii, V. K. (2012). Dumaya o Piotre Yakovleviche Gal'perine [Thinking about Piotr Yakovlevich Galperin]. *Kul'turno-istoricheskaya psikhologiya [Cultural-historical psychology]*(1), 73–85.

Zaretskii, V. K. (2013). Stanovlenie i sushchnost' refleksivno deyatel'nostnogo podkhoda v okazanii konsul'tativnoi psikhologopedagogicheskoi pomoshchi [Development and nature of Reflection and Activity Approach to the provision of advisory psychological and educational assistance]. *Konsul'tativnaya psikhologiya i psikhoterapiya [Counseling psychology and psychotherapy]*(2), 8–37.

Zaretskii, V. K. (2015). Teorema L. S. Vygotskogo «Odin shag v obuchenii — sto shagov v razvitii»: v poiskakh dokazatel'stva [L. S. Vygotsky's Principle "one step in learning — a hundred steps in development": In search of evidence]. *Kul'turno-istoricheskaya psikhologiya [Cultural-Historical Psychology]*, 11(3), 44–63. doi: 10.17759/chp.2015110305

Zaretskii, V. K., & Gilyazov, A. (2017). *To development through chess: reflection and activity approach. The educator's guide to teaching chess in primary school, volume 1.* Moscow: Otto Reichl.

Zaretskii, V. K., & Gilyazov, A. M. (2016a). *K razvitiju cherez shakhmati: refleksivno-dejatel'nostnyj podkhod. metodicheskoe posobie po vedeniju zanjatij v nachal'noj shkole [To development through chess: Reflection and activity approach. Primary school teacher's guide].* Moscow: Isdatel'stvo "Reichl".

Zaretskii, V. K., & Gilyazov, A. M. (2016b). *Shakhmaty dlja obshhego razvitija. Rabochaja tetrad' dlja zanjatij shakhmatami [Chess for general development. Chess workbook].* Moscow: Isdatel'stvo "Reichl".

Zaretskii, V. K., & Gordon, M. M. (2011). O vozmozhnosti individualizatsii obrazovatel'nogo protsessa na osnove refleksivno-deyatel'nostnogo podkhoda v inklyuzivnoi praktike [Possibility of individualization of the educational process on the basis of reflection and activity approach in the inclusive practice]. *Psikhologicheskaya nauka i obrazovanie [Psychology science and education]*(3), 19–26.

Zaretskii, V. K., Smirnova, N. S., Zaretskii, Y. V., Evlashkina, N. M., & Kholmogorova, A. B. (2011). *Tri glavnye problemy podrostka s deviantnym povedeniem. Pochemu voznikayut? Kak pomoch'? [Three major problems with adolescent deviant behavior. Why there? How to help?]*. Moscow: Forum.

Zaretskii, V. K., & Zaretskii, Y. V. (2015). Sluchai Denisa G. [Case of Denis G.]. *Zhurnal konsul'tativnoi psikhologii i psikhoterapii [Journal of counseling psychology and psychotherapy]*(2), 166–180.

Zaretskii, Y. V. (2013). Sub'ektnaya pozitsiya po otnosheniyu k uchebnoi deyatel'nosti kak resurs razvitiya i predmet issledovaniya [Sense of agency in relation to educational activities as developmental resource, and subject of study]. *Konsul'tativnaya psikhologiya i psikhoterapiya [Counseling psychology and psychotherapy]*, 110–128.

Zinchenko, V. P. (2011). Lev Semenovich Vygotskii: zhizn' i deyatel'nost' [L. S. Vygotsky: life and activity]. In T. G. Shchedrina (Ed.), *Stil' myshleniya: problema istoricheskogo edinstva nauchnogo znaniya. K 80-letiyu Vladimira Petrovicha Zinchenko. Kollektivnaya monografiya [way of thinking: the problem of the historical unity of scientific knowledge. V.P. Zinchenko eightieth anniversary]* (pp. 294–299). Moscow: Rossiiskaya politicheskaya entsiklopediya (ROSSPEN).

Pedagogical, Psychological and Psychotherapeutic Help in Overcoming Learning Difficulties to Facilitate Development

Different Methods of Help from the Cultural-Psychological Viewpoint

Viktor K. Zaretskii   zar-victor@yandex.ru

Moscow State University of Psychology and Education
Moscow, Russia

Alla B. Kholmogorova   kholmogorova-2007@yandex.ru

Moscow State University of Psychology and Education
Moscow Research Institute of Psychiatry – Branch of The Serbsky Federal Medical Research
Center for Psychiatry and Narcology

Abstract

The paper discusses theoretical basics for organising the work and interaction of different specialists helping children with learning difficulties (teachers, counsellors, therapists). The multivector model of the zone of proximal development based on cultural-historical psychology and developed in the theoretical framework of Reflection-Activity approach is proposed as such basic value. We connect different types of help to various developmental vectors and regard them as technologies to enhancing the client's development. We reveal the contents of such notions as cooperation, zone of proximal development, agency, reflection, and problem's epicentre. We present different ways of operationalizing these notions applied to aiding children with learning difficulties. The notion of dual resource we propose is important for developing new techniques of working in the zone of proximal development; it is this basis certain technologies of organising the client's reflection are relying on. We give examples of counselling children in such way and present a comparative analysis of the counsellor's work with action schemas and cognitive-behavioural therapist's work with problematic emotional states and behaviours in children with learning difficulties. The theoretic system we disclose helps to comprehend the famous quote from Lev Vygotsky: "one step in learning may signify a hundred steps in development".

Keywords :   Cultural-historical psychology; Development; Learning; Help in overcoming learning difficulties; Pedagogics; Psychological counselling; Cognitive-behavioural therapy; Reflective-activity approach; Multivector model of the zone of proximal development; Position of agency; Reflection; Dual resource; Problem's epicenter.

The number of children with learning difficulties is steadily increasing. It raises the issue of knowledge a specialist helping them should possess. They are usually referred to tutors, pedagogic psychologists, neuropsychologists and psychotherapists – the latter in case a serious threat to mental health is diagnosed. What kind of help can a child get from each of these specialists? A tutor can adapt the process of education to the child's capabilities and help amend his/her knowledge gaps. A neuropsychologist can diagnose the underdevelopment of brain structures and mental functions and propose a correction program. A pedagogic psychologist can also diagnose cognitive and personal characteristics of a child and recommend an optimal way of interpersonal communication to his/her parents and teachers. The most difficult cases arise, for example, in teaching orphaned children with disabilities and severe somatic illnesses, who need prolonged hospital treatment, which isolates them from the system of education, family and society in general. In these cases, different vectors of development get tied in an intricate knot, which can't be loosened by a single specialist.

In cases like these "what a single person cannot do, two can", according to Feuerbach – that is, they require a team of specialists. Questions arise: How to define the top-priority treatment targets? Where can specialists find the problem's epicentre to achieve a breakthrough in development? The principal issue is the following: how can different specialists agree upon the principles of interaction?

Evidently, the answer to these questions lies in the views on the process of development, which should be shared by all the members of the team; otherwise, their work can become chaotic, uncoordinated and ineffective, if not harmful. These views should rely on certain values, which give direction to the work process. For example, numerous pedagogical approaches differ in defining the child's agency in the learning activity, which is reflected in the opposition of "authoritarian pedagogy" versus "pedagogy of cooperation" (Dzhurinskii, 2008). In authoritarian pedagogy, a child is an object influenced by an adult. This idea is most strikingly expressed by the concept of tabula rasa, which an adult can "write" everything on. In pedagogy of cooperation, a child is an agent of the learning activity equal to an adult.

Such underlying values that can unite different specialists in child development can be found in cultural-historical psychology, an approach developed by Vygotsky (1956, 1982, 1984).

The model of mental development in cultural-historical psychology includes several basic notions:

1. culture is a source of development; it can be considered a system of "tools" for organising mental processes which were accumulated during the evolution of society;

2. learning is a driving force of development; mental tools are appropriated in the process of learning;

3. internalization is a process of turning the outer tools (means) into the inner ones; it is a crucial mechanism of development;

4. cooperation of a child and an adult, which takes place in the zone of proximal development of the child, becomes the most significant condition of development.

In the paper, we consider new workings in Russian psychology based on this model, which aim at facilitating the development of children with learning difficulties in pedagogical, psychological and psychotherapeutic counselling. It was this task (namely, promoting development through learning) that primarily interested L. S. Vygotsky, as the bulk of his works is devoted to developmental disorders and their treatment (V. K. Zaretskii, 2015, 2016).

From the viewpoint of cultural-historical psychology learning difficulties block the development on the whole if untreated. Learning and development are closely connected, and different methods of psychological and pedagogical help can be regarded as development facilitators.

Psychological-pedagogical support may be reduced to teaching. Psychotherapeutic aid may be considered a treatment. We regard both as **different approaches (or techniques) to creating the necessary conditions for the development of the person who receives help**. Thus, a psychotherapist and a pedagogic psychologist (a teacher) deal with the same process, but from different angles. Teachers deal with development in the context of acquiring new knowledge in the academic setting; psychotherapists help their clients overcome the causes of mental disorders, and acquire the skills of psychological self-regulation. This division is the result of the inevitable specialisation and differentiation of knowledge in each of the contexts.

Pedagogical activity (psychological-pedagogical help in overcoming learning difficulties) includes not only knowledge transmission, but also *re-education* (overcoming inadequate spontaneous behaviours) and *changing attitudes and mindsets*, as every activity including learning requires personal input. The latter indicates that the personality dimension is present in every activity, including pedagogical. If learning difficulties are connected to the child's personal problems, the psychotherapeutic approach may be needed to overcome them. For example, the child's conviction that he/she is not going to achieve anything renders any pedagogical help useless, because he/she cannot assimilate it. Only if this mindset is overcome, the efforts – made sense of, the child – involved into activity as a subject, can the pedagogical activity be effective. In such cases, the prerequisite of successful pedagogical help is overcoming the mindset that hinders the mastery of new material, which makes this process close to psychotherapy. Thus we can use the metaphor of figure-ground from Gestalt psychology: pedagogical help is a shape, and psychotherapeutic aspect is a background. In different situations figure and ground can change places. In the process of counselling, the child's problem's epicentre can change its position relative to the field of knowledge, thus, to overcome difficulties and create favourable conditions for future development a pedagogical psychologist needs to modify the techniques.

As we already mentioned, overcoming learning difficulties can be achieved through working on personal problems (chronic failure and resulting learned helplessness, passive or negative attitude towards studies, lack of meaning in connection to studies) or inadequate

action schemas in certain types of learning activity. This variety calls for setting different epicentres (targets) and moving along multiple vectors of development.

In connection to this, practical work demands developing counselling methods for treating learning difficulties based on the comprehensive conception of development and its different vectors. It is satisfied by Reflection and Activity approach (RAA), which has been developing for the last 20 years to assist children with learning difficulties relying on the concept of **development** from cultural-historical psychology. RAA as a psychological counselling approach relies on the multivector model of development (V. K. Zaretskii, 2013, 2016) and strives to integrate knowledge from psychotherapy, pedagogics and developmental psychology. It aims to equip teachers with such psychological knowledge about development that can help them to see not only the local difficulty their student experiences in their subject but the comprehensive picture of development. In this new context, the local learning difficulty can become a source of further development, or hinder psychological growing resulting in the loss of confidence and trust in others. On the other hand, despite having basic knowledge of developmental processes psychologists usually lack the necessary knowledge of teaching school subjects, which makes their work one-sided. RAA psychologists usually improve their counselling skills and learn the subject the child experiences difficulties in altogether, which greatly improves their potential to help the child. We suppose that this is the teacher Blonskii (1979) and Vygotsky (1956) were dreaming of – the one who possesses knowledge both on the subject and the process of development.

1. Basic concepts used in learning difficulties counselling: cooperation, zone of proximal development, dual resource, and agency

In the previous decade integration of RAA, cognitive-behavioural and existential approaches in psychotherapy became a subject of studies (Kholmogorova & Zaretskii, 2010, 2011; Nikolaevskaya, 2017). Pedagogical as well as psychological work starts with the most crucial stage – establishing a bond. Psychotherapist Frantz Caspar noted: "A psychotherapeutic bond is a factor most convincingly related to the outcome of psychotherapy. There is little use though in recommending therapists to establish a good bond without defining how exactly to reach this goal" (Caspar, 2010, p. 47). The same can be attributed to pedagogical activity. Teacher and student grow together, a principle stated by Confucius, which was put into practice in 20th century Russia in the pedagogics of cooperation, its primary role in child development pointed out by Vygotsky (1984). Cooperation can be considered a prerequisite for development and a basic value, which should be shared by each member of the team.

To give an example of cooperation, we turn to the works of Arnhild Lauveng, a Norse writer and clinical psychologist, who had a severe mental illness as an adolescent and described her way to recovery in autobiographic books. Summarizing her experience of a mental disorder and recounting different mental health specialists she met, Lauveng writes the following:

"Recalling what worked for me and what didn't, I guess, the main reason why anyone had any success with me lay in their cooperation with me. They used and developed my resources and helped me compensate my weaknesses, and made sure I were on their side not because of some legal action, but just because it was my life, my personality, my illness, and in the end only I could do anything with it. I couldn't get better on my own, without anyone's help, but no outside helpers could aid me without my activity. Evidently, this is what should be defined as cooperation" (Lauveng, 2009, p. 207).

However, how is the bond based on the established cooperation? What should be done by an adult to take a position of a cooperator, not a mentor, and what should be done by a child with the help of the adult to change form a student (or patient) into a cooperator, that is, a subject of an activity shared with the adult? Klaus Grawe, famous for studying factors contributing to the effectiveness of psychotherapy, formulated a rule, which can help reach this goal: the problem should not be actualized before the resources to overcome it are activated (Grawe, 2006). Nevertheless, a therapist abiding by this rule may wonder: How does one create the favourable conditions to activate the resources of the patient? What should be done if they are sufficient, and what should be done if they are not?

Studying the relationship between learning and development, Vygotsky formulated another basic value that should be shared by the specialists no matter what course of development they are working with: that is, operating in the zone of proximal development (ZPD). According to Vygotsky, only in this case can the adult's help be efficient and useful.

As we showed in the previous works (Kholmogorova & Zaretskii, 2010, 2011), Grawe's principle of resource activation and Vygotsky's principle of ZPD are closely related, the latter being a heuristic for specifying the conditions in which the former can be realized. To reveal this heuristic, we proposed a concept of dual resource, which emerges in the zone of proximal development. **The notion of dual resource helps to understand how to achieve resource activation and build-up during work in ZPD, and how to overcome difficulties.**

Originally Vygotsky distinguishes between the zone of proximal development and the zone of actual development (Vygotsky, 1956, 1984). While the zone of proximal development signifies a domain of actions and behaviours that a child can only perform with the help of an adult, zone of actual development is, according to Vygotsky, a domain of actions a child can perform on his/her own. Vygotsky pointed out that it is important to distinguish between the two and emphasised that "what a child can do today in collaboration with an adult, he will be able to do on his own tomorrow" (Vygotsky, 1984, p. 264). At the same time, Vygotsky noted the importance of this concept for pedagogical work with the child and planned to explain it in further works that remained unwritten (V. K. Zaretskii, 2007, 2009).

As we continue to draw similarities between learning difficulties in psychological-pedagogical counselling and the client's problems in psychotherapy, we state that due to the obvious lack of his/her resource (he/she would not have asked for help otherwise) a

patient needs not just resource activation, but its widening and build-up. To accomplish this task, it is useful to consider the personal resource of the client Grawe speaks of in a differentiated way and to distinguish between things a person (adult client or child) can do on his/her own and things he/she can do only in collaboration with a helping professional (psychotherapist, psychologist, or teacher). It is this differentiation of the resource construct that enabled us to propose a notion of **dual personal resource, upon which the specialist forms a therapeutic bond and decides what problems can be worked through using the client's own potential combined with the ability and readiness to accept help from others, and what problems can't be solved at the moment because this complex of conditions doesn't exist yet**. Thus, we can elaborate Grawe's principal of activating resources during problem activation: the problem actualized for discussion and solving needs to lie in the zone of proximal development of the client, that is, the zone where he/she has double resource – the ability to do something on his own, and something with the therapist's help (Kholmogorova & Zaretskii, 2010, 2011).

Grawe himself points out the condition that makes resource activation and problem activation most effective: it happens during **spontaneous resource activation** in a therapeutic session. The ability to detect these situations and rely on them during therapeutic work is, according to Grawe, distinguishing an effective psychotherapist from an ineffective one. **Spontaneous activation of resources connected to the problem both in psychotherapy and in learning difficulties counselling is an important empiric indicator of entering the patient's (child's) zone of proximal development** (Kholmogorova & Zaretskii, 2010, 2011). At the same time, the quality of the activity (whether it is related to the problem's epicentre) and the extent of the specialist's (psychotherapist's, teacher's, counsellor's) involvement are the key factors of the intervention's effectiveness in general from the viewpoint of the development.

By the activity theory, which states that development takes place only in the process of the person's goal-directed activity, a psychotherapist's activity should broaden the zone of actual and proximal development granted that a therapist keeps track of a patient's progress and supports him/her wholesomely. More active involvement is only constructive if necessary (if difficulties arise) and in a particular form, namely, as emotional support and questions aimed at developing the reflective ability, and thus, the **patient's own resource**.

2. Multivector model of mental development in the Reflection-Activity approach

Vygotsky (1984) points out that the sphere of actions a child can perform together with an adult in the zone of proximal development should be interpreted widely as a sphere of potential cognitive and personal changes. This interpretation is a basis of the multivector model of the zone of proximal development (Fig. 1), which is interpreted as a sphere of cognitive and personal changes the child experiences in joint activity with an adult in a certain difficult situation (V. K. Zaretskii, 2007, 2009).
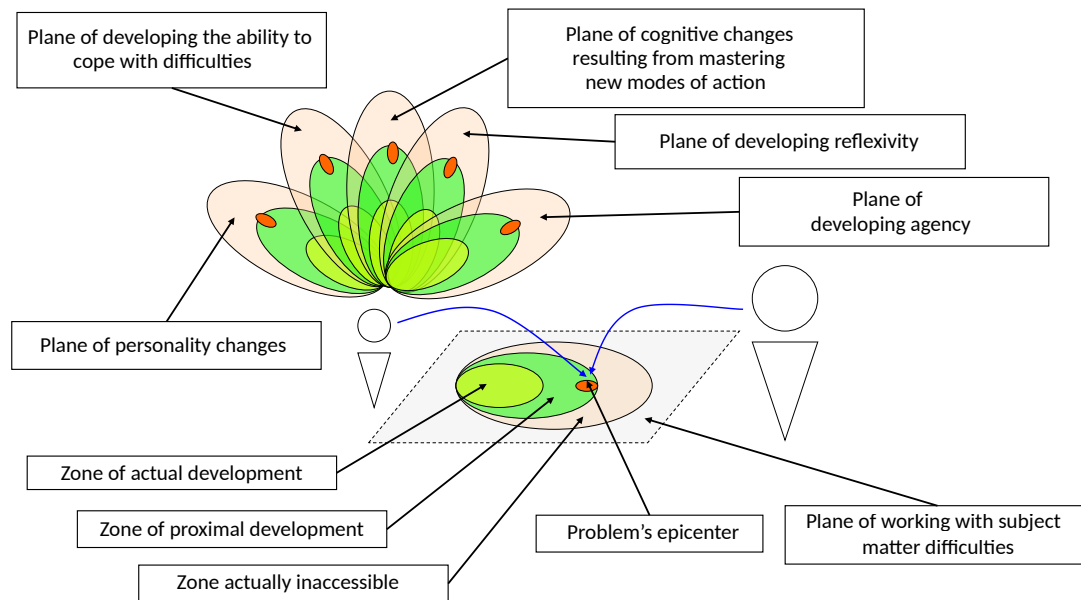
Figure 1. Zone of proximal development as an aggregate of vectors (dimensions) that can be used to make "steps" in Development in the Process of Learning (V. K. Zaretskii, 2007, 2009)

The multivector model of ZPD originated from the process of reflecting upon the practice of helping children of different backgrounds (children from comprehensive schools, with disabilities, orphans, disabled or seriously ill orphans raised in a hospital setting) in overcoming difficulties in learning. It is based on the search for "other planes" of ZPD than the plane of the school subject that was carried out by Russian researchers (Belopolskaia, 1996; Kravtsova, 2001; Obukhova & Korepanova, 2005; Tsukerman, 2006). Describing the notion of ZPD, Vygotsky (1956) himself emphasised: "the essential characteristic of learning lies in the fact that learning creates a zone of proximal development, that is, brings to life, wakes up and sets in motion a number of inner developmental processes in a child". What did he mean by "a number of inner developmental processes"? It is known that discussing the notion of ZPD and its fundamental importance for the reinterpretation of the relationship between learning and development Vygotsky emphasised that the concept of ZPD could be extended both to cognitive functions and the development of a child in general. He also formulated an essential thesis stating that "one step in learning may signify a hundred steps in development" (Vygotsky, 1982, p. 230). From that, we can suggest that a step the child makes in learning somehow brings to life the developmental processes located in different "planes".

Every specialist knows from practical work with children that the development does not proceed smoothly, it goes in leaps. In a moment, the efforts invested in a child suddenly transform into a sudden leap in development. This leap may be connected both with a progress in acquiring subject matter knowledge (for example, a child has, at last, understood

the meaning of mathematical operations or eliminated a long-term knowledge gap), with a breakthrough in the sphere of mental functions development (for example, a child mastered mental actions, which changed the whole system of psychic activity), or with overcoming personal barriers (for example, having successfully coped with difficulties a child starts to believe in him/herself and is ready and eager to learn).

As follows from these arguments, steps in the dimension of mastering the school subject (tagged in the scheme as "Plane of working with school subject difficulties") may bring to life, according to Vygotsky, "a number of inner developmental processes" located in different planes according to the proposed scheme:

1. in the sphere of the child's attitude towards learning as an activity (subjectivity);

2. in the sphere of meanings of learning he/she generates (reflection);

3. in different mental functions which fulfil this activity (cognitive sphere);

4. in the child's personal qualities and peculiarities, which emerge and come into play in this activity (personal sphere) (see Fig. 1).

During such interaction between the child and the adult, the former acquires the experience of overcoming learning difficulties, which may be made sense of, generalised, transformed into a method of "coping with difficulties in general" (V. K. Zaretskii, 2007). Other planes of essential change resulting from this experience can be distinguished. For example, a child may change his/her attitude towards people, first of all to adults, towards life, which becomes more meaningful and optimistic, towards the future, which becomes a place where dreams come true, and towards the past, which becomes a part of a personal story, not a sum of traumatic events to be forgotten.

As we see in these examples, pedagogical, psychological and psychotherapeutic aspects are closely intertwined. The problem's epicentre is some point where different aspects intersect; it is a central problem, which needs to be solved to launch the processes of development. Vygotsky's term that can be considered an analogue to the concept of "problem's epicentre" is the central new formation in the psyche of a school student, labelled as "the central nerve", "the axis" rotating the other processes. At the same time though he emphasised: "the most complex dynamic dependencies are formed between the process of development and the process of learning which can't be grasped by a single speculative formula given in advance" (Vygotsky, 1956). Indeed, working with a certain child, the counsellor may find out that his/her problem's epicentre is connected not to the new mental formations of the age, but to education history, family background peculiarities, past interpersonal relationships or experiencing problematic situations. Then, the therapeutic target can shift from the plane of learning difficulties or age-specific central new formation to any other plane of development where the problem is blocking development on the whole.

Vectors of agency and reflection acquire a special meaning in this model. The vector of agency signifies the person's ability to be a subject of his/her activity and its reflection

(Y. Zaretskii & Zaretskii, 2012; Y. V. Zaretskii, 2014). The child situated in a position of agency concerning his/her activity starts to get actively involved in the process of coping with difficulties, relying on and using the adult's help, but also taking the initiative. If a child cannot do something, but he/she can understand how this is done in cooperation with an adult, it means that the child can access this activity; it is situated in his/her ZPD. If the child is urged to act outside the borders of ZPD in the zone of actually inaccessible (that is, his/her resources aren't enough), then he/she won't be able to use help, and not only the problems won't be solved, they may become worse to the point of becoming aggravated by learned helplessness. On the contrary, in case the adult aids the child adequately, the latter develops his/her resource progressively through reflecting upon the joint activity with the adult, and becoming aware of and internalizing the tools used. Accordingly, the problems that weren't accessible at the beginning gradually become the subject of joint activity and may be solved. The close connection between different developmental vectors can be illustrated by studies showing the link between the child's position in the learning activity and his/her subjective psychological well-being (Y. V. Zaretskii, 2014), and also his/her level of empathy (Kholmogorova & Klimenkova, 2017).

The proposed multivector model (V. K. Zaretskii, 2007, 2009, 2015, 2016) provides an opportunity to apply the concept of ZPD not only to learning difficulties in children, but to a wide array of problematic situations, which a person (a child or an adult) can't overcome on his/her own and seeks help (as it usually happens in pedagogic, counselling or psychotherapeutic work).

Multivector interpretation of ZPD contributes to the understanding of the aforementioned relation between the effectiveness of psychotherapy and therapist's sensitivity towards the client's spontaneous resource activation discovered by Grawe. "**Spontaneous resource activation" signifies the possibility of development of the "agency vector", which implies the child's (client's) ability to take an active position in his/her own problems, and to define, direct and regulate the activity aimed at solving them**. In the process of interaction between a child and an adult (a client and a psychotherapist), each of them makes a possible contribution in joint activity. The growth of the input from the child (or client) signifies the development of his/her subjectivity. Thus, the child's position of agency becomes the most significant condition of cooperation and, accordingly, the prerequisite of its effectiveness. Consecutive support of a child's position of agency in learning difficulties counselling may be defined as another basic value, which operationalizes Vygotsky's thesis about cooperation as a special development-stimulating type of interaction between a child and an adult. It should be shared by every specialist who aims at enhancing development.

In this context, Grawe's results can be interpreted as an important principle of counselling children or adults. **Counselling is most effective when the specialist supports the child's (client's) position of agency**. We emphasise this once more: one of the most important qualities in a counsellor is his/her sensitivity to the child's (client's) sense of agency, which needs to be relied on when working towards solving an actual problem (overcoming a certain difficulty) or building-up the client's resource (enhancing development). This statement is vividly illustrated by Vygotsky's thesis which was considered an enigma for a

long time: "one step in learning may signify a hundred steps in development" (V. K. Zaretskii, 2015, 2016). In case a specialist works with a child in the manner discussed above his/her mastery of certain skills (modes of action) is accompanied by his/her growing activity, self-confidence, awareness of his/her resources and the spheres where assistance is needed, and the ability to seek and use help. A child becomes less and less dependent on the helping adult, more able to solve problems on his/her own and to distinguish between things he/she can do with or without help, and more knowledgeable in the kind of aid he/she needs.

3. Reflection and its applications in learning difficulties counselling

As we noted above, being an agent implies being an agent of activity and reflecting upon it. A Reflective Form is an RAA technique that realises this notion (V. K. Zaretskii & Gilyazov, 2016). It is a table with two columns where a child in cooperation with an adult captures dual resource, differentiates between his/her own abilities and the assistance provided by the counsellor. In the last row, the counsellor formulates the problem that can be solved by the child's resource (the hypothesis about the problem's epicentre), and plans the next step in counselling.

Based on the notion that the process of reflecting upon one's activity is significant for the child's development we suggest that the specialists aiding children with learning difficulties (teachers, psychologists) capture the process and the results of the joint activity in a table containing the following questions:

1. What could the child do by him/herself? (Zone of actual development);

2. What couldn't the child do by him/herself? (What mistakes he/she made, what could he/she do with the adult's assistance?);

3. What kind of aid did the child need? (What exactly did the adult?);

4. What did this aid give him/her? (Did the adult help the child overcome difficulties, how exactly?);

5. What will be the next step? (What is sensible to do next to achieve the next stage of learning and development? Ideally, problem's epicentre should be described.)

Naturally, elementary school pupils, as well as some adolescents, cannot fill in this table on their own. They need adult's assistance. As the child and the adult make sense of the executed activity together, the latter comprehends what the child can make sense of unaided, and what is yet outside his/her understanding. That is, the counsellor's task here is to discover the zones of actual development, proximal development and the actually inaccessible in the child's reflection.

We would like to give a few examples, which illustrate the relationship between cognitive, personal and interpersonal aspects (vectors) of development in the process of overcoming general learning difficulties. These examples indicate that reflection aimed at differentiating the child's resource and the shared resource in cooperation with the adult plays a major role in overcoming these problems and initiating development (Tables 1, 2, and 3). All the names in the examples are changed to provide anonymity.

Table 1 describes the process of joint reflection taking place at the end of the maths lesson with a second-grade pupil who has fallen behind the class in this subject. The form shows the student's attempts to reflect and the way the counsellor captures the process. As this lesson is the first the boy has with the tutor, it is clear that he cannot make sense of his actions yet even with the adult's help.

Table 1

Reflective form for capturing dual resource and defining the problem's epicentre (Vanya's case, age 8, 2nd grade).

What could you do by yourself?	Written down from Vanya's words: He wrote, read and drew arrows. (The tasks required him to connect actions and variants of answers)
What couldn't you do by yourself?	He cannot answer. (Vanya's reflection shows that the meaning of mathematical operations is concealed from him. Naturally, Vanya himself cannot formulate it)
What kind of help did you need?	He cannot answer. (The help was aimed at clarifying the meaning of the tasks)
What did this help give you?	Vanya notes that he managed to complete the task using the counsellor's assistance. (It helped him to understand the tasks, but didn't make sense of mathematical operations)
Commentary (hypotheses about ZPD, resource and the problem's epicentre)	In his reflexive activity, Vanya notes only the outer operational side of the actions performed ("I wrote, read. . . "). Mathematical operations are still a mystery to Vanya, these manipulations with numbers carried out according to certain rules do not make sense to him. The meaning of these rules is still, probably, out of the boundaries of ZPD. How should we approach them? – Probably, by involving Vanya in measuring activity, where operations and numbers can acquire specific meaning.

Table 2 describes the counsellor's reflection following the lesson in Russian with a first-grade pupil, whose parents sought help due to frequent gross mistakes he made in this subject. The table contains the counsellor's reflections during the lesson, particularly on

Table 2

Reflective form for capturing dual resource and defining the problem's epicentre (Vanya's case, age 8, 2nd grade).

What could you do by yourself?	Can't express his thoughts, agrees with the counsellor's opinion during joint reflection (as follows): Wrote simple words in clumsy irregular script, making "stupid" mistakes (Misha's expression); omitted, misplaced and inserted wrong letters (words from the task did not imply using grammatical rules). He was not dictating to himself, that is, spelling out what he was writing either orally or to himself. He understood the counsellor's explanation why spelling out words out loud is important.
What couldn't you do by yourself?	This question was not raised because Misha is overly sensitive to making mistakes and facing difficulties, he perceives them as proof of his failure. He also refused to write complex words, spelling them out loud. When the counsellor asked him why, whether he was not interested or didn't feel confident, he answered: "I am not confident in myself!"
What kind of help did you need?	This question was not raised either. To eliminate "stupid" mistakes, Misha was advised to spell the words out loud (first aid). To address the statement "I am not confident in myself", the counsellor said: "You are not confident that you can do it on your own, but I am helping you after all. Together we can do it! You do believe that I can help you, right?" (second aid).
What did this help give you?	From Misha's words: "Spelling the words out loud I made fewer mistakes". The first aid helped Misha to understand the meaning behind spelling words out loud to eliminate mistakes of a certain type, but it was not effective enough, and Misha did not start to spell the words correctly. The second aid (which wasn't discussed with Misha) enabled him to get to work and try to write and spell words out loud at the same time.
Commentary (hypotheses about ZPD, resource and the problem's epicentre)	Hypothetically the problem's epicentre, in this case, is an absolute lack of confidence and extreme sensitivity towards any mistake coupled with a belief mistakes are unavoidable. Misha avoids learning activity as a source of painful experience. It is imperative for him to reach real success, based on the new skills, to make sure that overcoming mistakes is possible, and he can do it. Things that helped him cope with mistakes need to be captured during reflection.

the problem, which was implicitly targeted during the session, without being discussed with the boy (in the "Commentary" section, last row).

Table 3

Reflective form for capturing dual resource and defining the problem's epicentre (Katya's case, age 9, 3rd grade).

What could you do by yourself?	(Written by the counsellor, the girl practically refused to reflect upon her performance). She can copy words, although not in the most efficient way (she copies words in parts and single letters, which poses a threat of mistakes connected to attention span). The result is reached mostly due to her high motivation and energy as opposed to perfect methods and mastery.
What couldn't you do by yourself?	She reads a syllable a time, doesn't understand texts as she reads them and needs explanations. She knows word parts, but can't mark them out. She does not understand the definition of word parts. She faces difficulties making generalisations even based on her reflection upon her actions.
What kind of help did you need?	Assisted in working with text, in marking out the meaningful parts of a definition. Provided assistance in using a definition as an instrument to differentiate between different word parts. Given training materials (study cards, examples, inscriptions) to make the process more visual. Assisted in checking what actions were performed. Aided in making generalisations.
What did this help give you?	The task was completed successfully and more or less understood. She was interested in studying. In the end, she said she liked everything.
Commentary (hypotheses about ZPD, resource and the problem's epicentre)	During reflection, Katya said she had not done anything by herself. At the same time, she aimed at completing the task excellently. This problem can be defined as follows: her self-esteem is too low, but her aspiration level is too high. Her focus on the goal as opposed to appreciating the value of learning is also concerning, although she starts to enjoy the process and studies with interest. She understands the meaning of the tasks poorly; rushes to act before she has understood the task; faces difficulties in making sense of what she does and how she acts on her own. We see this as a key to eliminating the gap between self-esteem and aspiration level and helping Katya to master such mental abilities as understanding and generalisation. Apparently, reflecting upon her activity is a principal target and focus of the difficulties we should be working with.

Table 3 describes the case of a girl, third-grade pupil, who makes many mistakes and has fallen behind the class in Russian. She knows enough but faces difficulties applying her knowledge. Reflection shows that she lacks adequate comprehension of her own and joint activity, which the counsellor proposes as her chief difficulty and the hypothetical problem's epicentre.

The practice of helping children overcome learning difficulties convincingly shows that reflection plays the most important role both in coping with the problems and in the development of other vectors affected by the activity.

In accordance with this notion, we consider studying functions of reflection in the process of coping with problems (narrowly: overcoming learning difficulties) the next step in researching reflection. In 1970s-1980s experiment as a method of studying reflection attracted the attention of the psychology of thinking. We were the first to compare the reflective regulation of cognition in solving creative problems in the normative and clinical samples. There we distinguished between the control (becoming aware of and analysing the established mode of actions) and constructive (rebuilding inadequate foundations and elaborating new ways of action) functions of reflection (V. K. Zaretskii & Kholmogorova, 1983). In 2001, in a special issue of Moscow Psychotherapeutic Journal on the topic "Cognitive-Behavioural Therapy" we compared the notions of Russian psychology of thinking and the principles of cognitive therapy and showed that the latter aims at developing reflective ability (Kholmogorova, 2001). Comparative analysis of classical cognitive therapy developed by A. Beck (Beck, Rush, Shaw, & Emery, 2003) and new techniques which emerged in the so-called "third wave" of this approach yielded two more functions of reflection: differentiative (aimed at distinguishing and separating different contents and actions) and integrative (aimed at making connections between different contents, actions and their consequences) (Kholmogorova, 2016).

Relying on the difference between the mentioned functions of reflection and the scheme of the reflective act based on Johann Fichte's ideas, developed by Alekseev (2002) and supplemented by V. K. Zaretskii (1984, 2013) we carried out a comparative analysis of the counsellor's work with the subject-related aspect of learning difficulties and the therapist's work with the personal aspect. The results yielded by the analysis are presented in Table 4. The first column shows the scheme of the reflective act, which consists of six successive actions and has been supplemented by the seventh action aimed at differentiating between the two aspects of dual resource while aiding a person with learning difficulties. The second column reveals the implementation of this scheme during work with action schemas using RAA techniques (cognitive vector), the third deals with cognitive-behavioural therapy (personal vector) focusing on the personal vector. Notably, differentiating between the client's resource and joint resource in the last step is principally important not only for the cognitive and personal vectors, but also for the vector of interpersonal relations – that is, for the development of the ability to cooperate with the adult constructively; and for the vector of subjectivity – that is, the ability to plan one's activity and seek help independently.

Table 4

Comparison of counsellor's work in RAA paradigm with an action schema and a psychotherapist's work in CBT paradigm with emotional state and behaviour of a child with learning difficulties.

Modified scheme of reflective act by N. Alekseev and V. Zaretskii	RAA counsellor's work aimed at enhancing a child's mental development in the process of rebuilding his/her ways of studying a certain school subject	CBT psychotherapist's work aimed at enhancing a child's mental development in the process of teaching him/her methods of managing his/her emotions and behaviours
Control function of reflection		
1) Stop of ideation - pausing one's thoughts (actions)	"What are you doing right now?"	"What thoughts / images flashed in your mind when you experienced this?"
Control function of reflection		
2) Fixation of ideation - capturing thoughts (actions)	Describing one's action	Formulating one's automatic thoughts
Control function of reflection		
3) Objectivation of ideation - thoughts (actions) objectivation	Analysing one's action (action as an object), exposing the reasons behind one's mistakes or difficulties	Assessing automatic thoughts (thought as an object), revealing cognitive biases or errors
Differentiative function of reflection		
4) Estrangement of ideation - thoughts (actions) alienation	Describing one's erroneous mode of action in a certain task (thus, freeing oneself from the unconscious mode of action)	Formulating the alternative view (freeing oneself from the usual view of the situation and emotional reactions and behaviours connected with it)
Integrative function of reflection		
5) Establishing relationships between different ideation contents - drawing connections between different thoughts (actions)	Making connections between: • the mode of action and difficulties or errors; • tasks similar to each other in the way they should be solved; • a new mode of action and success.	Make connections between: • thoughts, negative emotions and destructive actions; • automatic thoughts in similar situations and emerging beliefs; • beliefs and relevant childhood experiences; • beliefs and a broad life context – analyse the consequences of applying one's beliefs to solving problems.

Constructive function of reflection		
6) Change of ideation foundations - changing the basis of cognition	Deliberate renunciation of the old manner of action and moving on to the new one	Deliberate, purposeful rebuilding of dysfunctional beliefs and related non-adaptive emotional reactions and behaviours
Constructive function of reflection		
7) New step - drawing connections between different aspects of coping with difficulties (double resource disclosure)	When overcoming learning difficulties a connection should be drawn between personal resource ("what I did on my own/ what I learned to do") and joint resource ("what I needed assistance in / what I have yet to learn or change")	When overcoming emotional difficulties in learning activity a connection should be drawn between personal resource ("what I did on my own / what I learned to do") and joint resource ("what I needed assistance in / what I have yet to learn or change")

Thus, we can draw the following conclusions:

1. A child's learning difficulties are determined by different mental mechanisms blocking development in general. Cultural-historical psychology contains the model of mental development that can be used in various forms of aiding children with learning difficulties, which are connected by the notion of development enhancement. At the same time, the core value of this type of assistance is a cooperation between a child and an adult in the zone of proximal development.

2. Supplementing the notion of ZPD with dual resource enables the counsellors to operationalize the diagnostics of ZPD, use new techniques and deliberately assist development in different directions, above all, the child's position of agency in the process of overcoming learning difficulties.

3. RAA further develops the theses of cultural-historical psychology, specifically, in the multivector model of mental development, which includes the following vectors of development: mastery of the subject, cognitive functions, personal characteristics, reflective ability, coping with difficulties, emotional regulation, interpersonal relations, and others. The model can be used to distinguish the key problems and to coordinate the efforts made by different specialists aiding the child with learning difficulties.

4. Despite working in different theoretical frameworks with various aspects of learning difficulties, an RAA counsellor working with action schemas and a cognitive-behavioural therapist focused on the child's emotional and behavioural problems are united by the goal of building-up reflection, including its control, constructive, differentiative and integrative functions. This goal also contributes to the child's general development in different spheres.

To summarise, we will once more return to the notion of major importance to effective counselling work with a child experiencing learning difficulties. It is a concept of the prob-

lem's epicentre – that is, a fundamental problem localised on one of the developmental vectors and blocking the attempts to overcome difficulties (V. K. Zaretskii, 2016). Discovering the problem focus presents a genuinely creative task for the specialist, but it is this task that can greatly spur development and by taking a single step in learning make a hundred in development.

In the previous works (Kholmogorova, 2016; Kholmogorova & Zaretskii, 2010), we have already quoted Henri Ellenberger, the renowned historian of psychoanalysis, stating that the criterion indicating the psychotherapist's professionalism is an ability to foresee (guess) the moment when a certain intervention is most effective. At that, he refers to the notion of "kairos", proposed by Hippocrates. Kairos signifies a turning point in the progress of illness when the person's state can suddenly change either for the better or the worse. Hippocrates regarded the art of medicine in the ability to catch these moments and use them to help the patient fight the illness. According to Ellenberger (2001), a good therapist always knows that a special moment comes when a certain patient is inwardly ready to accept a certain intervention, which is only effective in this very moment, whereas before it was premature, and after it will be futile.

An example of such intervention is again provided by Arnhild Lauveng (widely popular in psychotherapeutic literature) who suffered from a severe chronic form of schizophrenia which started when she was an adolescent (Lauveng, 2009). In the book Tomorrow I Was Always A Lion she describes the turning point of her illness – a conversation with a social worker about a possible occupation. During the conversation, she disclosed her dream of getting a medical education and helping mentally ill people. Her chronic illness and frequent hospital admissions might have made the social worker consider this wish dangerously out of touch with reality, discard it and suggest she set a more realistic goal. Instead the social worker, who probably intuitively relied on the vector of agency, planned the progress towards this dream together with Lauveng. They started out by defining her current possibilities and the requirements she needed to reach her goal, what Arnhild could do by herself and where she needed help from the social worker. That is, this specialist was intuitively relying on Arnhild's zone of proximal development and at the same time differentiating between her resource and the area of applying joint efforts – thus, she used the dual resource. As a result, a so-called miracle happened – Arnhild got well and wrote a world-famous book about her illness, which has been translated into many languages. Sceptics may say it is all about the change in the progress of the illness. However, we envision Vygotsky replying to them: "One step in learning can lead to a hundred steps in development. This is indeed the most positive aspect of the new theory" (Vygotsky, 1982, p. 230).

References

Alekseev, N. G. (2002). *Proektirovanie uslovii razvitiya refleksivnogo myshleniya: diss... dokt. psikhol. n. v vide nauchnogo doklada [Designing the conditions of developing reflexive thinking: Ph.D. diss. in the form of a scientific report].* Moscow: MPGU Press.

Beck, A. T., Rush, A. J., Shaw, B. F., & Emery, G. (2003). *Cognitive therapy of depression*. New York: Guilford Press.

Belopolskaia, N. L. (1996). Assessment of cognitive and emotional components of the zone of proximal development in mentally retarded children. *Journal of Russian & East European Psychology*, *34*(1), 46–56.

Blonskii, P. (1979). Zadachi i metody novoi narodnoi shkoly [The aims and methods of the new public schools]. In *Izbrannye pedagogicheskie i psikhologicheskie sochineniya. t. 1. [selected pedagogical and psychological works: Volume 1]* (p. 304). Moscow: Pedagogika.

Caspar, F. (2010). Modeling the therapeutic relationship and resource orientation: Introduction. abstract. In *FMPP annual congress of psychiatry and psychotherap//20ᵗʰ IFP world congress of psychotherapy* (p. 47). Luzerne, Switzerland: KKL.

Dzhurinskii, A. N. (2008). *Istoriya obrazovaniya i pedagogicheskoy mysli [The history of education and pedagogical thought].* Moscow: Vlados Publisher.

Ellenberger, H. (2001). Klinicheskoe vvedenie v psikhiatricheskuyu fenomenologiyu i ekzistentsial'nyi analiz [Clinical introduction to psychiatric phenomenology and existential analysis. In *Ekzistentsial'naya psikhologiya. Ekzistentsiya [Existential psychology. Existence]* (pp. 201–236). Moscow: EKSMO-Press.

Grawe, K. (2006). Agents of change in the processes of psychotherapy. Part I. *IFP newsletter*, 7–17.

Kholmogorova, A. B. (2001). Kognitivnaya psikhoterapiya i otechestvennaya psikhologiya myshleniya [Cognitive psychotherapy in russia psychology]. *Moskovskii psikhoterapevticheskii zhurnal [Moscow Psychotherapeutic Journal]*(4), 165–181.

Kholmogorova, A. B. (2016). Kognitivno-bikhevioral'naya terapiya «na grebne tret'ei volny»: revolyutsionnyi povorot ili novye aktsenty? [Cognitive-behavioral therapy «on the crest of the third wave»: a revolutionary new turn or new accents?]. *Sovremennaya terapiya psikhicheskikh rasstroistv [Modern therapy of mental disorders]*(2), 16–21.

Kholmogorova, A. B., & Klimenkova, E. N. (2017). Empathic ability in the context of the subjectivity problem. *Counseling Psychology and Psychotherapy*, *25*(2), 75–93.

Kholmogorova, A. B., & Zaretskii, V. K. (2010). Mozhet li byt' polezna rossiiskaya psikhologiya v reshenii problem sovremennoi psikhoterapii: razmyshleniya posle xx kongressa internatsional'noi federatsii psikhoterapii (IFP) [Can russian psychology be helpful for solving the problems of modern psychotherapy: reflection after the 10ᵗʰ congress of the international federation of psychotherapy (IFP)]. *Meditsinskaya psikhologiya v Rossii: elektron. nauch. zhurn [Medical psychology in Russia: online journal]*(4).

Kholmogorova, A. B., & Zaretskii, V. K. (2011). C mozhet li kul'turno-istoricheskaya kontseptsiya L. S. Vygotskogo pomoch' nam luchshe ponyat', chto my delaem kak psikhoterapevty [Can Vygotsky's cultural-historical concept help us to better understand what we do as therapists?]. *Kul'turno-istoricheskaya psikhologiya [Cultural-Historical Psychology]*(1), 108–118.

Kravtsova, E. E. (2001). Kul'turno-istoricheskie osnovy zony blizhaishego razvitiya [Cultural-historical foundations of the zone of proximal development]. *Psihologicheskii zhurnal*, *22*(4), 42–50.

Lauveng, A. (2009). *Zavtra ya vsegda byvala l'vom [Tomorrow I was always a lion].* Samara: «Bakhrakh-M» Publisher.

Nikolaevskaya, I. (2017). Multidimensional model of the ZPD as tool of analysis of the child's cognitive-personal dynamics of development while overcoming learning difficulties. *Revue internationale du CRIRES: Innover dans la tradition de Vygotsky*, 4(1), 154–160.

Obukhova, L. F., & Korepanova, I. A. (2005). Prostranstvenno-vremennaya skhema zony blizhaishego razvitiya [spatial-time scheme of the zone of proximal development]. *Voprosy psikho logii [Questions of psychology]*(5), 13–26.

Tsukerman, G. (2006). Vzaimodeistvie rebenka i vzroslogo, tvoryashchee zonu blizhaishego razvitiya [Cooperation between a child and an adult creating the zone of proximal development]. *Kul'turno-istoricheskaya psikhologiya [Cultural-Historical Psychology]*, 4, 61–73.

Vygotsky, L. S. (1956). Problema obucheniya i umstvennogo razvitiya v shkol'nom vozraste [Issue of learning and mental development in school-aged children]. In *Izbrannye psikhologicheskie issledovaniya [selected psychological works]* (pp. 438–452). Moscow: APN RSFSR Publisher.

Vygotsky, L. S. (1982). *Collected works in 6 volumes. Vol. 2.* Moscow: Pedagogika.

Vygotsky, L. S. (1984). *Collected works in 6 volumes. Vol. 4.* Moscow: Pedagogika.

Zaretskii, V. K. (1984). *Dinamika urovnevoi organizatsii myshleniya pri reshenii tvorcheskikh zadach: Avtoref. diss. . . . kand. psikhol. nauk [the dynamics of organising thinking in creative problem solving: Ph.d. (psychology) thesis].* Moscow.

Zaretskii, V. K. (2007). Zona blizhaishego razvitiya: o chem ne uspel napisat' vygotskii [Zone of proximal development: what vygotsky had not time to write about]. *Kul'turno-istoricheskaya psikhologiya [Cultural-Historical Psychology]*(3), 96–104.

Zaretskii, V. K. (2009). Zone of proximal development: What Vygotsky didn't have time to write. *Journal of Russian and East European Psychology*, 47(6), 70–93.

Zaretskii, V. K. (2013). Traektorii razvitiya predstavlenii o refleksii i ikh ispol'zovanie v praktike organizatsii resheniya problem [trajectories of development of the notions of reflection and its applications in the practice of organised aid in solving problems]. *Psikhologiya v vuze [Psychology in Higher School]*(4), 55–97.

Zaretskii, V. K. (2015). Teorema L. S. Vygotskogo «Odin shag v obuchenii — sto shagov v razvitii»: v poiskakh dokazatel'stva [L. S. Vygotsky's Principle "one step in learning — a hundred steps in development": In search of evidence]. *Kul'turno-istoricheskaya psikhologiya [Cultural-Historical Psychology]*, 11(3), 44–63. doi: 10.17759/chp.2015110305

Zaretskii, V. K. (2016). Odin shag v obuchenii – sto shagov v razvitii: Ot idei k praktike [Vygotsky's Principle "One step in learning - One hundred steps in development": From idea to practice]. *Kul'turno-istoricheskaya psikhologiya [Cultural-Historical Psychology]*, 12(3), 149–188.

Zaretskii, V. K., & Gilyazov, A. (2016). *Shakhmaty dlya obshchego razvitiya. rabochaya tetrad' dlya zanyatii shakhmatami [Chess for general development. A workbook for chess studies].* Moscow: «Raikhl'» Publisher.

Zaretskii, V. K., & Kholmogorova, A. B. (1983). Smyslovaya regulyatsiya resheniya tvorcheskikh zadach [Meaning regulation of creative problem solving]. In *Issledovaniya problem psikhologii tvorchestva [Studying the issues of psychology of creativity]* (pp. 62–100). Moscow: Nauka.

Zaretskii, Y., & Zaretskii, V. K. (2012). Sub'ektnaya pozitsiya rebenka v preodolenii uchebnykh trudnostei [subject position of the child in overcoming learning difficulties (case study)]. *Konsul'tativnaya psikhologiya i psikhoterapiya [Counseling Psychology and Psychotherapy]*(2), 110–133.

Zaretskii, Y. V. (2014). *Sub'ektnaya pozitsiya shkol'nikov po otnosheniyu k uchebnoi deyatel'nosti v raznykh vozrastnykh periodakh [Schoolchildren's position of agency towards the learning activity in different ages.* Moscow: Ph.D. (Psychology) Thesis.

Multidimensional Model of the ZPD as Tool of Analysis of the Child's Cognitive-Personal Dynamics of Development While Overcoming Learning Difficulties

Irina Nikolaevskaya   HAVE_A_NIFE@MAIL.RU
Moscow State University of Psychology and Education
Moscow, Russia

Abstract

The main idea of the paper is based on L. S. Vygotsky's concepts of ZPD and collaboration of teacher and student. The special process between teacher and student, organised in child's zone of proximal development with using reflection and reflective questions as mail helping tools, leads to qualitative changes firstly in cognitive development of the student. Successes in learning activity create base for development of personal features. Thus, in such process, we may see strong connections between cognitive and personal developmental trajectories. Understanding of these connections gives an opportunity of mediative work with personal difficulties of a child, opportunity to turn simple processes of learning into counseling work, effecting all spheres of development.

Keywords : L. S. Vygotsky; ZPD; Collaboration between teacher and student; Tools.

In the past two decades, the problem of the personal well-being of students has become more urgent. Technological progress provides virtually unlimited access to Internet resources, the flow of information, actually knocking children off their feet. Unfortunately, this is combined with obvious difficulties in the process of education, because many parents are primarily concerned about the financial well-being of their family. There are behavioral disorders, affective disorders, social comparisons, low self-esteem, etc. In parallel with this learning difficulties are widespread: low learning motivation, lack of meaning in learning activity, low scores and poor relations with teachers. The request for counseling of a psychologist can be both learning difficulties and personal problems. However, these problems are often combined.

This link of learning and personal difficulties reflects the described L. S. Vygotsky principle of unity of intelligence and affect. These two aspects of the psyche are interrelated and influence each other (Vygotsky, 1984). Based on this provision, it is possible to build advisory psychological and pedagogical help, involving both cognitive and personal developmental dimensions of the child. Such work is also possible to build using the principle of the connection between learning and development (Vygotsky, 1984). Learning leads child development. The cooperation of the adult and the child allows the child to develop, to appropriate new cultural means, and to use them in future in all spheres of life. Such cooperation is most productive within the zone of the proximal development.

In the work "The problem of age" L. S. Vygotsky introduces the concept of a zone of proximal development, characterizing it as an area in which a child is able to move with the help of an adult. This area is located between the zone of actual development, where the child can act independently, and a zone that is actually inaccessible, where even with the help of an adult, it is not possible for a child to successfully accomplish the task. The concept of a zone of proximal development reflects the collaboration of an adult and a child within the framework of joint activity. Also, it shows the actual level of development of the child, or rather the entire range of development trajectories, and, as L. S. Vygotsky wrote, the zone of proximal development can be applied to the description not only of learning activity, but also to the personal development of the child. Thus, the definition of the zone of the child's proximal development can serve as a diagnostic tool in determining cognitive and personal development (Vygotsky, 1984). This diagnostic tool is able not only to reflect the cognitive and personal development of the child, but also describe the relationship between cognitive and personal characteristics of development.

In certain situations, it is possible to initiate a child's personal development through the provision of psychological and pedagogical help. For a such connection, special conditions for the provision of psychological and pedagogical help are required, and these conditions are reflected in the principles and technologies of the reflective-activity approach (Zaretskii & Gordon, 2011). The approach realizes in its practice a number of principles of cultural-historical psychology, including the thesis "learning leads to development" (Vygotsky, 1984). The process of overcoming learning difficulties is carried out in the zone of the child's proximal development, that is, if a student has some difficulty in the learning process, then he has moved beyond the boundaries of his zone of actual development, and he needs the

help of an adult. As the adult helps the child, both they are united by a common activity and are in collaboration. Under such conditions, dynamics of development arise.

There is an idea about the zone of the proximal development as a reflection of the dynamics of the child's cognitive and personal development. Also, there is an idea of the connection between problems of personal development and learning difficulties. It is assumed that due to this relationship, pedagogical help in overcoming learning difficulties under certain conditions can initiate positive dynamics of personal development (Kholmogorova & Zaretskii, 2011; Zaretskii, 2016). For its verification, it is necessary to develop a method that allows recording the relationship between personal problems and learning difficulties, and the positive dynamics of personal development in providing the child with psychological and pedagogical help in overcoming learning difficulties.

The idea of multidimensional model of ZPD developed in reflective-activity approach is based on L. S. Vygotsky's concept of ZPD (Zaretskii, 2007, 2009). The model is a set of dimensions - the directions of development of various abilities of the child. Each dimension reflects the development of some abilities of the child in the process of carrying out his activity. Development is due to a qualitative transformation of these abilities. Owing to collaboration with an adult, the child internalizes new ways of activity, from the interpsychic they become intrapsychic, enriching the child's abilities, and this is reflected in the expansion of the zone of proximal development on each of the dimensions. Often, within the framework of one activity, dimension-resources and dimensions containing key difficulties for development at this stage. One of the tasks of counseling is helping the child overcome the key difficulty by activating, and developing all available resources for the child. Quite often, the key difficulties arise precisely on personal dimensions, so that direct work with them can be realized only in the form of psychotherapy, which is quite difficult in the work with children. However, working with learning difficulties becomes, in a certain sense, a metaphor for dealing with personal difficulties. The child creates characteristic ways of coping, which can be realized both in learning activity and in a broader life context, and overcomes personal difficulties indirectly through learning activity. In the process of overcoming the learning difficulties, all possible resources of the child, necessary to solve the problem, are actualized and initiated. To overcome the learning difficulties, it is necessary not only to be able to solve specific problems, but it is much more important to be able to overcome fear and learned helplessness, to take an agency position in relation to this difficulty, to analyze method of solution that does not lead to the correct answer, etc. Thus, resources are not initiated only the cognitive sphere, but also personal. For convenience, let us illustrate this example with the following scheme:

This model allows to determine the main learning difficulty and build the child development dimensions that are involved in the process of overcoming this learning difficulty. The main direction remains learning activity. It presents dimensions directly related to the learning difficulty, but also reflects other development trajectories that belong to different spheres, including the sphere of personal development. Thus, the construction of a multidimensional model of the child's zone of proximal development makes it possible to record the development dimensions involved in this learning activity, which are resources,
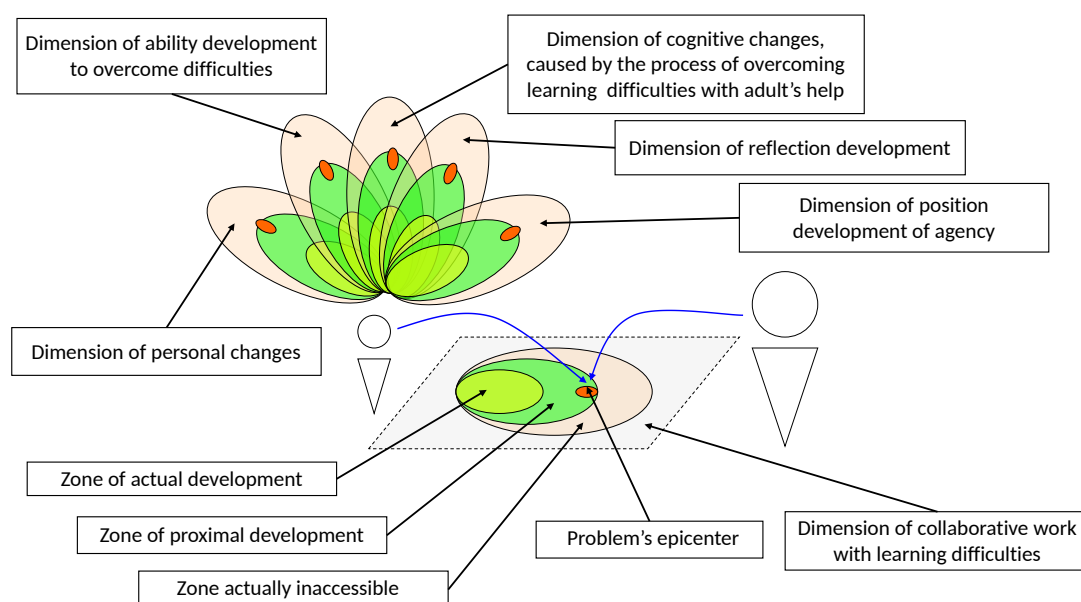
Figure 1. Scheme of the zone of proximal development as a set of dimensions in which "steps" in development are possible (Zaretskii, 2013).

tightened by a problem epicenter. An analysis of the dynamics of development on these dimensions makes it possible to make assumptions about possible connections between them. The definition of an epicenter problem makes it possible to build counseling activity aimed at the initiation and development of child resources.

Learning activity becomes a space in which the child's collaboration with an adult is linked to overcoming the learning difficulties and problems of the child in the personal sphere. In the process of working together, the child opens up new resources to overcome learning difficulties, and these same resources are used by him to overcome personal difficulties.

Thus, we can distinguish several basic stages of the method of analysis. At first, we record the initial learning difficulty. Then, the analysis of joint activity aimed at overcoming this difficulty allows to determine the internal obstacles and resources that shape the situation. A general picture reflects the present dimensions and their relationship to each other. The help process is recorded each session, which allows to track the overall and particular dynamics of changes, as well as to trace the relationship between the help provided and cognitive-personal changes.

This conceptualization is most productive when dealing with "difficult" cases. We conducted a qualitative study of the cases of overcoming the student's learning difficulties. As an example of the analysis of the dynamics of cognitive-personal development using the multidimensional model of the zone of proximal development, we will cite the case of work with one of the students, Nastya. At the beginning of the work, Nastya was 13

years old, at the end of the school year she was not certified for two subjects. The overall picture was rather sad, because Nastya was absolutely passive, afraid of assignments, did not want to overcome difficulties, did not want to think about her difficulties and think about herself as an active person in principle. Her mother was making most of Nastya homework's, a tradition that had arisen in this family several years ago, so the Nastya's ability to work independently literally atrophied. In addition to such a family and personal picture, Nastya also had cognitive difficulties: the viscosity of thinking, the low level of generalization, the impossibility of working in the ideal plane, and the high fatigue. By some indications, it was possible to determine an easy degree of mental retardation.

At the beginning of the work, the first dimensions were defined: reflection, the ability to solve the task in the mind, the ability to solve the task in the material plane - the basic cognitive dimensions, here they are presented in a complex form. Personal dimensions: agency position in relation to learning activity, subjectivity, idea of own activity, self-determination, attitude to difficulties. Personal dimensions are related to each other, reflect Nastya's idea of herself as an active subject of her own activity. In this case, personal dimensions are linked with cognitive ones. The agency position in relation to learning activity is connected with the dimension of reflection, because it is impossible to reflect the methods of one's activity, to modify these methods without showing the activity and awareness that are inherent in the subject of this activity. Initiation of development in these related dimensions makes it possible to analyze ways of solving problems, modify unproductive methods or choose the most convenient ones. Also, the dimension of self-determination is linked to more general context with all cognitive dimensions, because it allows the child to initiate self-development. Development in the dimension of attitude to the difficulty allows us to perceive difficulties and mistakes not as insurmountable obstacles, but as situational problems that can be solved with some efforts, that supports the development of the concept of activity on the dimension of the activity, helping to retain meaning, and also helps constructively plan its own work with methods.

These dimensions were highlighted after two sessions with Nastya, on the base of the diagnostic work, its joint analysis and reflection of mistakes. This allowed us to determine the zone of actual development - what Nastya can do on her own, as well as the difficulties that she cannot overcome by herself, but she is able to do this together with an adult. Also, from the reflection of Nastya, was received information about her attitude to difficulties, about ways of solving mathematical problems, about the general attitude to mathematics and education.

As a result of diagnostics on the dimensions of the model, a key problem was identified - the lack of seeing herself as the subject of her own activity - it pulled together several personal dimensions - self-determination, the idea of own activity, subjectivity. These are abilities of a person that allow her to recognize herself as an active subject of her own life, which means that Nastya practically did not feel herself the master of her life, everything was performed for her by adults, she did not have the opportunity to choose or make self-determination, in fact she was the executor of other's plans and instructions. As a result, there is a lack of agency position in relation to learning activity and, as a result, an almost

complete lack of ability to reflect. The agency position cannot arise in conditions when practically all decisions are taken for the child by adults, when the child is not a subject of his own activity. Reflection is also not initiated, because there is no need to analyze methods of activity. When Nastya encountered a mistake, she did not analyze her possible reasons and the way she came to this mistake, most often her mistake was corrected by adults. In addition, Nastya was able to implement the simplest tasks only in the material plane and almost completely could not transfer these tasks to the ideal plane.

One of the ideas of the consultant's work was to help Nastya learn to overcome her learning difficulties on her own. This is possible only if Nastya is able to feel herself the subject of her activity, to understand why she needs this activity, and to learn how to reflect on her methods of activity. A direct conversation about Nastya's desires, her ideas about the future and her personal meaning in math was not successful. Nastya really tried, but she could not answer to these questions. Therefore, there was an idea to come to this through learning activity. One of the intermediate results was the initialization of Nastya's ability to reflect on her methods of activity and choose from them the most convenient for her personally. For this, it was decided to initialize the development of the dimension "the ability to solve the problem in the mind", because it would allow Nastya to use those cognitive resources that will allow to move as far as possible from the mechanical unconscious performance of the task and begin to analyze her methods of activity.

Several lessons were spent on elementary teaching to the simplest abstract representations - the categories of the number. Learnt to understand numbers as complex abstract objects, and not as a linear record of numbers, Nastya began to try to count in her mind. Basically, these were examples of addition and subtraction of two-digit numbers, she fairly confidently applied the method of "convenient" addition or subtraction, first working with tens, and then with units. When this method was mastered by her, the moment X came. The consultant suggested to Nastya how she likes to solve math tasks, in her mind or in a notebook, writing down a column. Getting the right answer when solving the task in the mind brought Nastya great pleasure. She felt this as her own personal achievement. So, after a short hesitation, she chose the method of solution in her mind.

At this point, several steps have been taken on several personal development dimensions. On the dimension of subjectivity, the ability to feel herself active in her life, to be able to think and choose, to abandon something on the basis of her own thoughts arose. On the dimension of the agency position in relation to learning activity, there emerged the realization that this learning activity is just her, and she is a subject in it. On the dimension of the idea of own activity, it was possible to plan activity in accordance with her own desire to realize something. On the dimension of attitude to the difficulty, several steps were realized - increasing self-confidence, there was an idea of the difficulty as something that can be handled, the difficulties began to be perceived not as something fatal, but as points on a further path of overcoming.

The intermediate dimension in this work was the ability to reflect, due to the initiation and development of this ability Nastya, in principle, had the ability to look at herself, her activity and the ways of her activity from outside.

This dynamic was achieved in the first seven sessions. All classes were built in accordance with the principles of the reflective-activity approach. Each lesson began with a discussion of the general idea for the current lesson. The learning activity was organized together, each session ended in reflection - a discussion of the difficulties, successes, and the specifics of the help provided.

The fixation of the process and the results of each lesson allows us to correlate these results with each other, to observe the dynamics of cognitive development and progress in personal development. The picture was most voluminously reflected using a multidimensional model of the zone of proximal development. Each new appropriated cultural tool is a step on one of the dimensions of development, which opens up opportunities for development on other related dimensions. This case of practice is a brief illustration of the possibility of using the multidimensional model of the zone of proximal development as a tool for diagnosing and analyzing the dynamics of the child's cognitive and personal development in the process of overcoming learning difficulties.

References

Kholmogorova, A. B., & Zaretskii, V. K. (2011). Mozhet li kul'turno-istoricheskaya kontseptsiya L. S. Vygotskogo pomoch' nam luchshe ponyat', chto my delaem kak psikhoterapevty [Can the cultural-historical psychology of Vygotsky help us better understand what we are doing as psychotherapists]. *Kul'turno-istoricheskaya psikhologiya [Cultural-historical psychology]*(1), 108–118.

Vygotsky, L. S. (1984). Problemy detskoi (vozrastnoi psikhologii) [Problems of childhood (developmental) psychology]. In *Collected works in 6 volumes. Vol. 4.* (p. 243-432). Moscow: Pedagogika.

Zaretskii, V. K. (2007). O chem ne uspel napisat' L. S.Vygotskii [What Vygotsky didn't have time to write]. *Kul'turno-istoricheskaya psikhologiya [Cultural-historical psychology]*(3), 96–104.

Zaretskii, V. K. (2009). Zone of proximal development: What Vygotsky didn't have time to write. *Journal of Russian and East European Psychology*, *47*(6), 70–93.

Zaretskii, V. K. (2013). Stanovlenie i sushchnost' refleksivno deyatel'nostnogo podkhoda v okazanii konsul'tativnoi psikhologopedagogicheskoi pomoshchi [Development and nature of Reflection and Activity Approach to the provision of advisory psychological and educational assistance]. *Konsul'tativnaya psikhologiya i psikhoterapiya [Counseling psychology and psychotherapy]*(2), 8–37.

Zaretskii, V. K. (2016). Odin shag v obuchenii – sto shagov v razvitii: Ot idei k praktike [Vygotsky's Principle "One step in learning - One hundred steps in development": From idea to practice]. *Kul'turno-istoricheskaya psikhologiya [Cultural-Historical Psychology]*, *12*(3), 149–188.

Zaretskii, V. K., & Gordon, M. M. (2011). O vozmozhnosti individualizatsii obrazovatel'nogo protsessa na osnove refleksivno-deyatel'nostnogo podkhoda v inklyuzivnoi praktike [Possibility of individualization of the educational process on the basis of reflection and activity approach in the inclusive practice]. *Psikhologicheskaya nauka i obrazovanie [Psychology science and education]*(3), 19–26.

The Need for Chess in School and Its Role in the Dynamics of Child Development

Oksana V. Glukhova   KSUU@INBOX.RU
South Ural State University
Satka, Russia

Abstract

The article describes the methodology for studying the dynamics of increasing the level of development of intellectual processes in children learning to play chess with the help of the reflective-activity approach. It describes the formation of the mental plan of action and position of agency (subjectness position) in the planning of the student's own developmental trajectory and learning. The results of the influence of chess lessons on the qualitative leap in the development of junior students in comparison with children not engaged in chess are considered. The developing potential of chess lessons for students is also described.

Keywords : Intellectual processes; Cognitive processes: memory (visual-mediated and auditory); Attention; Working capacity; Ability to think logically on the verbal and non-verbal level; Ability to plan and predict the results of actions; Psychological research; Chess for the overall development; Mental plan of action; Position of agency (subjectness position); Zone of proximal development; Reflective-activity approach.

Today in Russia there is a statement that our educational system should work ahead of time in order to prepare a person for life in a changing environment. The new quality of education should be aimed at increasing the intellectual potential of future graduates, understanding their abilities and understanding the need to make the right decisions in conditions of uncertainty.

These are qualities of personality that consistent with the demand of modern reality for a successful person. And they develop in the process of acquaintance and understanding in the future the philosophy of playing chess.

In the small city Satka in the Chelyabinsk region, the chess projects are supervised by the collective of the chess club "Vertical". In the training of young chess players, as well as in the creation of a base for the overall development of young students, a significant role is played by the project "Chess for overall Development", which started in the autumn of 2004 (Zaretskii, Gordon, & Glukhova, 2011).

The program for learning chess was developed under the guidance of Viktor Zaretskii, candidate of psychological sciences, professor of the department of individual and group psychotherapy of the psychological counseling department of the Moscow State Psychological and Pedagogical University.

Teaching children the basics of the game and using chess as a tool for their overall development was carried out by school teachers, based on the development of the ability to act in the mind, on the use of the reflective-activity approach in the lessons, and on the application of the theory of Lev Vygotskii about the zone of the nearest development of the child (Vygotsky, 1984; Zaretskii, 2008b).

In the framework of this project, the lesson was built in such a way that each student had to face the task that he himself could not fulfill. In scientific terms, each student had to enter his zone of proximal development. As a result, everyone began to move at their own individual pace. The task of an adult is to catch this pace and organize for the child exactly the activity that will be useful at the moment (Zaretskii, 2008a).

Orientation to the joint work of the teacher and student in building the trajectory of his development, as well as the child's readiness to reflect on his successes and failures, created the basis for the dynamics of cognitive processes in all children participating in the project to be positive.

When planning and implementing a chess project, an important role was assigned to psychological and diagnostic support.

The selection of methods for conducting comparative cut-off diagnostics was carried out by the specialists of the Moscow State Psychological and Pedagogical University Svetlana Volikova, and Alla Kholmogorova. The research was conducted by psychologists of schools in the Satka district together with specialists from Moscow.

A package of psychological methods that tested the basic cognitive processes of the child was selected. While compiling this package, we tried to cover almost all the basic cognitive processes of the child: memory (visual mediated and aural), attention, performance, the ability to think logically on a verbal and non-verbal level, the ability to plan and predict the results of actions. These cognitive processes are involved in the successful learning of a child.

It is noteworthy that the main goal of the project "Chess for overall development" was the idea of creating a methodology for making classes that would allow children in the process of playing chess to develop their intellectual and personal potential:

- analyze the situation on the chessboard mentally, i.e. act in the mind;

- comprehend own activity in order to beat the opponent;

- independently make decisions in necessity to make the next move;

- plan own activity in accordance with the current situation on the board;

- concentrate and allocate attention to the course of the game, the opponent's strategy and own position;

- train the memory in a situation when it is necessary to repeat chess technique.

Therefore, our selection of methods allows us to fix the specifics of the influence of the chess program on the development of the child.

1. Method "Remembering 10 words" (author - Dr. AN Leontiev). The method is aimed at identifying the features of direct memorization. The technique allows to reveal the amount of memory and the ability to memorize mechanically, i.e. how many times the child needs to repeat a set of words so that he will remember them.

2. Method "Determining the level of development of visual mediated memory" (author - P. Ya. Kees, adapted by A. G. Liders, V. G. Kolesnikov). The method makes it possible to understand at what level the child's ability to remember the information perceived by him is formed, and whether he can use logical "helpers" when memorizing.

   In the fourth grade, this method was not carried out.

3. The method of "simple analogies" - for 2-3 classes. For 4 classes, subtest 6A is presented from the GIT methods (group intellectual test).

   The method is aimed at identifying the features of the development of the verbal intelligence of the child, his ability to establish verbal and logical connections.

4. Test "Progressive matrices of Raven".

   This test identifies the level and characteristics of the development of formal (nonverbal) intelligence. Shows the child's ability to establish formal logical connections. In this study, it is used to diagnose students of the 2nd and 3rd grade. To study the features of the nonverbal intelligence of students of the 4th grade, the subtest 5A of the GIT methodology was used.

5. Method "Determination of the level of the formation of the internal plan of action":

   - 1st variant - author - P. Ya. Keas, adapted by A. G. Liders, V. G. Kolesnikov. It is used for diagnosing students of primary school.
   - For the diagnosis of students of the 4th grade, the subtest 7A of the Intellectual Test, developed by Amthauer, was applied.
   - 2nd version - modification of the game for the development of attention (proposed by A. B. Kholmogorova).

   The method shows how the child has developed the ability to think and plan certain actions for several moves forward.

6. Method "Correction test Bourdon".

   It is aimed at revealing features of the child's attention and its performance.

This package has proved itself well throughout the study.

The received data were processed using the statistical software package SPSS for Windows, Standard Version 11.5, Copyright © SPSS Inc., 2002, most often in the international practice used for statistical analysis of the results of psychological research.

In order to identify the specific impact of lessons in the chess project on the development of children, a comparative analysis method was used. We compared the dynamics of changes in the level of development of cognitive processes in three large groups of students. The first included students who are engaged in chess on the project (the main group is the "chess project"). The students of the second group studied chess according to the program of Igor Sukhin (the comparison group is "chess universal"). The third group consisted of children not engaged in chess (the control group was "without chess").

The selection of the experimental class and comparison classes took into account the socio-demographic data, indicators of overall development and qualifications of teachers (all teachers had the first qualification category at the time of the research).

Socio-demographic data of the class were obtained with the help of teachers' answers to the questions of the questionnaire on the composition and well-being of families of students. The researched groups were roughly leveled up in order to be able to assert that the differences in the dynamics of development may be attributed to the difference in the learning process of these students.

In total, since 2004 to 2017, about 870 students of grades 1-9 of secondary schools in the city of Satka (schools No. 1, 5, 12, 13, 14 and 40) took part in the longitudinal study.

In the study of the initial stage of the analysis of the influence of chess lessons on the development of students (2004-2008), all classes in the primary school took part.

An analysis of the results obtained made it possible to draw conclusions that according to the positive dynamics of the development of cognitive processes in the academic year, the students of the class on which the experiment was conducted outstripped all the comparison groups. During the designated time (the first year of the project), the students of the experimental group improved their results for seven indicators (see Table 1). Their visual and aural memory improved, they began to cope with tasks for non-verbal thinking better, they became more attentive, performed, more able to plan their actions in the mind (this is confirmed by the basic and additional methods to identify the internal plan of action). Negative dynamics for any indicator was not found. Such bright indicators of dynamics were not found in any of the comparison groups.

Table 1

Comparison of the level of development of cognitive processes of students of grade 2 of school No. 14 (main group) for the period from September 2004 to May 2005 (the first year in the project)

Indicator	Time of the research		
	September (N=24, M (SD))	May (N=24, M (SD))	Significance level (p)
1. Memory	5.4 (1.9)	**9.0 (1.4)**	**0.000****
2. Visual memory	8.6 (1.8)	**9.2 (2.3)**	**0.000****
3. Nonverbal intelligence	6.2 (2.7)	**7.9 (3.0)**	**0.057***t*
4. Attention	0.77 (0.3)	**0.9 (0.1)**	**0.003***
5. Performance	178.8 (82.7)	**288.7 (66.5)**	**0.000****
6. Ability to act in the mind 1	1.4 (1.5)	**2.8 (1.6)**	**0.000****
7. Ability to act in the mind 2	2.5 (0.66)	**2.8 (0.4)**	**0.048**

M – average value

SD – Standard deviation

* – significance level *p*<0.05 (Mann — Whitney U-test)

** – significance level *p*<0.001 (Mann — Whitney U-test)

t – significance as tendency

To the studies organized in the period from 2008 to 2010, students of the first - fourth grades were involved. Dynamics of development of children learning chess within the framework of the Chess for Overall Development project has also been shown to be consistently positive.

The task of the new stage of diagnostics (2010-2013) was the study of a combined primary class in composition, which, in addition to the basic composition of the children, included students with disabilities. The diagnostic section (2010-2012) to determine the

dynamics of development of children with disabilities (mental retardation) also confirmed the positive effect of chess (see Table 2).

Table 2

Comparison of the level of development of cognitive processes of students of grade 2 of school No. 13 (main group) for the period from May 2011 to May 2012

Indicator	Time of the research		
	May 2011 (N=26, M (SD))	May 2012 (N=26, M (SD))	Significance level (p)
1. Memory	5.56 (2.36)	**8.6(1.15)**	**0.000****
2. Visual memory	4.52 (2.68)	**6.30 (1.89)**	**0.003***
3. Verbal intelligence	7.32 (2.36)	7.78 (3.90)	0.663
4. Nonverbal intelligence	7 (1.26)	**7.91 (1.44)**	**0.017**
5. Attention	0.81 (0.16)	0.86 (0.09)	0.191
6. Performance	188.54 (55.90)	**244.87 (83.14)**	**0.002***
7. Ability to act in the mind 1	1.28 (0.89)	**2.13 (0.87)**	**0.002***
8. Ability to act in the mind 2	2.04 (0.46)	**2.46 (0.64)**	**0.008***

M – average value

SD – Standard deviation

* – significance level $p<0.05$ (Mann — Whitney U-test)

** – significance level $p<0.001$ (Mann — Whitney U-test)

The results of the research conducted in May 2012 showed that the second-graders of the main group have a positive dynamic in the development of memory (aural and visual), nonverbal intelligence, performance and the ability to plan actions in the mind. There are statistically significant differences between the May 2011 research and the 2012 research.

Comparison group - second-graders included as a control group - "without chess", improved their results only in three indicators (visual memory, performance and ability to act in the mind (Vygotsky, 1984) (see Table 3).

However, the level of statistical differences is lower than that recorded in the indicators of students in the experimental group. The indicators of the dynamics of intellectual processes are also lower (three against six).

At the same time (2010-2013), an analysis of the level of development of intellectual processes among the first participants of our project and the comparison groups was made. In 2011-2012, these children were studying in the ninth grade, and many of them planned their future professional education outside the school's walls. Therefore, it was so important to trace the existing trends in the development of the entire class as a whole.

For the designated time, a large number of students studying and not studying chess as a whole have increased their level of development of cognitive processes. However, the

Table 3

Comparison of the level of development of cognitive processes in the 2nd grade pupils of school # 40 (without chess) for the period from May 2011 to May 2012

| Indicator | Time of the research | | |
	May 2011 (*N*=27, *M* (SD))	May 2012 (*N*=25, *M* (SD))	Significance level (*p*)
1. Memory	7.6 (1.78)	7.9 (1.2)	0.709
2. Visual memory	7.8 (2.6)	**9.4 (1.7)**	**0.000****
3. Nonverbal intelligence	6.6 (2.3)	6.9 (2.4)	0.691
4. Attention	0.89 (0.09)	0.7 (0.1)	0.264
5. Performance	173.53 (37.22)	**268.4 (48.2)**	**0.000****
6. Ability to act in the mind 1	1.25 (1.09)	**2.0 (1.1)**	**0.002***
7. Ability to act in the mind 2	2.07 (0.8)	2.4 (0.8)	0.088

M – average value

SD – Standard deviation

* – significance level *p*<0.05 (Mann — Whitney U-test)

** – significance level *p*<0.001 (Mann — Whitney U-test)

pupils of the experimental classes compared with the background ones have consistently improved their results for more intellectual indicators.

The obtained results again bring us back to the conviction that the stable improvement in the indicators in the experimental classes was promoted by the use of such a method of teaching chess, in which the student in each lesson independently planned actions to overcome yesterday's difficulties and could deliberately reflect on the motives for his training. As a result, the intellectual and personal qualities developed, the dynamics of which were initiated by chess lessons.

The words of participants of this project, today's university students, can serve as an illustration of these statements. Future doctor-rehabilitologist Nastia T .: "Chess helped in that, carrying out any task, I, in my mind, represented a plan of action, different options for implementation and possible outcomes. Then I chose the most correct one. This helps to avoid unnecessary mistakes".

Future engineer-mechanic Vasya V.: "Chess helped me to assess the current situation and to consider my further actions. This helps in solving various problems".

The future specialist in artistic metalworking: "Due to the fact that we were trained with the help of a reflective-activity approach, we are more broadly conceived". The opinion of these students of the experimental class, who have grown up, is especially valuable for us, because the goals we set for ourselves at the beginning of the project were achieved by us. Their statements are an additional confirmation.

Thus, it can be said that the students of the 1st and the 9th grades who study chess within the framework of the project find a positive dynamic of the development of cognitive functions for a larger number of indicators than children not engaged in chess.

In 2014, students in the experimental class finished high school with an impressive result: out of 24 students 18 graduated with five gold medals. This was the best result in the city of Satka, and the Chelyabinsk region.

The current stage of the study (2015-2017) is devoted to the study of the influence of methodological developments on the materials of the methodology on the dynamics of increasing the level of development of intellectual processes in children of comparison groups.

The work on the analysis of all diagnostic results continues and will be presented in our next publications.

I would like to emphasize once again that the results described were obtained over several years of research repeated when testing several classes, which may indicate not only the repeatability, but also the reproducibility of the results. And this, in turn, speaks about the reliability of the conclusions of this psychological research.

References

Vygotsky, L. S. (1984). *Collected works in 6 volumes. Vol. 4.* Moscow: Pedagogika.

Zaretskii, V. K. (2008a). Evristicheskiy potentsial ponyatiya «zona blizhayshego razvitiya» [Heuristic potential of concept of ZDP]. *Voprosyi psihologii [Questions of psychology]*, *6*.

Zaretskii, V. K. (2008b). Refleksivno-deyatelnostnyiy podhod v rabote s detmi, imeyuschimi trudnosti v obuchenii [Reflective-activity approach in the work with children with learning difficulties]. In *Pedagogicheskaya psihologiya [pedagogical psychology].* Moscow: TTs Sfera.

Zaretskii, V. K., Gordon, M. M., & Glukhova, O. V. (2011). *Shahmatyi dlya obschego razvitiya [Chess for overall development], Materialyi mezhdunarodnoy nauchno-prakticheskoy konferentsii. psihologo-pedagogicheskie i mediko-biologicheskie problemyi fizicheskoy kulturyi, sporta, turizma i olimpizma: innovatsii i perspektivyi razvitiya [Materials from international science conference. Psychological and educational, medical and biological problems of physical education, sports, tourism, mountaineering: innovations and trends of development].* Chelyabinsk: Izdatelskiy tsentr YuUrGU.

"Chess for overall development" software in the frame of Reflection and Activity*

Aleksei A. Chernysh   4257998@gmail.com

Faculty of Counseling and Clinical Psychology
Moscow State University of Psychology and Education
Moscow, Russia

Abstract

The paper discusses "Chess for overall development" project, which is based on Reflection and Activity Approach in helping overcome learning difficulties. The project has been running for over 12 years now, putting theory of the approach into practice in several cities throughout the Russian Federation. One of the key elements in this project is developing the ability to think in mind using chess problems and sequential progress through material where solving of problems becoming more idea-based and less action-based using the notion of the stage-by-stage formation of mental actions. Unlike other methods teachers use to teach chess, the Chess for Overall Development project views chess primarily as a psychological instrument for helping develop the ability to think in mind. The basis for the ideas of the project is L. S. Vygotsky's cultural-historical psychology. Vygotsky's notions on the development of the human psyche are implemented and partially expanded as part of the project. In recent years the software "Chess for overall development" was made designed with full compatibility with the principles of the reflection and activity approach and implementing the notion of the ability to think in mind development and sequential transition from material to ideal plane of mental actions. We present detailed description of the software features as well as its approbation results collected in schools, universities and hospitals.

Keywords : Cultural-historical psychology; Development; Learning; Help in overcoming learning difficulties; Pedagogics; Reflective-activity approach; Chess for overall development; Ability to think in mind; Stage-by-stage formation of mental actions; Computer software.

---

*. The Chess for Overall Development website [electronic resource], http://www.chess-od.com

Introduction

The issue of grades or evaluation of the educational process at schools is relevant in any society and throughout history. Usually, schools have a clear division – two opposing ends of the educational process – when it comes to results. The "straight A" students, the "stars", the successful students are compared to the students lagging behind, receiving poor grades, misbehaving. In addition, the teaching staff as well as most students traditionally treat the "stars" well. They treat the students lagging behind as the root of various problems within the school environment (which, one must note, normally has a sound basis). It is clear any professional teacher dreams of having more "stars" and as few students lagging behind as possible. Attempts to solve this problem within the system in a straightforward manner, making students who test poorly answer many questions relevant to a specific subject often fail to achieve the desired results. Even specific changes in grades or scores, which tend to improve when working on a specific subject, do not mean improvement in behavior, additional subjects (part of the school program), and relationships with other students... The students who used to lag behind do not change much. One must ask a question, which stems from the data mentioned above: can it be possible to approach the issue of low grades and the desire to improve the student's achievements so as to positively influence the results, the level of knowledge, as well as the students' quality of life? One of the attempts to answer this question with a "yes" is the "**Chess for Overall Development**" project.

The Chess for Overall Development project has been running for over 12 years now, putting theory into practice in several cities throughout the Russian Federation. Professor V. K. Zaretskii is project manager in Moscow, working within the framework of an approach he and his colleagues are developing – the **Reflection and Activity approach** - helping students overcome learning difficulties (V. K. Zaretskii, 2013, 2016). The approach is part of a psychological methodology used for this project. One of the key elements in this method is developing the ability to think using chess problems and their solutions (V. K. Zaretskii & Gilyazov, 2016). When one works within this framework, one must assume the mental process will gradually change, becoming more idea-based than action-based. This assumption, in turn, is based on the ideas of the "stage-by-stage formation of mental actions" (Galperin, 1966). Several schools in Satka, a town in the Chelyabinsk Oblast, have been using this method, based on the Reflection and Activity approach, for the past 12 years. As part of the project, students who participate in the program as well as students from various control groups (including groups that did not play chess or participate in alternative chess related projects) have been the subject of a comprehensive psychological diagnosis.

Unlike other methods teachers use to teach chess, aiming to improve the students' ability to play the game, the Chess for Overall Development project views chess primarily as a psychological instrument. The goal of the project is not just chess. It is mainly set to influence the students' psychological development, their ability to learn how to play the game while changing the quality of their higher mental functions. It aims to reinforce the students' positive approach towards the learning process, to support the child's ability to

assume a subjective point of view on his/her learning process. The decision to use chess instead of other games to influence students' development is not a mere coincidence. One can quote N. G. Alekseev, a member of the project's development team, "Chess is a game created by God himself to develop the ability to perform mental actions" (Alekseev, 1990).

The basis for the ideas used to create and run this project is L. S. Vygotsky's cultural-historical psychology. Vygotsky's notions on the development of the human psyche are implemented and partially expanded as part of the project (V. K. Zaretskii & Gilyazov, 2016).

During the past few years, as part of the project, a computer program, "Chess for Overall Development" (authors are V. K. Zaretskii and A. A. Chernysh), has been created and is available on the internet (`http://www.chess-od.com`). The program implements the principle ideas of the Reflection and Activity approach and actually enables the users to transform the thinking process, moving them from the "material" plane to the "ideal" (internal) plane. This move requires several stages such as minimizing actual aid and verbal representation of actions.

1. The psychological methodology of "Chess for Overall Development"

The methodology of "Chess for Overall Development" (V. K. Zaretskii & Gilyazov, 2016, 2017a, 2017b) consists of two parts, designed for the first and second year of study respectively.

The methodology for the first-year fits children who do not know a thing about the game of chess, starting from the basics as well as children who have partial knowledge, understanding the game to a certain extent. It is usual for children from these two groups to play with the game instead of playing the game. That is to say – they primarily use the game of chess in order to increase their ability to think. As a result, playing with the game makes this methodology as useful for children who have some knowledge of the game as it is for children who cannot play at all. The difference is only regarding the question – when to introduce exercises focusing on the game itself. One should do so somewhat later with beginners.

The first part, which focuses on chess, follows the usual structure of most educational programs. It includes the following topics (V. K. Zaretskii & Gilyazov, 2017b):

- Introduction;
- The Chessboard;
- Rules of chess moves and rules of the game;
- Reasons, the essence of chess and goals; possible outcomes;
- Phases of Chess;

- Positions in Chess;

- Exercises: mate-in-one move;

- Practice – Playing the Game.

Each lesson in the program contains three types of exercises:

1. Basic exercises meant for all levels.

2. Difficult exercises, which may cause problems for students while doing individual work.

3. Advanced exercises, which may cause difficulties for most students.

This list of exercise types is dependent on specific situations, since "basic" exercises may seem difficult for some learners and "difficult" exercises may become understandable for learners at a certain point in time. It is recommended, therefore, that teachers working with this methodology in mind do not limit the educational process and continue to search for more exercises or make them up to expand the existing set. Some exercises could prove more efficient for specific learners and be of great use to them.

Studying with the use of "Chess for Overall Development" methodology is significantly different when it is compared with traditional chess lessons and teaching methods:

- The focus is mainly on developing the learner's abilities (and the first of these abilities is to compose mental images of possible actions) rather than improving the learner's basic skills as a chess player.

- The lessons are meant to provide every child with the option to move within one's zone of proximal development. In other words, the aim is to create appropriate conditions, allowing the child to progress along his/her own developmental path.

- The part of "Chess for Overall Development" which includes the ability to reflect and document one's reflections in a unique format exists in a special workbook (V. K. Zaretskii & Gilyazov, 2017a).

- Moving along one's developmental path is possible thanks to allowing each student to have his or her own rate of progress and level of understanding chess. Furthermore, the individual development dynamics of the child's abilities to compose possible mental images is taken into account.

This final observation requires further explanation. One of the most important terms within the reflection and activity approach is the "developmental path". This term assumes

a specific area in which the action takes place, allowing the learner to advance, acquire new information, expanding the possibilities the learner already has (V. K. Zaretskii, 2016).

The learning process, when "Chess for Overall Development" methodology is used, involves moving along several developmental paths at once. This happens thanks to direct interaction with information (such as training one's visual memory) and to the development of the student's ability to compose possible mental images during class. One can assume moving along a specific vector may have positive influence on movement along other development vectors as well. In view of these movements, one can see how the ability to compose mental images may become a resource, allowing the student to move forward in several developmental paths at the same time.

It is true the lessons have a specific order or continuum and follow a plan. However, every lesson allows the children, who learn together in the same classroom, to do different tasks. These tasks may vary and be difficult for some or easy for others, differ in content or type, allowing each student to progress on his/her own, studying individually tailored learning material. Different children may need different amounts of time to grasp the same information. The student also has the ability to form and alter his/her own lessons, formulating individual ideas or plans. The plans must be discussed with the teacher (as this is one of the rules both adult and child must follow while interacting). The methodology assumes individual work as well as group work with students in the classroom.

Some of the necessary conditions, allowing overall development of the student, are establishing contact: assuming the position where cooperation is possible, actualizing the subjective position of the student, working with difficulties in the student's zone of proximal development. A teacher should stress the fact a student may reflect, use the concept of internalization and nurture the student's inner potential (V. K. Zaretskii, 2016). It is recommended that the teacher, relying on these conditions, should follow a certain order of events when planning an individual lesson, regardless of the lesson's theme.

This certain order of events or action scheme includes the establishment of an emotional-informational contact. The adult may assume different roles during the process. Some examples are – assume an active role, reflect and observe, help the student. The student also has a choice and positions oneself differently when interacting with the teacher. A child, just like an adult, may feel very strongly about something and truly need to share these feelings. When one does not allow them to be seen or heard, it may interrupt the learning process. Understanding each other's emotional condition allows mutual understanding and empathy. In addition, establishing contact at the level of meanings and attitudes is easier when the beginning of the lesson includes reflecting upon the self. One may attempt to find out about important events, which happened during the previous lesson, asking the student if any thoughts may have surfaced regarding these events or requesting to learn about specific needs the student may have and wishes to share as part of the ongoing lesson. In most cases, children start to consciously express and verbalize their own difficulties and problems or suggest topics for further discussion during the lesson. This stage, which includes reflecting and thinking, should result in mutual plans for the ongoing lesson or for future lessons.

The next stage should be to allow the child to complete exercises independently in order to establish the child's zone of proximal development in chess. The student may complete the exercise independently before the lesson instead of doing it during the lesson. It is important to stress the child must complete the work independently and no sign of others' help should be encouraged. In case the child completed an exercise with someone's help, it is highly recommended to find out which part did the child complete with no help and which part caused difficulty, what type of help did the child require and how did he receive it. Finally, find out how efficient was the help. When the teacher or educator does not follow these guidelines, there is always a risk to evaluate the student's actual abilities incorrectly and falsely understand the limits of the student's abilities. It is therefore important to share an understanding of the great value in individual work done independently with the students' parents and see it as a necessary condition for the child's development.

A student may make mistakes when working independently or find the work substantially difficult (which should occur in case the exercises the teacher chose are the right ones and fit the student in terms of difficulty, level and/or achievability). The adult and the child have a good reason to work together when the child encounters difficulties. The child may try to solve some problems together with the adult in order to learn and become more experienced.

The adult should help the child to reflect and analyze what the child has done already. This includes consciously grasping the difficulties or mistakes made; helping to create a connection between the mistake and the way towards solving the problem. The adult should help the child notice the disadvantages of the previous solution and come up with new methods to solve the problem together, test the new solution and see whether it works. The adult may offer different exercises to achieve this, causing the child to test the solution and see whether it is good enough. In case the new solution does not work, the student should continue to improve it. In case it works – the teacher can suggest the next exercise. In order to finish working on a solution the student and teacher should document it so that it remains fixed in the actual form the child may use in the future, rather than just becoming part of our unreliable memory. The teacher should not waste time memorizing in particular, since involuntary memory, as work by P. I. Zinchenko shows, is a lot more efficient than voluntary memory (Zinchenko, 1961). The scheme, which should conclude the lesson, is similar in structure to its beginning. The individual lesson should end by reflecting upon the lesson.

When one examines the structure of a group lesson, one sees that all stages mentioned here, regarding the individual lesson, are also true regarding the group lesson. A group lesson requires the teacher to face the class as a whole as well as every individual in it. Teachers often argue against this view, claiming it is not possible to achieve. It is true in case the lesson plan is traditionally structured, making the whole class do the same exercises, understand and implement the same topic. However, this type of lesson has disadvantages examined here and entails possible negative outcomes, effecting groups of children. It is possible to read more about structure and lesson plans looking at examples

of math lessons in N. A. Antonova's (2013) article. Her experience can definitely be useful and implemented accordingly when planning chess lessons.

It is possible to make planning easier by dividing the class into groups of 12-15 students. It may also be useful to divide the groups according to students' level of understanding of the game of chess.

The teacher will acquire very meaningful assistance in case he or she decides to work with another teacher or psychologist (V. K. Zaretskii & Gilyazov, 2016). Some reasons to support this are:

1. working together in every given moment throughout the lesson, the teachers are able to maintain two important processes vital to their success: processes of operational and reflective control. One teacher is always observing, ready to become an active participant when necessary, get involved in case it seems the other teacher should change something, and introduce corrections;

2. The teacher may not be teaching the entire class, but he or she may offer additional help to individuals or small groups who cannot keep up and require an individual approach. The teachers may divide the class when the need arises, creating several groups. Each group is free to work on different exercises;

3. Complex situations may occur during class, requiring creative thinking and searching. Situations of this sort make the presence of two adults extremely important. Two adults can solve a problem requiring creative thinking in a highly efficient way, six times more efficient than one adult (Y. V. Zaretskii, 2014);

4. Having another teacher in the classroom allows reflecting and evaluating faster during the lesson. The concluding part of the thought process improves in quality as well.

An important part of working in a group, where it truly differs from individual work, is the possibility to organize pairs or small groups of students during the lesson. Dividing the class provides the following advantages:

- It is possible to give students differentiated exercises (sorted by themes or according to difficulty level), organizing the most efficient tasks for each group of students.

- Each student may get the chance to express oneself as part of group work.

- Children can try out new roles (be the teacher, the assistant, the consultant) in the classroom. They can now learn more than the lesson itself. They can practice giving the help in similar ways to those in which they received it from the teacher. The students' experiences may also become a valuable resource for development and reflection.

2. The computer program "Chess for Overall Development"

The computer program, "Chess for Overall Development", was planned and realized as a current technological version of the ideas and methodological concepts making up the methodology of the same name. A crucial part of the planning process was the program's compatibility with the principles of the reflection and activity approach. The program, created as a powerful, resilient and convenient instrument, allows each student to progress along an individually constructed developmental path. Teachers using the program can quickly and accurately understand and define the limits of the zone of proximal development.

The program is a web application. The address is http://chess-od.com. It works with any computer, assuming it has a browser and a stable Internet connection. Working with the program does not require additional resources, other than the browser. The program offers the user a wide array of functions and is equally user friendly for teachers and students. The chess problems in the program are also adapted to fit the user.

The program's menu consists of:

- Student

- Teacher

- System

- Language selection

The sections "Student", "System" and language selection are available for every user whereas the section "Teacher" is only available to registered teachers. The following is a detailed overview of each section.

3. Student's Menu

The section for students becomes available after entering the "Student" section in the menu. It consists of the following segments:

- Stage 1 - Problems for identifying a square on the chessboard

- Stage 2 – Problems for identifying a line on the chessboard

- Stage 3 – Problems for identifying square configuration

- Stage 4 - Problems for identifying a square where lines intersect

- Stage 5 – Mate-in-one problems

- Stage 6 – Mate-in-two problems

- My Progress

- Manuals

- Rules of Chess

The following is a brief overview of the content in each of these segments.

The six stages are part of a set of problems for the student. The first stage is an introduction and the problems it deals with fit young children, as well as for children diagnosed with intellectual disability. The sixth stage includes problems, which may challenge chess masters when they reach its most complicated part.

The main idea connecting all stages is the gradual change in complexity, advancing from simple to complex problems. The different stages are interlinked, making a clear, direct logical connection between stages.

Each of the stages includes subdivisions. Each stage includes a certain number problem types. Each type offers the user several levels to choose from when solving the problem. This structure allows the student to choose from a list of 167 levels of complexity when learning the material. However, the student can advance to the next level only after completing all tasks on a given level successfully.

The main idea behind the structure of each stage is problem solving which gradually increases in difficulty, ranging from simple to complex. Every new stage is always harder than the previous stage. Having said that, it is important to note all stage types are interlinked by the same general idea: problem solving should gradually transform. The student should gradually stop solving problems on the material plane (when it is offered that the student uses an entire array of learning aids) and gradually begin working in the "ideal" plane, having a mental image of the problem (without the use of additional material; furthermore, the student sees nothing on screen but a white square, symbolizing the chessboard).

The following is a brief overview of the unique features each of the six stages contains.

"Stage 1 - Problems for identifying a square on the chessboard" are the simplest set of problems. This is, basically, an introduction. This stage offers the user four types of problems:

I. Square colour (including 8 levels of difficulty)

II. Square name and colour (including 5 levels of difficulty)

III. Piece's position (including 4 levels of difficulty)

IV. Configuration of squares (including 6 levels of difficulty)

The problems of the first stage are for students who need to understand the chessboard's structure, the system establishing names for each square, the knowledge required to use the system and determining the color of a square by its name. Problems of the first type offer finding a specified square on the chessboard (e3, for instance) and determine its color (e3 is black). The second and third types require solving the same problem from an opposite perspective and determine the name and color of a specific square already indicated on the chessboard. The fourth type requires that the student enters a series of names of four squares, according to a specified color (black or white).

"Stage 2 – Problems for identifying a line on the chessboard" is where the student learns about the lines on the chessboard. The student should understand terms such as "file", "rank" and "diagonal". This stage consists of three types:

I. Files and ranks (including 8 levels of difficulty)

II. Longest diagonals (including 2 levels of difficulty)

III. Long and short diagonals (including 8 levels of difficulty)

The names correlate with the functions of these types. The first type allows the student to understand and use files and ranks on the chessboard. The students should be able to determine a file or rank crossing a specified square. The student should then determine all the squares, which make up a line (for the first and second levels), followed by determining the first and last squares of a line (on levels 4-8).

Upon reaching the third level within the first type of problems, the student is offered to take a test. It is composed of four questions to begin with, regarding files and ranks. A certain part of these questions has more than one correct answer. The fifth question documents the student's self-evaluation and offers the following options, when answering the question "In your opinion, did you do well on the test?":

- Badly

- So-so

- Good

- Perfect

After the student completes this test, the program displays an objective evaluation of the test scores, compared with the student's subjective evaluation. In case the test score is evaluated as "Perfect", the program allows the student to begin the next level (however, in case the score is lower, the test should be taken again).

The second and third type of problem is analogous to the first type, however, the theme is the "diagonal" line and the knowledge required to work with it. The student

tries to specify the longest, long or shortest diagonal line, crossing a specific square on the chessboard, indicating all squares of the diagonal or just the first and last square.

On the third level of the third type of problems, the student is required to answer thirteen questions, testing the student's understanding of the concept "diagonal" and of the quantity of squares each diagonal line on the chessboard contains. The last question in the test documents the student's self-evaluation.

"Stage 3 – Problems for identifying squares configuration" is a more complex version of the same problems, showing the idea of increasingly difficult tasks in practice. This stage consists of three problem types:

I. Orienting oneself within the space of the chessboard (including 5 levels of difficulty)

II. Ability to see squares configuration (including 8 levels of difficulty)

III. Tracing how a piece moves (including 5 levels of difficulty)

Each level of the first type includes eight steps. Each of the steps may consist of the following problem types:

- Squares at the center of the chessboard (white squares only, black squares only, all squares)

- All the white squares or all the black squares where white pieces are in initial position

- All the white squares or all the black squares where black pieces are in initial position

- All the white squares or all the black squares on whites King's or Queen's flank

- All the white squares or all the black squares on blacks King's or Queen's flank

- All white diagonals amounting to a specified number when counting squares (2-8)

- All black diagonals amounting to a specified number when counting squares (2-8)

- All diagonal lines on the chessboard amounting to a specified number when counting squares (2-8)

Problems of the second type help the student understand which squares are controlled by each piece on the chessboard in accordance with the piece's location. Every level of difficulty within the set of second type problems consists of six steps. Each step revolves around a single piece. For example, the student should specify which squares the Knight controls, in case it is on square e5.

Upon reaching the third level of the second type, the student goes through a test on the way the chessboard functions, on understanding squares, controlled by various chess

pieces when located on different squares. All questions in the test are mirrored in previous problems the student has already solved without a single mistake. The test's final question documents the student's self-evaluation.

Every level of difficulty within the third type consists of six steps. Each step revolves around a single piece. The student should trace a series of moves. Each piece moves four times per series, while the program requests indicating the next square. Here is an example of a possible problem:

"Place the white Rook to d4. Imagine that during the game Rook made 4 moves:

1. to the right to 2 squares
2. upwards to 4 squares
3. to the left to 3 squares
4. downwards to 1 square

Trace the piece's path, mark the squares that the piece passes with a green chip, click on the virtual keyboard to enter their names and colour".

"Stage 4 - Problems for identifying a square where lines intersect" is a transitional stage. It is designed to help the student move away from solving developmental chess-alike problems to solving real chess problems. This stage consists of the following six types of problems:

I. Safety of the squares in the starting position (including 4 levels of difficulty)

II. Checking the King (including 8 levels of difficulty)

III. Defending against check (including 8 levels of difficulty)

IV. Ways to attack the opponent's pieces (including 8 levels of difficulty)

V. Ways to defend from an attack (including 8 levels of difficulty)

VI. Double Attack (including 8 levels of difficulty)

Problems of the first type are there to teach students how to recreate initial position in chess, showing the number of pieces defending each of the pawns. The fourth level of difficulty for problems within the first type is a test. The student should answer four questions, regarding the initial position in chess and the student's understanding of how pawns are defended. The test's final question documents the student's self-evaluation.

Problems of the second through sixth types are real chess problems offering the student problems in accordance with the name of each problem type. In each of these types, the

student gets a demonstration of a position on the chessboard. The position is shown to the student for a limited amount of time, depending on the number of pieces. The amount of time has been determined by way of experiment. The average amount of time required to remember a position is six seconds per piece, in case the person remembering is a healthy adult. Therefore, a position including four pieces is shown for 24 seconds, whereas a position including 13 pieces is shown for 78 seconds. When the time elapses, the position is no longer visible. When working with problems on levels 1-3, the student should recreate the position shown to him and make the right move (threatening the opponent's King with check, for instance). Levels 4-8 require making the right move at once.

"Stage 5 – Mate-in-one problems" consists of three problem types, each of 8 difficulty levels, divided in accordance with the difficulty level of each step:

I. Elementary problems

II. Difficult problems

III. Advanced problems

The logic required to solve these problems is analogous to types 2-6 of the fourth stage. The student should try to remember the position when working on levels 1-3, recreate it and place the pieces on the chessboard, then make a mate-in-one. Levels 4 and higher require remembering the position and then making the right move for a mate-in-one. Let us note that a specific problem on the fifth stage may have more than one correct answer. In this case it is necessary for the student to show all the correct answers.

"Stage 6 – Mate-in-two problems" consists of five problem types. Each type consists of 8 difficulty levels:

I. Elementary problems

II. Problems for various defenses

III. Problems for various attacks

IV. Difficult problems

V. Advanced problems

This stage is similar in structure to the previous stage, having levels 1-3 repeat position recall, recreation and, finally, solving the problem. Levels 4 and higher require remembering the position and solve the problem immediately. The problems in this stage differ from the fifth stage since they are mate-in-two problems. They require that the student predetermine the first move, the opponent's move and the final move, ultimately reaching checkmate.

The structure of the process is similar to mate-in-one problems since mate-in-two problems may also have several correct answers. The student should indicate all the correct answers. This stage has some problems with up to eight possible ways to develop the initial position, meaning that there are eight possible answers. The student needs to indicate each answer in turn and only when all possibilities are taken into account, the problem is solved.

In addition, stages 5 (Mate-in-one problems) and 6 (Mate-in-two problems) include a system of interactive help. The system is available for use in case a student encounters difficulty solving the problem. The system is a list of nine questions, reflecting on different ways to solve a specific problem. Each question allows the student to submit several possible answers. These answers are then marked true or false. After answering the questions, the student may choose to either continue working on the problem or stop trying. If the student decides to stop, the program offers to show the student the right move, which was not reached during the learning process, or to solve the problem later without seeing the answer.

When the student chooses **"My Progress"** from the menu, the program offers a detailed problem-solving history for all six stages. The student can review the information independently or with the teacher, note the date and time, see how much time it took to answer specific questions, review mistakes, test results and compare the program's objective evaluation with self-evaluated results. Finally, the student may see which problems are solved and which are unsolved.

When the student chooses **"Manuals"**, the program offers detailed manuals for each of the program's six stages. Instructions include illustrated descriptions, explaining the aim of every problem and nuances having to do with problem solution.

The last item of the "Student" menu is **"Rules of Chess"**. It includes a brief illustrated list of rules, descriptions of each piece (and possible moves with each piece), possible outcomes of various games and, finally, special moves (such as castling, en passant and promotion).

4. Teacher's Menu

The teacher has to register in order to start working with the program. Necessary fields are: teacher's name, city and country of residence, email address, and unique password. After receiving a confirmation email, the teacher may enter the program.

The teacher's menu consists of the following items:

- My Profile

- My classes

- Manuals

The teacher can view and edit his/her own profile under the "My Profile" item, changing the name, city, country and password required to enter the program when necessary.

The methodology assumes the teacher is working with children at school and so it offers the options required for this type of work. The menu item called "My Classes" allows the teacher to create virtual classrooms, adding students when needed. In addition, the teacher can add other teachers to the class since the methodology assumes teachers will work in pairs or even bigger teams. The teacher can edit each class, changing its name, for instance. It is also possible to transfer a student from one class to another. Furthermore, it is possible to delete the records of students who stopped attending classes.

As it turned out, registering the students is a real issue. The usual registration process assumes the user has an email address. But there are two problems here: the teacher should be able to follow the students' progress and control their work using the program and most young learners in the elementary school do not have an email addresses yet. To solve these problems, the teacher should add every pupil manually to the virtual classroom, and the program creates a unique key for each new student upon adding. The students identify themselves using this key within the system and their teacher is able to track their progress.

The **"System"** menu item includes the following:

- Contact Us

- About the Software

- Share your Feedback

The first and second parts of this menu are clear as they are. The third, "Share your Feedback", offers the user a form to fill out, consisting of seven closed questions and one open question. The teacher is requested to evaluate the program, provide impressions and feelings regarding program use and, in case he or she wish to do so, send any requests or comments to the program developers.

5. Initial Results of Computer Program Approbation

The program "Chess for Overall Development" is currently undergoing approbation testing. It is happening in many schools, colleges and universities throughout Moscow and other Russian cities. The users testing the software are school students (grades 1-11), university students and teachers. The software is also undergoing tests in a home for mentally disabled people, in a rehabilitation center for seriously ill children, and in RCCH (the Russian children's clinical hospital), focusing on children with severe somatic disorders going through long periods of treatment. The program also has users located outside of Russia. The following information is a summary of the observations the developers made while testing the program.

In our experience, the program is very popular among school students. The younger the students, the more enthusiasm and amazement it makes the students feel. Many students from grades 1-3 happily attend chess clubs at school, where they use the program. Some of these students signed up for chess club willingly, after asking the school administration to participate. Other students arrive spontaneously, drawn to the chess club by their classmates who already attend. Some children attend the lessons every time, whereas others attend irregularly.

The youngest groups of children attending these lessons always create a dynamic, emotional atmosphere in the classroom. Children are interested and engaged in learning with the program, not hiding their feelings. Their emotions range from great happiness when they succeed in solving a problem to deep sorrow when they fail.

Some of the youngest learners, including first grade students, show independence and persistence when they overcome difficulties, refusing the teacher's help and eventually succeeding. Other children make the most of the convenient psychological atmosphere to interact with the teachers and their assistants. These children ask for help in solving the problems they are truly and clearly capable of completing without help. The majority of children do not fit into these groups. Most children function in their zone of proximal development and request the adults' help only when they are not capable of solving the problem themselves.

The approbation process involving the youngest learners resulted in some unexpected problems for the developers. It turned out some students do not know the beginning of the ABC and cannot repeat its beginning (letters A to H). This makes solving even the simplest problems in the introduction stage impossible. Studying the letters using a wooden chessboard and remembering them did not bring the desired results because the chessboard has uppercased letters marking the squares whereas the program uses lowercased letters. The children learned the capital letters, finding the right square on the wooden chessboard with relative ease. However, when they had to adjust to the change in letter case, they experienced great difficulty.

In addition, another serious obstacle was the children's low level of Russian language. Some students were not able to read. These children are capable of strong logical thinking, but are not able to complete the simplest tasks because they cannot read and therefore understand the instructions.

Children who knew the ABC and could read the instructions (even if they read slowly or divide words by syllables) made normal progress, as expected by the program developers. Each student progressed according to his/her own developmental path, requesting an adult's assistance when necessary.

It is also interesting to add that the lessons involving the youngest learners within the framework of various chess clubs resulted in several discoveries made by the children themselves. One of the popular practical tasks, for instance, turned out to be drawing a scheme of the chessboard on checkered paper. This task was not a part of the methodology

or the computer program. This specific task also revealed itself as flexible. It is possible to alter the level of difficulty, according to developer's logic, making it harder and harder to complete the task. The children start by simply drawing a grid of any size. They proceed to compare the drawing with the wooden chessboard and create a version of it on paper. They draw a scheme consisting of 64 squares, checking the original board all along. At the end of the process, they color the squares accordingly, adding letters and numbers. This type of task could potentially be completed without an actual chessboard, using one's memory alone. Another observation is that children sometimes shift from solving problems in "Chess for Overall Development" to solving them on an actual chessboard. Sometimes, the students make the shift from using the software to playing an actual game with an opponent (teacher or student) or the computer, using a built-in chess program.

The chess clubs participating in the program also have groups for middle school students as well as for high school students who use the program. Lessons with these children show different emotional dynamics. Students of these age groups mostly tend to focus on their work just like adults. They are not as emotional as the younger children are and tend to aim at success. They go through first stages of the program faster than the younger children do, but playing an actual game of chess is as popular among them as using the program.

College students form the third group of testers. The program's developers were surprised to find that they too have occasional difficulties solving problems of the first few stages. One young college student tried solving the test belonging to the second stage repeatedly, for a long time, with no result. He failed every time. The test involved answering questions about diagonal lines. He was amazed when, following his teacher's advice, he closely examined the structure of the chessboard and found that the chessboard lacks one central square, and the amount of diagonal lines of the same color is an odd number!

For this moment approbations are in progress and final results and conclusions have not been processed yet. However, it is already clear that the "Chess for Overall Development" program matches expectations very well. The users' experience results not only in better knowledge of the game of chess, but also in improving students' overall development. It is particularly evident when examining users who regularly work with the program (at least once a week for several months). The program developers noticed that when these users, regardless of their age, continue using the program regularly they improve spatial cognition and memory as well as their ability to compose mental images of possible actions. Some of these users shared their experience willingly, initiating contact, stating that their abilities and ways to deal with difficult situations in life have changed because of the program. They use skills learned while using the program to solve problems in other areas (not related to chess or education at all) and that, in the developers' opinion, is the key indicator showing their overall development. The developers are currently working on creating and integrating a system of psychological diagnosis into the program so that it becomes possible to document the changes mentioned above objectively.

References

Alekseev, N. G. (1990). Shakhmaty i razvitije myshlenija [Chess and cognitive development]. In *V knige shakhmaty: nauka, opyt, masterstvo [In Chess: Science, experience, mastery]* (pp. 41–53). Moscow: Vysshaya Shkola.

Galperin, P. Y. (1966). Psikhologija myshlenija i uchenie o poetapnom formirovanii umstvennykh dejstvij [Psychology of thinking and stage-by-stage formation of mental actions theory]. In E. V. Shorokhova (Ed.), *Issledovanija myshlenija v sovetskoj psikhologii [Cognition research in soviet psychology]* (pp. 236–277). Moscow: Nauka.

Zaretskii, V. K. (2013). Traektorii razvitiya predstavlenii o refleksii i ikh ispol'zovanie v praktike organizatsii resheniya problem [trajectories of development of the notions of reflection and its applications in the practice of organised aid in solving problems]. *Psikhologiya v vuze [Psychology in Higher School]*(4), 55–97.

Zaretskii, V. K. (2016). Odin shag v obuchenii – sto shagov v razvitii: Ot idei k praktike [Vygotsky's Principle "One step in learning - One hundred steps in development": From idea to practice]. *Kul'turno-istoricheskaya psikhologiya [Cultural-Historical Psychology]*, 12(3), 149–188.

Zaretskii, V. K., & Gilyazov, A. (2016). *Shakhmaty dlya obshchego razvitiya. rabochaya tetrad' dlya zanyatii shakhmatami [Chess for general development. A workbook for chess studies].* Moscow: «Raikhl'» Publisher.

Zaretskii, V. K., & Gilyazov, A. (2017a). *Chess for overall development. The educator's guide to teaching chess in primary school, volume 2.* Moscow: Otto Reichl.

Zaretskii, V. K., & Gilyazov, A. (2017b). *To development through chess: reflection and activity approach. The educator's guide to teaching chess in primary school, volume 1.* Moscow: Otto Reichl.

Zaretskii, Y. V. (2014). *Sub'ektnaya pozitsiya shkol'nikov po otnosheniyu k uchebnoi deyatel'nosti v raznykh vozrastnykh periodakh [Schoolchildren's position of agency towards the learning activity in different ages.* Moscow: Ph.D. (Psychology) Thesis.

Zinchenko, P. I. (1961). *Neproizvol'noe zapominanie [Involuntary memory].* Moscow: Izd-vo APN RSFSR.

Play and Toy in the frame of Cultural-Historical Psychology

Elena O. Smirnova   SMIRNEO@MAIL.RU

Moscow State University of Psychology and Education
Moscow, Russia

Abstract

The intention of this paper is to show the specific of L. S. Vygotsky's approach to child play and toy as the tool of play. Vygotsky paid special attention to pretend play the essence of which consists in a divergence of the imagined and real situation. Such play promotes the development imagination, thinking, self-control, voluntary behavior, self-awareness, social interrelationship, emotional intelligence. The main tools of a children play are toys. Functions and characteristics of toys are presented. It is indicated that the good toys should be open for various actions and the ideas of the child. However the majority of modern toys are equipped with technical devices which don't allow the child to show his/her own activity. Playing with such toys comes down to a putting buttons that unlike a pretend play doesn't develop the abilities in the child. Tech toys, and electronic games present a new developmental situation and it is necessary to study the impact this kind of activities have on the development of young children. In the last part of article criteria of psychological examination of toys are presented.

Keywords : Play; Pretend play; Imaginary situation; Traditional toys; Tech toys; Child development; Child's activity; Psychological examination of toys.

1. Play as leading activity in preschool age

L. S. Vygotsky is the founder of theory of play as leading activity in preschool age. The cultural-historical approach to children's play is part of Vygotsky's general theory of the origin and development of the higher mental functions. It should be noted that he studied a special kind of play – pretend one. Vygotsky advanced the view that pretend symbolic play is the ***origin of consciousness development in preschool age***. It should be pointed out that Vygotsky differentiated between the predominant and leading forms of activity: the predominant activity is the one that takes up most of the time, while the leading activity is the one which determines mental and personal development. Play may not be the predominant form of children's activity; however, it is during play that the main new mental formations emerge during the period 3 to 7 years, and that is why it is the leading activity (Vygotsky, 2004, 2005).

According his theory the main sense of child play is the ***imaginary situations***. Imaginary situation is the main specific property of pretend play distinguishing it from any other activities. Imaginary situation exists in the child's practical play actions (individual or joint) rather than in his/her imagination. It is a simultaneous holding to both real and illusory situation. The child's actions are determinated by his/her ideas, rather than real visible objects. Due to these characteristics of play, it serves as a base for the effectively develop creative imagination, image thinking, self-awareness, etc.

Vygotsky (following K. Lewin) emphasized that until the age of three the child is totally dependent on the situation. This dependence on the perceived field reveals itself both in the child's actions and utterances. Vygotsky believed that this dependence on the situation resulted from the unity of the affect and perception (Vygotsky, 2005). Perception in early age is the initial point of the ***affective-motor reaction***. It is interesting that Vygotsky, unlike Piaget, did not analyze the sensory-motor, but the affective-motor reaction, in which perception and action relate through affect. Since a situation is always given in perception and perception is not separated from affect and, consequently, from movement, the child is dependent on the situation in which he/she finds him/herself.

After three years of age, in developed forms of play activity, the child demonstrates a totally different and even contrary type of behavior. The child does not act in a visual situation he perceives but in ***an imaginary situation in his mind***, ascribing names and functions to objects, that are totally uncharacteristic of them. According to Vygotsky, the ***creation of an imaginary, make-belief situation is the key element of play***, which sets it apart from other kinds of activity. He defined the main characteristic of child play as the ***divergence between the real and imaginary situations***: "A child in a play starts acting "not from an object but from a thought", not in a real but in an illusory, imaginary situation" (Vygotsky, 2004, p. 210). Due to these characteristics of play, it serves as a base for the forming and effectively developing the major new characteristics of this age period facilitating the buildup of consciousness and the internal plane of action as specifically human features (Elkonin, 1978).

But the questions are: How certain objects in play are replaced by others (i.e., to study the special features of play symbolism), and, secondly, What enables the child to use objects "symbolically" in make-believe situation. So, we should to consider the genesis of the symbolic function.

It is well known that J. Piaget was the first to pose the problem of symbolism in play. He linked it to the development of representative intelligence, believing that the main precondition for this was the emergence of a symbol, i.e., the relation between the signifier and the signified. However, Vygotsky rejected such approach which, in his view, could result in an intellectualistic understanding of play. He wrote, "If play is understood as symbolism, it is thereby turned into a system of some signs generalizing objective reality which no longer has anything specific for play" (Vygotsky, 2004, p. 215). Play is not cognitive or intellectual activity; it is the child's *practical activity* and it is always connected with his real (not symbolic) affects and emotions. The transition from natural to mediated action is made *when both the intellectual and the affective are at work*.

The basic characteristic of pretend play is object substitution. Considerable number of objects can be used to replace others. However, there are certain limits to the use of objects in play that at first glance appear to be the result of the outward similarities between the signifier and the signified. What determines these limits? Vygotsky's experiments provide a preliminary answer to this question. During an experiment, child were requested to participate in a tongue-in-cheek play of supplying new names to familiar objects. For example, a book was used to designate a house, keys – children, a knife – a doctor, a pencil – a nurse, etc. A simple story with these objects would be shown to three-to-five-year-old children, for example, a doctor came to a house, where a nurse opened the door for him; he examined the children and gave them medicine, etc. It turned out children had no difficulty in following the plot and that the similarity of objects did not play any important role in reading this "object notation". The main condition was that objects allowed certain *actions* to be performed with them. Children rejected objects only when they could not be used to make the required gesture or action. This study raised the problem of the function of activity in establishing the *relationship between word, object and action*(Vygotsky, 2005). It should be emphasized that imaginary situation in play *exists in the child's practical actions* (individual or joint) rather than in his/her mind. It is important that at first kids *act* with an objects during playing in a substituting manner and only later give it a new play name. In early stages of the development of play (as distinct from its subsequent phases), the child is unable to perform an appropriate action with an object, before he/she gives a new name to it.

2. Functions of toy in child's play

The postulate that signs as cultural phenomena are media or tools of man's internal psychological activity is pivotal to Vygotsky's cultural-historical concept (Vygotsky, 1982). By analogy with work tools signs are psychological tools used by person to build own inner world and to organize his/her own behavior. According to Vygotsky, the specificity

of human behavior is that it involves sign mediation. The main function of signal tools is to objectify one's own behavior by transforming it into a special object, separate from man. This behavior no longer 'coincides' with the subject of activity and thus enables its cognizance and control (self-regulation).

Speech is the most universal system of signal instrumental media. That is why, according to Vygotsky, the development of speech mediation is central to the child's mental development. Speech is of universal importance in liberating man from the pressure of the existing situation and making him behave consciously (Vygotsky, 1984).

However, speech is far from the only means of taking cognizance and therefore control of one's own behavior. Different models, rules or ways of acting can also serve as such media. Children begin to act consciously and deliberately when their actions are mediated by an idea of 'how they are to act'. Such mode of behavior can be set in the form of a general rule or play role or else the behavior of a concrete person. A role as a mode of behavior includes instrumental function. It is important, because it becomes a model, with which the child can compare his behavior. By comparing it with the model the child becomes cognizant of his own behavior and takes a certain attitude to it.

It can be surmised that toy has a function of psychological tool (Smirnova, 2011).

Toy is the most traditional cultural tool created by adults to develop children. Toys promote children's learning about the world and themselves, realizing their creativity, expressing feelings and communicating. Nowadays toys of a new generation differ greatly from the traditional ones become very popular. That's why it is very important to understand their impact on the children's development and to evaluate their developmental potential.

The theoretical basis of the toys' evaluation is a cultural-historical and activity approach to mental development. According to this approach, the essence of ontogenetic development is the assimilation of cultural and historical experience in the course of child-adult joint activity (Vygotsky, 1984). Mastering this experience takes place in the child's culturally adjusted activity that ensures the transfer from inter- to intrapsychical form, encouraging the appearance of new individual psychic and personal features. Each type of child's activity is realized with the help of certain means conducive to mastering various aspects of cultural experience, at first in joint activity with adults, and later in the independent activity of a child. Toys are the only accessible cultural means that can be used for *independent* activities at an early age, creating the zone of proximal development.

Independent activity of a child with a toy is called as "play". Talking about toys, we have in mind two meanings of the term "play". In the wide sense, play is any child's activity with toys or play material. In the narrow sense, play means creation of a conditional imaginary situation with toys or without them.

Play activity of a child may be considered as a special form of transfer and mastering of cultural experiences that reflects the peculiarity of children's life in society. This means

toy is a specific psychological mean that objectify the tasks of psychological and personal development at all age periods. The main requirement to a toy is an ability to expand those types of activities that contribute the most efficient stimulation of the leading activity.

The tasks of mental and personal development and the means provided for this purpose are different and have qualitative specifics for each age period.

At the same time, the main function of toys for all stages of child development is *to encourage age-appropriate child's activities*.

Toys are the main attributes of child play and for creation imaginary situations. Two crucial processes centering on toy take place simultaneously. On the one hand, the child *expresses him/herself* – his (her) knowledge, emotions, moods and events of life. By observing how children play one can understand their inner world and what is bothering them.

On the other hand, when playing, the child *masters the world* of human relations and ideas, in which he/she lives. Toys always reflect the world outlook of those adults, their ideology, tastes, fashion, etc. They are the special psychological tools for a child's education. A 'dialogue' with a toy (especially with a doll) is an important phase of the development of inner dialogue, which will subsequently transform into inner speech, a chief means of human thought and consciousness.

This implies requirements on the quality of the toys. It should adequately reflect reality (both material and idea), and be open for inner world of child.

A good toy ought primarily to be open *to the different actions and emotions of the child*. Toys should make it possible for children to impart their own activity – their voices and movements - to it. To remain being media, toys should not impose themselves nor suggest concrete actions. Only this way can toys become psychological media rather than merely an object of manipulations.

Role attributes as specific things should likewise not monopolize the child's attention. They are needed to enable children **to feel** they are somebody else and to retain that feeling rather than to impress or surprise. Their function is to become conventional yet commonly recognized role **signs**.

For the child to get the meaning of relations between people, play activity should be conventional and open for conditional meanings. The more detailed is an action in practice, the more compressed and subconscious is the role relations plan. In child play the conventional or detailed nature of a practical action largely depends on whether the toy is simple or complex, realistic or not. For this reason, objects used in role-playing should not be actual copies of real things. They do not monopolize the child's attention but allow to use them instead of the conventional designation of things. The fact that play actions are generalized and contracted (i.e., made conventional) shows that the inner plan, that

is, relations between people and their emotional experience, has become important to the child.

Unfortunately, the majority modern tech toys are closed for kid's mental and motor activity.

Toys are becoming self-sufficient, automatic things. Whenever toys have intricate technological equipment and impose certain modes of acting, they inhibit not only imagination in children but also their ***inner psychological life***. Such toys dictate children what to do with it.

Dolls can talk by themselvs, sing, dance and so on. Instead of stimulating children to play, such toys encourage them to consume toy qualities. As a result the child becomes a toy accessory guided by the toy instead of the other way round.

Our observations and studies showed big differences of playing with traditional and interactive toys. When children play with tech toys, the game is reduced to pushing buttons and observing the actions of the toys. "Program" embedded in an interactive toy changes the nature of the play: reduces the initiative and variety of play actions, speech activity of children and their interaction. So our presumption is that necessary condition for kid's play activity is toys "inactivity", i.e. the lack of technical equipment (Smirnova, 2011; Smirnova, Salmina, Abdulaeva, Filippova, & Sheina, 2008).

But adults by making the task easier for children and confining their play to monotonous stereotype movements, limit their capacities for independent meaningful actions and therefore inhibit their development.

Tech toys have become increasingly popular. Parents consider them to be more modern and useful than the traditional "passive" toys. Tech toys, and electronic games present a new developmental situation and it is necessary to study the impact this kind of activities have on the development of young children. So, the task to evaluate the developmental qualities of particular toys arise.

3. Psychological examination of toys

The psychological examination of toys is realized in Play & Toys centre of MSUPE. This examination is based on Vygotskian theory – on the possibility for toys to become a real psychological tool (Smirnova, 2011; Smirnova et al., 2008). Psychological and pedagogical evaluation of toys take into account not only their aesthetics properties, but the potential psychological effect on child's development is especially important. Such examination must base on impersonal, scientific criteria for assessing toys' potential impact on child's development.

Let's shortly describe the main aspects of psychological examination of toys. The examination includes three steps.

The first one is the ***motivational basis of the play***, which is corresponded with the attractiveness of toys for the child. It should make child to act and provides the motivation of play activities. Interests and tasks of the adult (toy as a mean of education) and a child (toy as a tool of play) are crossed in the toy. On the one hand the toy should encourage education and development, to be useful for kid's future, and on the other hand every toy should to be attractive and entertain the child, to bring him the pleasure of the moment. In order to stimulate meaningful children's toy activity a toy should serve the interests of the child, consistent with its needs, be attractive. The attractiveness of toys such as matching the interests and senses of a child is an important requirement for toys that actually encourages independence initiative activity. Only in this case, it makes child to act and provides the motivation of play activities.

The second and the main step is the evaluation of toy's ***developmental potential***. The possibility of toy to become a developmental tool largely depends on the toy's qualities that may facilitate or interfere with their performing their basic function.

Suggestions of activity in toy may be more or less open. The toy should open up horizons for the child's creative and meaningful activity, it should offer a wide range of variants. Objects that presuppose useful yet stereotyped and monotonous actions can be used for exercises and training but not for playing. It is highly important for a developmental toy to be open for varied and actions.

We evaluate the development potential not of toy itself but of play actions with it. Toy as the object of children's play (or tools of activity) determine the character of the play, inspire the direction and the play, in other words, toy orients the child on certain actions. To perform its developmental function a toy should suggest adequate and culturally consistent guidelines for child's play action, that is orientate towards what should be done with it and how to encourage the child to realize the toy's potentials.

As it was noted earlier playing is a free and independent activity. The toy should open up horizons for the child's creative and meaningful activity, it should offer a wide range of variants. Objects that presuppose useful yet stereotyped and monotonous actions can be used for exercises and training but not for playing. It is highly important for a developmental toy to be open for varied and actions.

Developmental potential of toy depends on the character and variability of play action and its relation to the needs and potential of the age. For example, a doll as a person's substitution (partner in pretend play) is always reflects the experience of the child. That is why Barbie for a toddler is too complex: it carries too wide and not yet available for her social context, which will remain unclaimed. At the same time, this doll's image interferes the realization of the actions that the child can understand such as to rock to sleep, feed spoon, punishment for disobedience etc.

A good toy ought primarily to be open to the different actions and emotions of the child. Toy as the object of play orients the child on certain actions. To perform its developmental function a toy should suggest adequate and culturally consistent guidelines for child's play

action, that is, orientate towards what should be done with it and how and to encourage the child to realize the toy's potentials. Suggestions for independent children's actions and their clearness for the child are two indispensable qualities of all developmental toys. They could direct rigid activity or allow child's initiative.

Contents of the play action (what kind of actions can be performed with the toy and for what type of play it can be used) determines the age (age range) in which the toy may have a maximum developmental effect. Play actions should not contradict each other. For example, there are some games are based on material for students (reading, account etc.), but the rules of the game focused on preschool children. As a result, these games are not interested neither small children ones nor students.

The third aspect of examination concern is the **operational basis of play**, providing the possibility of execution of the play action. Toys' operational possibilities contribute to the realization of the developmental potential. The playing material should correspond to practical paying activities because they are realized by the child independently. The purely physical descriptions such as size and weight may also either encourage or discourage the child. The feasibility of practical actions with a toy is also determined by several factors, the toy's durability and its high quality in the first place. These are not purely technical requirements: they are directly related to playing activities and ensure the possibility of playing with a toy. In case the toy corresponds to these criteria, it is noted by a special sign which draws to her attention of parents and teachers.

This examination doesn't forbid anything, doesn't limit the choice of adults, but draws attention of buyers to good toys. It is possible to hope that it can positively influence the choice of parents for really developing toys, and also to understand the relationship between the toys children play with and the abilities children can and do not can develop playing with certain type of toys and games.

References

Elkonin, D. B. (1978). *Psychology of play*. Moscow: Pedagogika.

Smirnova, E. O. (2011). Psychological and educational evaluation of toys in moscow center of play and toys. *Psychological Science and Education*(2), 5–10.

Smirnova, E. O., Salmina, N., Abdulaeva, Y., Filippova, I., & Sheina, Y. (2008). Psychological and pedagogical principles of toy expert assessment. *Social sciences*, *39*(3), 86–96.

Vygotsky, L. S. (1982). *Collected works in 6 volumes. Vol. 2.* Moscow: Pedagogika.

Vygotsky, L. S. (1984). *Collected works in 6 volumes. Vol. 4.* Moscow: Pedagogika.

Vygotsky, L. S. (2004). Igra i ee rol' v psikhicheskom razvitii rebenka. In *Psikhologiya razvitiya rebenka* (p. 200-234). Moscow: EKSMO.

Vygotsky, L. S. (2005). Appendix. From the notes of L. S. Vygotsky for lectures on the psychology of preschool children. *Journal of Russian and East European Psychology*, *43*(2), 90–97.

Subjectness Position Relative to Educational Activities in Different Age Periods

Yuriy V. Zaretskii   YZAR86@GMAIL.COM

Moscow State Psychology and Education University
Moscow, Russia

Abstract

The concept of subjectness position relative to educational activities is considered in the article as one of the central one for the reflexive-activity approach. The author's definition of this concept is given. The main results of the research concerning the attitude to educational activities in different age periods among Russian school's pupils are given, which show that, on the one hand, it is the subjectness position that is extremely important for many aspects of educational activities, but at the same time the Russian pupils subjectness position intensity decreases in the adolescent period. Nevertheless, in Russia there are pedagogical systems that contribute to the development of the pupils' subjectness position.

Keywords : Subjectness position; Educational activities; Subjectivity; Reflexive-activity approach; Junior schoolchildren; Adolescents; Senior schoolchildren; Awareness; Reflection; Educational difficulties overcoming.

Introduction

The recent socio-economic changes taking place in our country and in the world as a whole have brought a shift in the hierarchy of values adopted in society. The attitude for consumption has led to the decrease of the education value and the academic subculture based on cognitive and educational motivation in the youth environment. The appearance of students with low motivation level and the pragmatic subculture predominance in universities is the consequence of the professional identity difficulties, the decrease in the professional development interest and at the same time following the existing family stereotypes and orientation to rapid success without special efforts (Mangels, Butterfield, Lamb, Good, & Dweck, 2006; Rice & Dolgin, 2012).

In middle and senior school classes, the low educational motivation often results in knowledge gaps, a distracted attitude toward the results of their activities, an external locus of control. Teachers call such adolescents difficult, uneducable, deviant.

As an answer to this challenge of time the approaches appear both in national and foreign psychology which are searching for ways to increase the motivation, the subjectum formation and the subjectness position of pupils.

Researchers and experts use different terminology: attitudes, beliefs, self-determination, subjectum, subjectness position (Deci & Ryan, 2002; Engeström, 2006; Griffin, 1997; Mangels et al., 2006; Obukhov, 2010; Yakimanskaya, 1996; Y. V. Zaretskii, 2013; Zukerman & Wenger, 2010). It is interesting that modern researches of the psychotherapy effectiveness (Grawe, 2006) also emphasize the psychotherapist ability to recognize the internal resources of a person to solve the problem as the main condition for successful treatment. That is, the activation of the internal human resources seems to be the key moment in the overcoming of difficulties *broadly speaking (educational difficulties, psychological problems, etc.)*.

In our research, we rely on the concept of the subjectness position and its role in the development process worked out in the reflexive-activity approach for the psychological and pedagogical assistance providing to pupils in the educational difficulties overcoming (V. K. Zaretskii, 2013). The theoretical basis of the reflexive-activity approach was the notion about the connection between education and development in L. S. Vygotsky's cultural and historical concept (Vygotsky, 1984) concerning the cooperation of the child and the adult in the proximal development zone, the arising from the cooperative relationships thesis about the activity of the child himself relative to the activities carried out. The empirical grounds for considering the pupils' independent activity and its reflection as the key reference processes for the provision of psychological and pedagogical assistance appeared during the conduction of Summer Schools in the 1990s organized by the Institute of Pedagogical Innovations of RAE (V. K. Zaretskii, 2013; Y. V. Zaretskii, 2013). Using the example of Summer Schools, it is clearly seen that in the process of educational activities based on the reflexive-activity approach the specific learning difficulties overcoming, the educational activity successfulness increasing as a whole and the sharp increase in educational motivation take place (V. K. Zaretskii, 2001). Initially the idea that an adult and

a child are equal subjects of cooperation was the value-based position, but children at interacting with adults, gradually began to become the subjects of their own educational difficulties overcoming. It is possible to say that the process of subject-subject relations interiorization took place (Vygotsky, 1984).

In the process of their work reflecting the consultants and teachers from the Summer School developed the principles and technologies for provision of assistance in the educational difficulties overcoming based on the supporting of the pupils' "subjectness position" in relation to their (educational) activity. As a result of their own practice reflection in the reflexive-activity approach there appeared the idea that the subjectness position manifested as the **active and conscious attitude to the activity being carried out** which is that internal resource that helps the child to develop in activity in many directions simultaneously (Y. V. Zaretskii, 2013). This notion allowed to reconsider the cases when in the course of the assistance providing in educational difficulties overcoming there were positive changes in the development and subjectum of the child, his self-reflection ability, different cognitive and personal qualities (V. K. Zaretskii & Zaretskii, 2012). The data on the subjectness position in these researches were obtained by the method of participant observation and qualitative analysis of the pupils' learning tasks solving protocols.

The question arose before us: Is it possible to identify and examine the subjectness position with the help of psychological methods? The answer to it seemed to be especially important in the light of the need to develop the operational and convenient methods for diagnosing of the subjectness position as the important resource for the child development. In order to answer this question, we developed our own questionnaire "The Subjectness Position" in accordance with the theoretical concepts concerning this construct (Y. V. Zaretskii, Zaretskii, & Kulagina, 2014), and also formed a battery of four additional techniques that allow to consider features of different age children and adolescents attitude to the educational activity from different foreshortenings:

- the questionnaire for the research of the older adolescents and youngster's educational motivation (Ch. S. Spielberger, adaptation by A. D. Andreeva) (completed by adolescents);

- the method "The Orientation to the Knowledge Acquisition" by E. P. Ilyin and N. A. Kurdyukova (completed by junior pupils instead of the Spilberger-Andreeva questionnaire);

- the questionnaire "The School Situation" developed by V. K. Zaretskii, A. B. Kholmogorova;

- the modified method for the instant diagnosis of pupils' educational preferences (Pakhomova, 2004).

- the modified method of unfinished sentences, the statements themselves are taken from the method of Nutten (2004).

1. The main results of the research
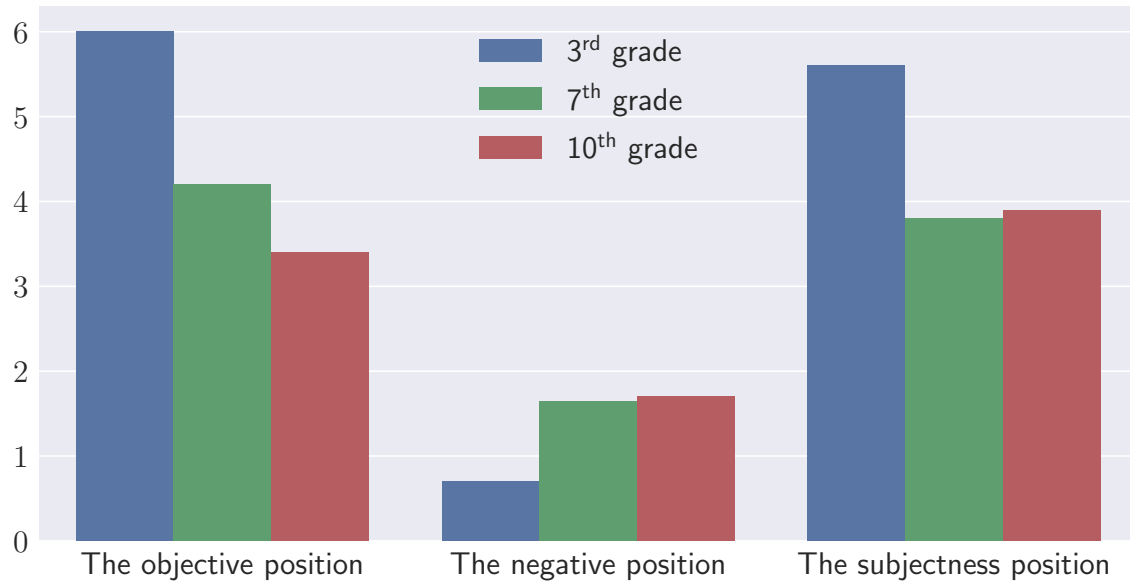
Figure 1. Attitude to the educational activity based on the results of the questionnaire "The subjectness position" of pupils of the 3rd, 7th and 10th grades of general academic schools

From the figure above, it can be seen that the indicators of the subjectness and abjectness' positions are higher in the third grades, while the negative position is more pronounced in the seventh and tenth grades. When comparing the third and tenth grades, it is clear that those trends in the change of the objective position that were observed when comparing the third and seventh grades continue to increase, while the negative and subjectness positions remain practically at the same level.

Thus, it can be seen that the subjectness position is most pronounced in the third grade and its expressiveness decreases to the adolescence after which the decrease stops, but the increase in the tenth grade does not occur.

In order to check whether these changes are related to the age-related patterns, we conducted the research in the physical and mathematical gymnasium, where, on the one hand, the most motivated children are selected, on the other hand, in the process of educational activity the attention is paid to the development of the pupils' subjectness position.

As we see the tendency of changes in the pupils' subjectness position differs from the one we observed comparing the indicators of general academic school's pupils, it remains unchanged throughout the entire period of study. That is, the education built in a special way can encourage the keeping of the active and conscious position with which the child comes to school.
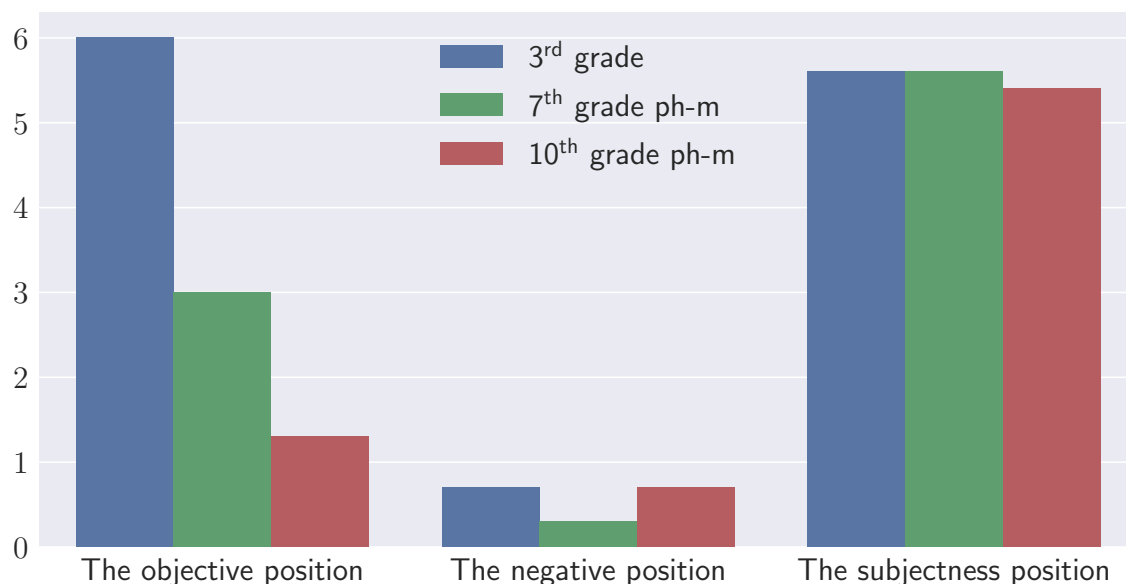
Figure 2. Attitude to the educational activity based on the results of the questionnaire "The subjectness position" of pupils of the 3rd grades of general academic schools, 7th and 10th grades of the physical and mathematical gymnasium

In the context of our understanding of the subjectness position the results obtained can indicate that while schooling the pupils' own activity in the educational activities decreases and awareness and involvement in the educational activities diminish (less and less attempts to blow up difficulties and perform the reflection of their own mistakes). On the other hand, the objective position also falls to adolescence and continues to decrease in pre-adult age, i.e., the willingness to obey the rules, to act according to the teacher's instructions; the teacher's praise no longer has that motivating importance as in the primary school. In addition, the negative attitude towards education is increasing. It seems that the decrease in the objective position could be considered as a positive change, but taking into account the lack of the subjectness position increase and the increase of the negative position, these changes result in indifference or negative attitudes toward educational activities in general. Such indifference when none of the positions is expressed we designated as the "passive position". Using other method, we tried to describe the differences between the indicated positions. For better appearance, let's consider the diagram.

In the vivid form, we see the differences between some of the groups we have examined. The subjectness position looks like some standard – pupils occupying this position have high motivation, they study with interest and meaningfully, they have good relations with teachers, there are no conflicts about studying at home and there is no absenteeism.

The group with the objective position noticeably comes short of the motivation, but in whole it considers the schooling interesting, although the pupils consider the subjects themselves senseless; the relations with the teachers are good, but there are conflicts at
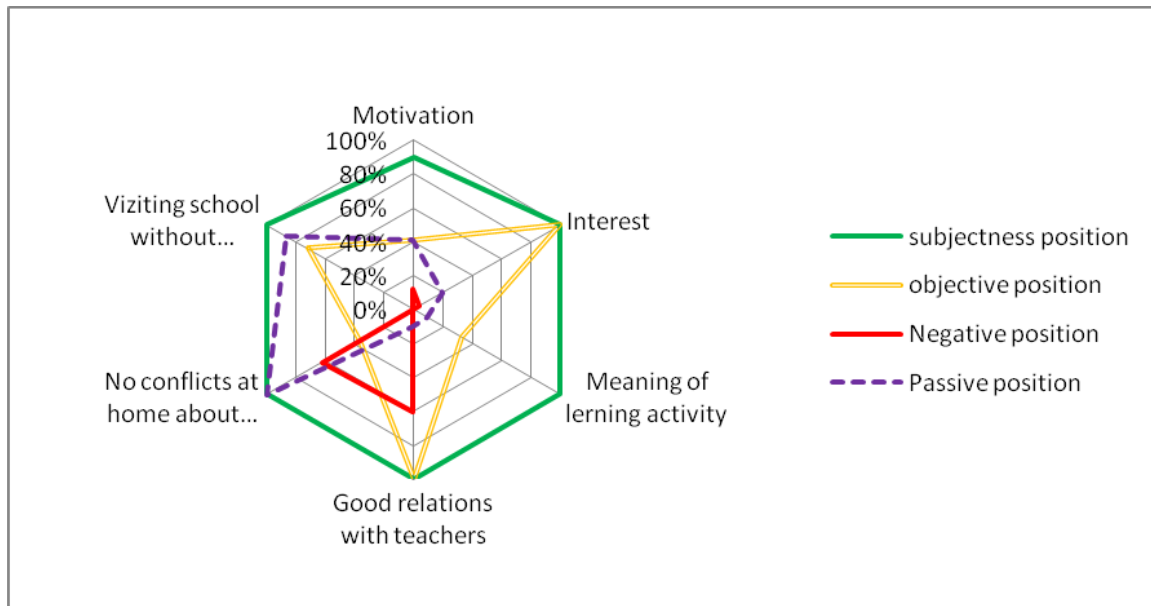
Figure 3. The comparison of the main indicators in groups with pronounced subjectness, objective, passive and negative positions (only pupils of general academic schools participated in the comparison).

home (many pupils in this group talk about pressure and parents' checks), there appears the absenteeism, but only of minority in this group pupils.

The pupils with the "passive" position also have an average motivation, but the meaningfulness and interest in education are absent; the relations with teachers are also in a poor state, there are no conflicts at home (we assume that just no one at home is interested in schooling). The absenteeism for this group is also not very characteristic.

Finally, the group with the expressed negative position has the worst indicators of educational motivation, for them the schooling completely has no meaning and interest, although there are good relations with some teachers, conflicts at home also occasionally occur (50%), and this is exactly that group that regularly skips classes.

Thus, on the one hand, the subjectness position is connected with the extremely important aspects of educational activity, primarily: motivation, meaningfulness, relations with teachers and parents. At the same time, the research of the subjectness position evidence at different ages showed that the educational system existing in Russia does not support the subjectness position of the pupils. Simultaneously with the public educational paradigm there are pedagogical systems that successfully support the subjectness position of children and promote the development of the pupils' conscious and active attitude to the educational activities. And this apposes new tasks for us to study the influence of various pedagogical environments on the development of the subjectness position.

The questionnaire "The Subjectness Position"

Surname, first name:
School:
Age:
Grade:
Date:

Instructions: Please, answer the questions expressing your consent ("Yes", "More likely yes, than no") or disagreement ("No", "More likely no, than yes"). Tick the appropriate box. Your answers will be known only to specialists conducting the survey and will not be reported to any classmates, parents, teachers, or any of the specialists working in the school.

No	Statement	Yes	More likely yes	More likely no	No
1	Parents and teachers say that it is very important to study, so I study and go to school.				
2	If I did not understand something at the lesson, I will definitely try to see it for myself.				
3	Usually I do not do my homework.				
4	When I do the task the most important thing is to be praised.				
5	I often want to find my way to solve the task.				
6	It can be said that an upset lesson is an amusement.				
7	I must go to school and fulfill all the teachers' demands.				
8	When we study a new topic, I want to see the unclear questions for myself.				
9	Sometimes I skip classes.				
10	I do sums only in such a way as the teacher says.				
11	I like to cope with difficult tasks.				
12	I would not go to extra classes on a subject difficult for me.				

The keys:

- Answers "Yes" – 2 points, answers "More likely yes" – 1 point, "No" and "More likely no" – 0 points.

- The objective position – 1, 4, 7, 10

- The subjectness position – 2, 5, 8, 11

- The negative position – 3, 6, 9, 12

References

Deci, E. L., & Ryan, R. M. (2002). *Handbook of self-determination research*. Rochester: University of Rochester Press.

Engeström, Y. (2006). Development, movement and agency: Breaking away into my corrhizae activities. In K. Yamazumi (Ed.), *Building activity theory in practice: Toward the next generation.* Osaka: Center for Human Activity Theory.

Grawe, K. (2006). Agents of change in the processes of psychotherapy. *IFP Newsletter*, *1*, 7–17.

Griffin, E. A. (1997). *A first look at communication theory* (3rd ed ed.). New York: McGraw-Hill.

Mangels, J. A., Butterfield, B., Lamb, J., Good, C., & Dweck, C. S. (2006). Why do beliefs about intelligence influence learning success? A social cognitive neuroscience model. *Social Cognitive and Affective Neuroscience*, *1*(2), 75-86. doi: 10.1093/scan/nsl013

Nutten, J. (2004). *Motivation, action and the prospect of the future*. Moscow: Smysl.

Obukhov, A. S. (2010). The age aspect of the research activity development: from spontaneous behavior to subjectum formation. In A. S. Obuhov (Ed.), *Research activity of pupils: from the kindergarten to the university: the scientific and methodological collection in two volumes* (pp. 42–48). Moscow: All-Russian Public Movement of Creative Pedagogues "Researcher"; MPSU.

Pakhomova, O. (2004). *Difficulties of translation.* http://psy.1september.ru/article.php?ID=200403314.

Rice, F., & Dolgin, K. (2012). *Psychology of adolescence and pre-adult age*. St. Petersburg: Peter.

Vygotsky, L. S. (1984). *Collected works in 6 volumes. Vol. 4.* Moscow: Pedagogika.

Yakimanskaya, I. S. (1996). *Personally oriented education in the modern school*. Moskow: September.

Zaretskii, V. K. (2001). What does the consultant on the problem solving process. In V. K. Zaretskii & M. M. Gordon (Eds.), *Summer school for children with developmental features: the work experience.* (pp. 107–120). Nytva: REM, IPI RAE.

Zaretskii, V. K. (2013). The formation and essence of the reflexive-activity approach in the provision of the consultative psychological counseling. *Consultative psychology and psychotherapy*, *2*, 8–37.

Zaretskii, V. K., & Zaretskii, Y. V. (2012). Subjectness position of the child in the educational difficulties overcoming (the case from practice). *Consultative psychology and psychotherapy*(2), 110–133.

Zaretskii, Y. V. (2013). The subjectness position in relation to the educational activity as the resource for development and the subject of research. *Consultative psychology and psychotherapy*(2), 110–128.

Zaretskii, Y. V., Zaretskii, V. K., & Kulagina, I. Y. (2014). Metodika issledovaniya sub"ektnoi pozitsii uchashchikhsya raznykh vozrastov [Methods of study of a subject position of pupils]. *Psikhologicheskaya nauka i obrazovanie [Psychological science and Education]*(1), 98–109.

Zukerman, G. A., & Wenger, A. L. (2010). *Development of educational independence*. Moscow: EHDE.

Old Age as a Cultural and Historical Phenomenon and its Transformation in Modern Times

Marina V. Ermolaeva   MAR-ERM@MAIL.RU
Moscow Psychological-Social University
Moscow, Russia

Abstract

Old age, like any other age, is a cultural and historical phenomenon. In the culture and mass consciousness the viewpoint about elderly and old age as the period of involution is still prevalent. At the same time, there has been a change in attitude toward this age. Many authors emphasize the perspective of using the potential of older people in society, the value of continued employment to maintain social and intellectual activity in old age. This is possible only if a person realized the need for continuous creation of themselves and their living conditions.

Currently, the ending of the life of modern people has moved from 60 to 80 years. Thus, after retirement, the person has a chance to live around 20 years of valuable productive life. This means that contemporary people's life path has a completely new period, which did not exist before. At that time, when the previous life attitudes were realized, the person opens up new possibilities of self-development in other areas. People on their life become able to realize the potential of self-development and to resist the pressure of adverse cultural forces. At any age the opinion about people's abilities has a significant impact on the life efficiency and quality. Conscious and productive change in the trajectory of person's own life path not only questioned the idea of the inevitability of negative changes in the quality of life in old age, but also "removes" the problems of this age, as constant depression, deficiency and weakness.

Keywords : Elderly and old age; Modern times; Life efficiency; Life quality; Depression, deficiency and weakness.

Old age, like any other age, is a cultural-historical phenomenon. In developmental psychology, the old age is considered in the context describing the whole path of a person's life. Any handbook on developmental psychology contains a description of old age. However, the analysis of these representations is puzzling: Are authors writing on the same age? Their understanding of goals, content and developmental opportunities in old age are too different. On the one hand, authors notice the adoption of ageing which opens the possibility to review the existential being (not an active adaptation to the sociocultural reality, but the search of person's own place in the universe, making a sense of completion of life, the feeling of fatigue from her and the exit out of the sphere of obligation) as the most important tasks of this age (Sapogova, 2011). In this approach, which is supported by some authors, the real social life is aside from the elderly people, and old age is considering as the period of summing up life. Many authors associate the old age with withdrawal of elder people from active life and deepening into their inner world, in their way of passed life.

On the other hand, there are ideas about old age which claiming the possibility of using the potential of older people in society, the value of continued employment to maintain social and intellectual activity in old age, the need for continuing of education throughout life path (Ermolaeva, 2011). The impression is that the term "old age" means different periods of life for different authors. Those psychologists, who write on aging as the involution, they view it from the outside as a "foreign" problem distanced from it. As a result, the old age is represented as the final outcome of not entirely successful scenario of life which has no alternative. But is it true? To answer this question, it is necessary to define time frames of old age.

In different fields of science different criteria are using. In gerontology, retirement is considered as the boundary of old age. Currently, this criterion also is not sufficiently compelling because for many people, retirement is a basis for a change of activity that, not only important for maintaining intellectual and personal potential, but also for their development (Ermolaeva, 2011). In general, attempts to give a clear definition of old age and even to designate its borders are not successful because the aging process is for everybody. In other words, there is no general, identical for all people, final stage of life.

The contours of life path are marked in youth, when the person is able to take consciously the estimated position in relation to his life and is able to dispose of it, to organize the life consciously, making efforts, when all life appears for him as unfolded in time system of voluntary choices, when people realize themselves as the creators of their own life's world. Whatever reflective or responsible is the choice of life which person will carry out, this choice will depend on the success of her/his maturing and aging. In each age a person enters into a new system of socio-psychological relations in which he has to create his own unique life-world and to learn new ways of living, thus confirming (or refuting) your choice (Antsyferova, 2006).

We refer to the idea of S. L. Rubinstein about the two ways of existence (Rubinshtein, 2012) to understand the choices of life. The first way is a life not beyond direct relations in which person lives, where every attitude is the attitude to individual phenomena, but

not to life in general. In this case the person is not able to rise above his existence to his reflection. The second way, according to S. L. Rubinstein, is associated with the person's mental exist beyond the ties that determine his existence. This second way is associated with the development of reflection, with the advent of value-semantic definition of life, with a conscious choice of life, sense of life, because it implies the need for understanding human's relationship to the life and the need to find inner resources for change (Rubinshtein, 2012). In psychology, the first way of life is called adaptive, the second called active, since the latter is accompanied by the experience of the intentional direction of his own life.

In our opinion, these two ways of life determine fundamentally different, not reducible to each other trajectories of human life, and respectively, the different content of the late stages of life. Thus, in the case of adaptive way of life the process of aging is, above all, a natural biological process of involution, not held back by self-development and responsibility for building their own lives. In the case of adaptive way of life, the involutional changes associated with aging "run" like the program of biological development of the body, including growth and ability to reproduce. Old age creeps up gradually, but steadily, the person noticing it, begins to fear old age and everything connected with it.

A different picture emerges with the active way of life. This way is characterized by purposeful and conscious self-development, where the change itself becomes a special form of transformation activity. In this active, spiritual trajectory of the life of a person's path is consciously making an effort to make sense of her/his vital-creative strength potential, to realize their intentions, aspirations for future development, and most importantly, in actions, in transforming, creative activity. Adult development is not predetermined, it is given as a possibility, and a person who has reached adulthood, may not have all the characteristics of a mature personality. This way of life really is the way of cultural development in old age. Stagnation in development can occur at any point of the life path of an adult, followed by involution, which represents the aging. In this regard, can hardly be considered scientifically valid merging into one concept of "old age" elder people, characterized by different ways of life and different trajectories of life path. Indeed, chronological coevals in this period seem to us as representatives not only of different ages but also different historical periods, which are characterized by a different attitude to old age.

Development trajectory which defined by a way of life, so different that the concept of "old age" in one case means "the undergoing" suffering of total dependence on the conditions of existence and their own condition' deteriorating, and in another case, the continuation of progressive development of personality, productivity, and spirituality of life, which realized in actions. In the second case, when people realized the need for continuous creation and creative transformation of themselves and their living conditions, is it possible to say about old age as an inevitable result of the existence? The person on life path creates a space of his own life, its own unique life-world, becomes the master of his destiny, able to withstand the pressure of adverse social and cultural forces, and learns to protect your world and your identity, because these gains do not come for free.

Currently, the ending of the life of modern people has moved from 60 to 80 years. Thus, after retirement, the person has a chance to live around 20 years of valuable productive life. This means that contemporary people's life path has a completely new period, which did not exist before. At that time, when the previous life attitudes were realized, the person opens up new possibilities of self-development in other areas.

Finally, a rather sharp age crisis (life fracture) occurs before retirement. There is a perception that the severity of the crisis associated with the "depletion of active form of life" (Slobodchikov & Isaev, 2000) when things lose relevance for a middle-aged person, become obsolete, students are ahead of him, the children grow up and not need her/his experience and support, and she/he has not kept pace for modern technologies. And, apparently, it's time to accept the fact of the inevitability of retreat in the life to come to terms with aging in body and in soul and to look to the past. However, the latest age crisis (like all previous) is a chance to update targets, semantic orientations; a chance for self-development. It is possible to agree with E. Erickson that the contents of the final stage of life depends on successful completion of all previous stages. Once embarked on the path of conscious self-development, creativity, people will find the opportunity to continue it on the final stage of life path. Even then, when thinking about the possibility of purposeful life changes for the better after retirement seem sudden, not having prerequisites, there is no doubt in their deep rootedness in the already accomplished inner work of self-creation, accountability for past actions. In other words, the person feels the need and the will to update, feeling a willingness to change, the person enters into a new relationship to the world and to ourselves. The person would no longer be treated to the difficulties of living conditions with humility and fear. Period starting after recent age crisis is associated with the search for new grounds of meaningful existence, for a new phase of self-determination. The trajectory of the life path is the most important thing (or rather a series of actions), which determines the progressive development of the personality at this stage. If a person finds that he makes her/his personal contribution, she/he argues the self-esteem and confident attitude to life. It is known that at any age, opinion about their abilities has a significant impact on the efficiency and quality of human life. If people in the crisis of elder age are not felt ready to update life goals, they lose their professional future, filled with ideas, problems, plans, if they excluded from the system of interpersonal peer-relations that negate age-related segregation.

Analysis of the patterns of changes in life in moments of crisis have shown that a person selecting for an active way of living and experiencing in this way all his allotted challenges, disappointments and rebirth, one gets the chance of progressive development throughout life, and with it a deep satisfaction with their lives. This experience is determined by the conviction of people that their way is the realization of the own life plan, which became meaningful and, therefore, a good choice of possible life alternatives, the fruit of his consistent effort. It should not be assumed that a hasty, wrong choice in his youth negates the possibility of progressive development : any age crisis (if it is experienced reflective and heavily) has a chance to be completed the entry on a path of meaningful existence. The range of individual possibilities is fundamentally indeterminate, and the development is

not restricted to any specific periods of human existence, it is carried out throughout life (Antsyferova, 2006).

This period of life (often called "late maturity") ends by the moment when the biological capacity is depleted and this process affects the ability of a person to action – to act. Can we call this period the "decrepitude" full disability? Yes, if an elderly person is concentrated in the struggle for life in its vital needs, on the sensations of body and inside of body. But choice the path of meaningful existence determines the possibility of the release of "beyond" at the very late stage (beyond concentration on itself, pain, frailty, the proximity of death) to another person, to the values of creativity, emotions, relations (Frankl, 2012), to trans-vital sense.

At any age, people's opinion about their abilities has a significant impact on the efficiency and quality of human life. Conscious and productive change in the trajectory of person's own way of life not only casts doubt on the idea of the inevitability of negative changes in the quality of life in old age, but also "removes" such problems of this age as the constant depression, deficiency and impotence. Selecting for an active way of life, people consistently move to the height of maturity and late maturity. Old age in the traditional sense has no place on this life path, there is no place for the fear of old age. However, the progressive development of life is given with great effort of 'overstep through own self', with the refusal of opportunities seem attractive, but which are not authentic, not relevant for life design. At the final stage of life, summing up its results, one person will take your way of life as the only needs, and does not need to be replaced, as the author, truly, "your", and the other will feel cheated by life. This probably shows the difference in the outcomes of life as the end of a fading (old age) or as a meaningful completion of all begun affairs, fruitful realization of life goals and the transfer of development to future generations.

References

Antsyferova, L. I. (2006). *Razvitie lichnosti i problemy gerontopsikhologii [Personality development and the problems of gerontopsychology]*. Moscow: Institute of psychology RAN Pabl.

Ermolaeva, M. V. (2011). *Psikhologo-pedagogicheskoe soprovozhdenie pozhilogo cheloveka [psychological and pedagogical support of elderly person]*. Moscow, Russia: NOU VPO Moskovskii psikhologo-sotsial'nyi universitet [The Moscow Psychological and Social University].

Frankl, V. (2012). *Stradaniya ot bessmyslennoi zhizni [Suffering from a meaningless life]*. Novosibirsk: Sib. Universitet Publ. (in Russ).

Rubinshtein, S. L. (2012). *Chelovek i mir [Man and the world]*. Moscow: Pedagogika.

Sapogova, E. E. (2011). Ekzistentsial'no-psikhologicheskii analiz starosti [Existential-psychological analysis of old age]. *Kul'turno-istoricheskaya psikhologiya [Cultural-historic psychology]*.(3), 75–81.

Slobodchikov, V. I., & Isaev, E. I. (2000). *Psikhologiya razvitiya cheloveka [psychology of human development]*. Moscow: Shkol'naya Pressa.

PART D:

CLINICAL PSYCHOLOGY, PSYCHOTHERAPY AND TRAINING

A. Beck's Cognitive Psychotherapy and L. S. Vygotsky's Cultural - Historical Psychology

Alla B. Kholmogorova   kholmogorova-2007@yandex.ru
Moscow State University of Psychology and Education
Moscow Research Institute of Psychiatry – Branch of The Serbsky Federal Medical Research
Center for Psychiatry and Narcology

Last year was celebrated by the international professional community as the 95th jubilee of Aaron Beck - founder of one of the most authoritative branches of modern psychotherapy, the influence of which on the sphere of modern mental healthcare can be compared with the value of Sigmund Freud's psychoanalysis in the last century. Developmental psychologists celebrate one more anniversary last year - 120 years since the birth of the creator of cultural-historical psychology, founder of Moscow psychological school - Lev S. Vygotsky, who was called "the Mozart in psychology" by a famous British philosopher and methodologist working in the USA Tulmin (1981). Mozart discovered a new epoch in music and died at the prime of creative life - sick, poor and lonely. L. S. Vygotsky in the same way made a revolution in the psychology of the last century and died at the age of 37, persecuted and rejected by the official Stalinist science, in isolation from the international community.

Overcoming and criticizing a number of methodological principles of behaviorism and psychoanalysis, connected with ignoring the leading role of the conscious and ideation in human behavior, became L.Vygotsky's main objectives already in the 1920-30-es of the last century, when these main branches of psychology and psychotherapy were just gaining strength. Beck (1976); Beck, Rush, Shaw, and Emery (2003) postulated the central role of ideation disorders in psychical pathology when behaviorism and psychoanalysis were victoriously marching in the universities and clinics of America and Europe, and the defining role of "sex" versus "reflex" in human behavior was fiercely defended by the representatives of two contradictory approaches. This hardly made professor A. Beck's professional way easier as he ended up caught in crossfire, but it reflected his principal position as scientist and practician which he implemented with admirable consistency, despite sometimes furious resistance of opponents. As a result, as German methodologist A. Dürssen aptly remarked, cognitive psychotherapy acted as a "bridge between behaviorism and psychoanalysis" (Dührssen, 1985).

Now, considering the insufficiently understood and inadequately appreciated L. S. Vygotsky's heritage in historical perspective on the one hand, and the vast fruitful field of

scientific and practical works sown with Beck's ideas (Beck et al., 2003) – on the other, it is possible to state that there is close internal connection between different branches that never crossed before – cognitive psychotherapy and the Moscow psychological school. As Meichenbaum, one of the famous followers of Beck, noted: "to a certain extent, the works of Lev S. Vygotsky and his student A. Luria had an influence on CBT, especially for children. These authors thought that a child is socialized by means of interiorizing interpersonal communication and turning it into internal speech. The models of socialization and interiorization that they offered became a theoretical basis for the development of the children's CBT modification" (Meikhenbaum, 1998).

Let us note the most important methodological points that bring together CBT and cultural-historical psychology. Research of cognitive activity or cognitive processes is central for the works of Vygotsky (1982a, 1982b, 1983) and his followers, for example, the author of the theory of stage wise formation of mental actions Gal'perin (1959), the founder of the Moscow school of clinical psychology Zeygarnik (1986) and many others.

Both cognitive psychotherapy and the Moscow psychological school view the subject's own activity as the driving force of development (Alford & Beck, 1997; Leont'ev, 1978). Stressing the leading part of consciousness in development distinguishes cognitive psychotherapy from behaviorism and psychoanalysis and reconciles it with the Moscow psychological school.

One more thing uniting cognitive psychotherapy with Moscow psychological school is the view of the problem of affect and intellect connection as one of the keys for understanding development. Disputes about this issue among the cognitive scientists were in many ways anticipated by L. S. Vygotsky in his principle of affect and intellect unity with the increasing role of intellect in development. He pointed out the basic distinctions between conception logical ideation of an adult and pre-conception ideation of a child, emphasizing the impossibility of solving the problem of affect and intellect connection outside the problem of development. In this sense, L. S. Vygotsky's position marks the guideline for the whole cognitive-behavioral tradition, where the problem of development was traditionally underestimated, and where the attempts of static solving the problem of affect and intellect connection still dominate. Three types of understanding their connection in psychology may be singled out: 1) cognitive processes are primary, emotions are secondary; 2) emotions are primary, cognitive processes are secondary; 3) finally, cognitive and emotional processes are simultaneous. According to L. S. Vygotsky, in the process of ontogenesis these relations constantly change towards the increase of the cognitive processes' role, they never stay in the form set once and for all. "Its not just the properties and structure of the intellect and affect that change in the course of development, it's the relations between them [. . .] the study of a child's life – from its most primitive forms to the most complex – shows that transition from the lowest to the highest affective compositions is directly linked with change of relationships between affect and intellect" (Vygotsky, 1983, p. 225).

One should also note the affinity of L. S. Vygotsky's "internal speech" concept and the concept of "automatic thoughts" by Beck. While observing his patients Beck comes to the conclusion about the essential, if not defining, influence on the person's emotional

condition of subconscious cognitive processes in the form of surrogated internal speech or images that arise involuntarily and do not get in focus of consciousness. Therapeutic work on finding the problem train of thought is extremely laborious, since a lot of cognitions connected with problems are automatic and they are not directly noticed by the patient. L.Vygotsky wrote in his critique of classical behaviorism "Consciousness as the problem of behavior psychology" on the role of such thoughts in the regulation of emotional condition and behavior and on the difficulties of their registration: "...a person is always thinking inwardly: and this never fails to influence their behavior; a sudden change of thoughts during the experiment will always clearly reflect on the whole behavior of the test subject (a sudden thought: "I will not look in the device"). But we know nothing about the way to take account of this influence" (Vygotsky, 1982a, p. 79).

It was A. Beck who managed to develop a system of methods to reveal this hidden internal speech. The method of finding and registering the subconscious cognitive processes or, in his terminology, the automatic ideas, may be compared with the method of free associations by Z. Freud, who made psychoanalysis a practically working system. Beck created the whole system of technique in order to reveal and register automatic thoughts, by actually "aiming the probe" in the unconsciousness, in the deep peripheral processes of consciousness.

Vygotsky's fundamental work *Thinking and speech* (Vygotsky, 1982b) gives a lot of attention to the issue of internal speech, which structurally differs from the external speech: it has predicative telegraph character and does not exist in the form of clearly verbally defined sentences. L. S. Vygotsky also wrote about pre-conceptive ideation that is irrational and that has essentially different structure in comparison with the logical one – domination of random connections by separate attributes of concepts instead of their complex as a whole.

According to A. Beck, automatic thought is born from internal cognitive scheme, the mechanisms of which are still not fully described. However, one can assume that these are, first of all, voices of parents and other significant persons transformed into certain system of beliefs and into internal speech, and also strong emotional experiences structured in diffuse idiosyncratic images - for example, the self-image of helpless and unloved person, connected with extended difficult experience of orphancy in childhood. The affective load of this image makes it inaccessible to logical ideation even when the child becomes a capable adult. According to the expression of psychoanalyst E. Bibring, there is a certain "psychobiological state of helplessness" suffered in childhood that has a tendency to actualize in situations of separation, parting, losses in the further life.

The ideas stated by parental figures are not subject to analysis and critical evaluation; they are simply taken on faith. In this way, E. Sokolova remarks: "One can assume, that cognitive and affective components of self-esteem do not develop simultaneously - a child starts feeling loved or rejected much earlier, and only later does he acquire the abilities and means of cognitive self-perception" (Sokolova, 1989, p. 55).

Secondary logical processes of ideation proceeding by the principle of reality are built upon the primary ones. They can either contradict the primary cognitive schemes, and

then the action of the latter leads to breach of logic and various cognitive distortions. Reorganization of deep schemes is possible due to the person's ability to the tertiary processes of ideation aimed at the analysis of their own ideation. In Western psychology, they are called *metacognitive processes*, and in the Russian psychology of ideation the term *reflection* was introduced for their designation.

D. Meichenbaum defines metacognition as processes of self-regulation and the thoughts about them. The psychotherapist assists the client in developing the ability to "notice", "catch", "interrupt" and "watch" his or her thoughts, feelings and behaviors. In addition, the therapist must make sure that if there are positive changes in the client's behavior, the client is aware that they are due to his or her own efforts (Meikhenbaum, 1998).

Based on the research of foreign and domestic psychologists it is possible to define at least three levels of the cognitive processes' organization: 1) primary pre-logical, based on affective connections; 2) secondary, based on logic, rational connections; 3) reflection or metacognitive processes based on the person's ability to understand and change the deep foundations of their ideation and activity. *Development of mature person consists in gradual transition to the third level of cognitive organization.*

Early emotional experience on the one hand and pre-logical ideation of the child on the other hand act as sources of cognitive scheme in ontogenesis. It is possible to assume that if the schemes are negative and excessively affectively charged the development of secondary processes of ideation and reflexive ability is broken, which leads to various behavioral and emotional problems.

Based on the understanding of idiosyncratic character of internal speech one can claim that a patient needs indirect verbal support to develop their hidden semi-acknowledged thoughts. The directive advancing approach, characteristic for the rational-emotive therapy by Ellis (*challenging*) creates threat that the patient receives the knowledge of their irrational belief from the outside, but does not acknowledge their own idiosyncratic structures.

It is necessary to ponder on the problem of cognitive psychotherapy method and that hypothetical method of help, which can be extrapolated theoretically from the research work of the Moscow psychological school. In her last works on the analysis of psychic pathology B. Zeygarnik especially stressed the role of violation of **mediation (**опосредствование**)** or the ability of conscious reorganization of personal emotional reactions, closely connected with the person's comprehension of their values and directives. She saw this as the basis of behavior self-adjustment. The data about the defects of the ability to comprehend their rational structures in various mental frustrations was received in a number of researches [(Kholmogorova, 1983, 2011; Sokolova & Nikolaeva, 1995; Zaretskii & Kholmogorova, 1983; Zeigarnik, Kholmogorova, & Mazur, 1989; Zeygarnik & Kholmogorova, 1985), etc.]. Hence the primary goal of psychotherapeutic help – the development of reflexive ability underlying self-adjustment.

According to L. S. Vygotsky, a mature person is distinguished by the ability to control the affect: "Ideation can be a slave to passions, their servant, but it can also be their master"

(Vygotsky, 1983, p. 235). This is the strategic purpose of cognitive psychotherapy: to develop ability to master one's own ideation by directing it into a more realistic constructive channel, and through that to get the power over emotions. In other words, *the main purpose of cognitive psychotherapy – the development of alternative ideation and reorganization of dysfunctional beliefs – can be reformulated as the development of reflexive ability*.

Actually, the cognitive psychotherapy puts into practice one of the central theses of L. S. Vygotsky about the necessity of submitting the affect to intellect in the process of normal development and becoming a mature person. However, psychotherapy simultaneously becomes a source of new emotional experience for the patients – feelings of support and understanding with extreme respect for autonomy – this is the deficiency that a therapist needs to fill for many patients. This experience also promotes the change of cognitive schemes; therefore, these processes – cognitive and emotional – are inseparably bound.

The idea of **mediation** that was especially interesting to B. Zeygarnik in the last years of her life is connected with the category of sense. *Mediation can only be defined as arbitrary sense formation, control of person's own rational sphere through its acknowledgement and reorganization*. Such an ability, according to B. Zeygarnik, is the basis of mental health; she connected the breach of mediation with different forms of psychic pathology. Research of reflexive mental regulation carried out by the group of Moscow psychologists – Alekseev (1975, 2002), Zaretskii (1984), Semenov (1980) contained important conceptual framework and methods for the further research in this area.

Experimental research of reflexive regulation dysfunction in fulfilling creative tasks by schizophrenics showed a major breach of the constructive function of reflection – the ability to understand and change the initial situationally actualized foundations of ideation (Kholmogorova, 1983; Zaretskii & Kholmogorova, 1983; Zeygarnik & Kholmogorova, 1985). In the research on creative ideation this ability is also called **divergent ideation**. Using A. Beck's terminology one can speak of decreased ability of alternative ideation that is based on the ability to treat one's ideas as hypotheses and flexibly change them where needed. *The concepts of **mediation**, metacognitive processes, alternative ideation and reflection reflected similar mental reality*.

The issue of studying reflection as the mechanism of activity organization was raised by Russian methodologist and psychologist N. Alekseev in transition from the position of researcher to the position of practician, forming and changing ideation, since reflection is, first of all, the mechanism of change. This transition was accomplished by him in the beginning of the 1960, when he worked as a teacher of mathematics at school and concentrated on teaching children to *consciously, purposefully master the ways* of solving certain types of problems, as the means of mathematical ideation organization (Alekseev, 1975, 2002).

He defined reflection as establishing relationships between various contents previously isolated, and later, based on the works of the German philosopher I. Fichte, presented the scheme of reflexive act description as the sequence of internal actions (Alekseev, 2002) which are cited below supplemented by V. Zaretsky (item 6), who showed the leading role of

reflection in changing of ideation foundations in the process of accomplishing creative tasks (Zaretskii, 1984). Parallel with the scheme of reflexive act the cognitive psychotherapist's operational scheme or the sequence of basic work methods with automatic thoughts is listed.

Table 1

Structure of the reflexive act according to N. Alexeyev and V. Zaretsky and a cognitive psychotherapist's operational scheme (Kholmogorova, 2001)

Sequence of steps in the reflexive act	Sequence of cognitive psychotherapist's work methods
1) Stop of ideation	Formation of automatic thoughts
2) Fixation of ideation	Formation of automatic thoughts
3) Objectivation of ideation	Assessment of automatic thoughts – working with thought as an object
4)Estrangement of ideation	Formation of alternative view
5) Establishing relationships between different ideation	- correlation with other automatic thoughts and establishing beliefs; - establishing relationships between beliefs and relevant childhood experience; - establishing relationships between beliefs and broader life context (consequential analysis)
6) Change of ideation foundations	Transformation of dysfunctional beliefs

Table 1 shows that the sequence of internal actions making up the reflexive act of consciousness and the sequence of steps in cognitive psychotherapy are in relationships of mutual conformity (Kholmogorova, 2001). Therefore, one can conclude that *during cognitive psychotherapy the teaching of reflection is going on as the sequence of internal actions*.

The process of forming reflexive ability is somewhat similar to the method of stage wise formation of mental actions, developed by the follower of L. S. Vygotsky, an outstanding representative of Moscow psychological school Gal'perin (1959). Formation of reflexive ability occurs during cooperation between psychotherapist and a patient, with the leading role of the patient's own activity (which is purposefully provided by the system of the home assignments aimed at constant independent refinement of all components of the reflexive act). *The basic steps in the cognitive psychotherapist's operation may be viewed as a reflexive act brought in interpersonal dialogical space*. During work with the patient such reflexive acts invariably repeat, which eventually leads to interiorization of the reflexive act that was originally executed by two people together. In this process the person acquires the ability

of self-reflection and of changing their own ideation, *i.e. it is not only dysfunctional beliefs or ideas that change, but the whole organization of ideation changes - in B. Zeygarnik's terminology, it becomes more of a mediator*.

Tying the findings of cognitive psychotherapy with the achievements of psychology of ideation allows for seeing the main purpose of psychotherapy of various forms of mental pathology in a new light. It can be viewed as the *development of sense formation or formation of reflexive ability as the system of internal actions – the components of reflexive act or internal means of cognitive processes and emotional conditions' regulation*. Integrative model of psychotherapy based on these ideas can be called **cognitive-reflexive**.

Thus, Vygotsky's ideas and findings of Russian psychology of ideation allow to get a fresh understanding of the psychotherapist's operation process: on the basis of activity approach to mentality (understanding of mental activity as a systems of actions) and cultural-historical approach (understanding of the higher mental functions as derivatives based on the interiorization mechanism from joint external activity with other person - carrier of cultural means and activity methods).

To prove such conclusion let us refer to the opinion of J. Wertsch, the Western expert in the field of cultural-historical psychology, whose article published in 1979 and republished 30 years later in the "Human development" magazine anniversary issue, stated: "The development of self-adjustment ability in ontogenesis is the central theme of works of Vygotsky and his followers. . . . his ideas about self-adjustment can be understood correctly only if we conduct the genetic analysis going back to the sources of self-adjustment" (Wertsch, 1979, p. 66). And further: ". . . researchers paid little attention to his idea about transition of interpsychical functioning into intrapsychical" (Wertsch, 1979, p. 67).

These words were written almost 30 years ago, but still there is little attention to Vygotsky's works in the context of modern psychotherapy (Kholmogorova & Zaretsky, 2010), with rare exception (Leiman, 1992; Meichenbaum, 1977; Ryle & Fonagy, 1995); though the main interest of specialists in the field of modern psychotherapy is focused more in the direction mapped out by L. S. Vygotsky - development of ability to consciously self-adjust mental or cognitive processes.

The search for mechanisms providing adjustment of emotional state, behavior and communication became the epicenter of modern research in the field of psychotherapy. This is expressed in rapid growth of a number of similar concepts that describe the processes of self-adjustment and communication – **"mentalization", "emotional intellect", "social cognitions", "metacognitions", "theory of mind", "reflexive awareness"**, etc. These concepts reflect similar psychic reality that the specialists focus upon when developing new methods of treating various psychiatric disorders.

For the sake of justice, it is necessary to note that the development of mentalization capability that became one of the most popular directions of dynamically focused psychotherapists' work (Bateman & Fonagy, 2006), is effectively carried out by means of cognitive psychotherapy, and in many ways, it is the essence of the method suggested by Beck. In

our view, the concept "reflection" is rather heuristic for further development of this branch. It has deep roots in philosophical tradition, which stresses the freedom of human will and the reflection as the major mechanism of this freedom. Assigning psychological meaning to this concept allows viewing the reflection as the basis of emotional self-adjustment, randomness of behavior and effective interaction with other people.

The concept of cultural-historical psychology was born in opposition to the naturalistic concept that viewed human mentality as completely natural instinct formation. L. S. Vygotsky differentiated natural, instinct and higher (properly human) mental functions by the criterion of the mediation of the latter. It means that properly human or higher mental functions are not given evolutionarily, they are formed during interiorization of some cultural means of their organization. That means that they are, first of all, a product and function of cultural development, instead of brain evolution; this is the principal difference of human mentality from the mentality of animals. The main achievement of biological evolution is the highest flexibility of a human brain providing for interiorization of a wide range of means specific to different cultures during learning various cultural practices and behaviors.

From the perspective of cultural-historical psychology, psychical pathology can be viewed as a deficit of methods of psychics' organization and regulation, and psychotherapy as the process where this deficit is compensated and mental growths appear expanding the self-adjustment ability. Therefore, a psychotherapist's activity can be treated as the activity that does not simply eliminate the symptoms of illness, but it compensates the underlying deficit through development of a mental "toolkit". More than half a century was devoted by A. Beck and his followers to the perfection of this toolkit, and they armed the modern psychotherapists, in the terms of L. S. Vygotsky's concept, with a system of cultural means aimed at the development of a mature and effective organization of ideation and the whole psychical apparatus. This system is gaining acceptance by the representatives of the historically opposing traditions, defining their integration by uniting the best achievements of various schools of psychotherapy into the paradigm, which the European methodologist and researcher of psychotherapy Klaus Grawe was dreaming about, and which he called "general psychotherapy". In the historical perspective, the resultant force of the two leading traditions in psychotherapy - behaviorism and psychoanalysis – sets clear direction, which can be described as moving the focus of the specialists' attention "from sex and reflex" to reflection.

References

Alekseev, N. G. (1975). *Cognitive activity in the formation of conscious decision-making*. Moscow: MTPI.

Alekseev, N. G. (2002). *Designing conditions for the development of reflexive thinking*. Moscow. Access mode:www.circle.ru.

Alford, B. A., & Beck, A. T. (1997). *The integrative power of cognitive therapy*. New York: Guilford Press.

Bateman, A., & Fonagy, P. (2006). *Psychotherapy for borderline personality disorder*. Oxford: Oxford University Press.

Beck, A. T. (1976). *Cognitive therapy and the emotional disorders*. New York: American book.

Beck, A. T., Rush, A. J., Shaw, B. F., & Emery, G. (2003). *Cognitive therapy of depression*. New York: Guilford Press.

Dührssen, A. (1985). Die "kognitive wende" in der verhaltenstherapie.—eine brücke zur psychoanalyse. *Nervenarzt*, *56*, 479–484.

Gal'perin, P. Y. (1959). Development of research on the formation of mental actions. *Psychological Science in the USSR*, *1*, 441-469.

Kholmogorova, A. B. (1983). Narusheniya refleksivnoi regulyatsii poznavatel'noi dey-atel'nosti pri shizofrenii [violations of reflective regulation of cognitive activity in schizophrenia.]. *Diss. kand. psikhol. nauk.[Ph. D.(Psychology) diss.]. Moscow*.

Kholmogorova, A. B. (2001). Cognitive psychotherapy and domestic psychology of thinking. *Moscow Psychotherapeutic Journal*, *4*, 165-181.

Kholmogorova, A. B. (2011). *Integrative psychotherapy of affective spectrum disorders*. Moscow: Medpraktika.

Kholmogorova, A. B., & Zaretsky, V. K. (2010). Can russian psychology be useful in solving the problems of modern psychotherapy: reflections after the 20th Congress of the International Federation of Psychotherapy (IFP). *Medical psychology*(4). `http://medpsy.ru`.

Leiman, M. (1992). The concept of sign in the work of vygotsky. *Psychology and Psychotherapy: Theory, Research and Practice*, *65*(3), 209-221.

Leont'ev, A. N. (1978). *Activity, consciousness, and personality*. Englewood Cliffs, NJ: Prentice-Hall.

Meichenbaum, D. (1977). *Cognitive behaviour modification*. New York: Plenum.

Meikhenbaum, D. (1998). Evolution of cognitive-behavioral therapy: its origins, principles and examples from clinical practice. In L. M. Krol & M. Class (Eds.), *Evolution of psychotherapy. Vol. 2.* Moscow.

Ryle, A., & Fonagy, P. (1995). Psychoanalysis, cognitive-analytic therapy, mind and self. *British Journal of Psychotherapy*, *11*(4), 567-574.

Semenov, I. N. (1980). *System study of thinking in solving creative problems*. Abstract of diss. Cand. psychol. sciences.

Sokolova, E. T. (1989). *Samosoznanie i samootsenka pri anomaliyakh lichnosti [Self-awareness and self-esteem of the individual anomalies]*. Moscow: MGU Publ.

Sokolova, E. T., & Nikolaeva, V. V. (1995). *Osobennosti lichnosti pri pogranichnykh rasstroyst-vakh i somaticheskikh zabolevaniyakh [Personality traits in borderline disorders and somatic diseases]*. Moscow: SvR-Argus.

Tulmin, S. (1981). Motsart v psikhologii [mozart in psychology]. *Voprosy filosofii [Questions of Psychology]*(10), 127–137.

Vygotsky, L. S. (1982a). *Consciousness as a problem of behavioral psychology* (Vol. 1). Moscow: Coll. Op.

Vygotsky, L. S. (1982b). *Myshlenie i rech' [Thinking and speech], Vol. 2.* Moscow: Pedagogika.

Vygotsky, L. S. (1983). Problema umstvennoy otstalosti [The problem of mental retardation]. In *Works: in 6 volumes* (Vol. 5, pp. 231–256). Moscow: Pedagogika.

Wertsch, J. V. (1979). From social interaction to higher psychological processes. A clarifica-

tion and application of vygotsky's theory. *Human development*, 22(1), 1-22.

Zaretskii, V. K. (1984). *Dinamika urovnevoi organizatsii myshleniya pri reshenii tvorcheskikh zadach: Avtoref. diss. . . . kand. psikhol. nauk [the dynamics of organising thinking in creative problem solving: Ph.d. (psychology) thesis].* Moscow.

Zaretskii, V. K., & Kholmogorova, A. B. (1983). Smyslovaya regulyatsiya resheniya tvorcheskikh zadach [Meaning regulation of creative problem solving]. In *Issledovaniya problem psikhologii tvorchestva [Studying the issues of psychology of creativity]* (pp. 62–100). Moscow: Nauka.

Zeigarnik, B. V., Kholmogorova, A. B., & Mazur, E. S. (1989). Self-regulation of behavior in norm and pathology. *Psychological journal*, *10*(2), 122–132.

Zeygarnik, B. V. (1986). *Patopsikhologiya [pathopsychology].* Moscow: Moscow University Publ.

Zeygarnik, B. V., & Kholmogorova, A. B. (1985). Violation of self-regulation of cognitive activity in patients with schizophrenia. *Journal of Neuropathology and Psychiatry*, *85*(12), 1813-1819.

Elaboration of Cultural-Historical Approach in Developmental and Clinical Psychology: Tendencies and Levels of Analysis

Natalia Burlakova   naburlakova@yandex.ru
Associate Professor, Neuro- and Patho-Psychology Chair
Department of Psychology, the M.V. Lomonosov Moscow State University
Moscow, Russia

Valery Oleshkevich   ov-6161@mail.ru
Clinical Psychologist of the Highest Category
Applied Research Center for Child and Adolescent Mental Health named after G.E. Sukhareva
Moscow, Russia

Abstract

The research was focused on the following opportunities of further development of L. S. Vygotsky's cultural-historical approach: 1) further analysis of symbolic mediation methods of mental activity in socially and culturally stratified modern society and 2) cultural-historical analysis use in research of theories and conceptual apparat of clinical psychology. Drawing on performed research, we argue that psychological knowledge should be analyzed in the context of its cultural-historical formation. The application of cultural-historical analysis in different levels provides an opportunity to extend the methodology used for empirical research including research of certain clinical case.

We've developed the integrated cultural-historical approach that combines the ideas of L. S. Vygotsky and M. M. Bakhtin complementing psychology of interiorization with psychology of exteriorization. To develop further, modern cultural-historical psychology needs to extend the "experience" concept and to integrate the experience of depth psychology, inasmuch as an individual develops within the culture, which means, that development is closely related with language and should be analyzed in the context of language and voice dialogues as fundamental conditions of psychological development. Thereby, mental activity is dialogical in its structure – it does not only evolve in dialogue, but is a dialogue at the root as well. Performed research proves L. S. Vygotsky's idea that normal and abnormal development goes in accordance with the same rules. Moreover, normal and abnormal phenomena intertwine in the midst of empirical development of an individual. Historically divergent phenomena provided an opportunity for extension of normal consciousness that places developmental psychology and pathopsychology in the global phenomenological and historical context of analysis.

Keywords : L. S. Vygotsky; Symbolic mediation methods of mental activity; Cultural-historical analysis; Clinical psychology.

L. S. Vygotsky made a unique contribution in psychology with cultural-historical approach invented by him (Vygotsky, 1978, 1983a, 1983b, 1983c, 1985; Vygotsky & Luria, 1930). He developed this conception in specific historical conditions that emerged in the 1920s in Russia, when the symbolic activity first began to be considered and analyzed as a significant phenomenon in the development of an individual within the culture. Vygotsky first realized the essential nature of this phenomenon for an individual and began to develop cultural-historical psychology based on interiorization of cultural-historical experience in symbolic form. In the middle of the 20th century, cultural-historical situation in USSR changed, and activity theory based on different methodological approach became a central one in Soviet psychology reflecting this change. The cultural-historical situation in nowadays Russia is different from the one Vygotsky had been developing his ideas in. However, his methodology is fundamental and provides numerous opportunities for further elaboration.

Today, we should work with the methodology of cultural-historical psychology drawing on new cultural conditions that helps to discover new concepts and approaches within this methodology. For instance, it could be used for analysis of different historical as well as modern psychological concepts and practices. If analyzed from the perspective of cultural-historical approach, every psychological concept reflects social and cultural experience of the society it emerged in. Moreover, cultural-historical experience can be understood as psychotechnical one forming the living psychology of people in this society, therefore reflection of this experience in psychological theory remains psychotechnical as well. If so, it is possible to recognize the psychotechnical scheme the theory is based on (Oleshkevich, 1997, 2002, 2016). It points to the fact that modern psychological concepts are to be analyzed from the cultural-historical perspective. Even more, the Vygotsky's theory needs to be analyzed in such way as well. It emerged in certain cultural and historical conditions, and we are to consider them for deeper comprehension of the theory's structure.

The society in Vygotsky's time was a homogeneous one due to the ambitious historical experiment called Russian revolution. The conception Vygotsky developed was one of the results emerged out of this historical experiment. In recent 20 years, we witness different historical transformations in Russian culture, including rapid development of diverse social groups, heterogeneous cultures and social strata determining different forms of interiorization and even different mechanisms of individual self-awareness development. This situation can be understood as a new historical experiment in Russian society determining new living psychologies people have and therethrough new psychological concepts.

While analyzing modern psychology from the cultural-historical perspective, it is important to distinguish between Russian psychology based on interiorization and Western psychology based on psychoanalysis (Burlakova & Oleshkevich, 2010; Oleshkevich, 2011). Both methodological approaches actualize cultural-historical situation, but psychology based on interiorization does it explicitly, while psychology based on psychoanalysis derives cultural mechanisms from the self-awareness of an individual actualizing cultural-historical situation implicitly. However, these two types of psychology complement each other and combining them could be effective, as we have proved in our research integra-

ting Vygotsky's methodological approach and psychoanalytical concepts (Burlakova, 2016; Burlakova & Oleshkevich, 2001).

In Russian culture, both methodological approaches existed — M. M. Bakhtin developed the methodology similar to the psychoanalytic approach (Bahtin, 1986; Voloshinov & Bahtin, 1993). That was psychology of expression, exteriorization, dialog and understanding mental activity as internal "Self — Other" dialogues, and it complemented the Vygotsky's approach. In our research, we have integrated these two approaches making of them solid cultural-historical and dialogical approach aimed at understanding the self-awareness development (Burlakova & Oleshkevich, 2001). Drawing on this integrated approach, we have described the psychotherapeutic process, built the functional-structural model demonstrating how the internal dialogues unfold in the mind during the psychotherapeutic session (Burlakova, 1996; Sokolova & Burlakova, 1997, 2009), depictured internal and external dialogues children lead and characterized their role in the development of child's self-awareness (Burlakova & Bykova, 2015; Burlakova & Fedorova, 2016; Burlakova & Oleshkevich, 2001). This integrated methodological approach reveals new perspectives in the research of diverse cultural-historical phenomena such as, for instance, collective historical memory and its transmission to younger generations or psychodynamic mechanisms of self-awareness used for transmission and transformation of traumatic cultural experience. The capabilities of this approach were shown by analyzing the traumatic experience of Holocaust and the ways of its transmission from survivors to the younger generations (Burlakova, 2016).

As L. S. Vygotsky believed, an objective psychological research is only possible when we examine the development of psychological phenomena, which means that we need to examine the interiorization of external social factors into internal psychological manifestations. This goal appears to be difficult to achieve especially in light of fast-moving modern culture: cultural patterns such as models of upbringing a child come and go quite fast, cultural trends change and intercommunicate. Methodology of interiorization is not enough for examination of such cultural situation. Therefore, we have supplemented the methodology of interiorization with the methodology of exteriorization (including the reflection of its conditions) and with analysis of internal dialogues unfolding in the mind that is necessary for understanding the mechanisms of self-awareness. Such research can be considered as a cultural-historical one, at least because we document and reflect the conditions of data acquisitions (Burlakova, 2011; Burlakova & Oleshkevich, 2001; Oleshkevich, 2002).

Cultural-historical analysis requires epistemological understanding of psychological concepts and theories as well as their development. Therefore, it is possible to examine psychological theories such as A. Adler's or E. Erikson's theory using cultural-historical approach and to analyze historical conditions when these theories were considered true ones reflecting certain cultural-historical situation (Burlakova & Fedorova, 2016; Burlakova & Oleshkevich, 2011, 2012). As our research proves, the theories emerge from certain social groups and are true for these groups, which means that they have cultural-historical conditions of their veracity.

Scientific theories usually emerge in critical historical periods from problematic or traumatic experience of an individual within the culture. At first, this experience is relevant only for a small social group. Afterwards it spreads to larger segment of society. In such type of research, the cultural-historical analysis helps to understand the cultural conditions of genesis and expansion of the theory examined and to clarify its social, cultural and psychotechnical meaning. The main question to answer is: Why was the personal history of Z. Freud or A. Adler or E. Erikson (and consequently the theories developed by them) relevant for certain social group and in time for the whole society as well? We have tried to traverse this subject in our research (Burlakova, 2012; Burlakova & Oleshkevich, 2011, 2012; Oleshkevich, 1997). These theories emerge from certain traumatic experience widespread in certain social group that transforms into new psychological norm. In this case, cultural-historical analysis reveals mechanisms of development of human experience in culture that arises from perception and reflection of certain abnormal and traumatic experience.

Thus, clinical psychology needs a new approach providing cultural-historical analysis both of certain concepts and methodology in general. While performing such an analysis, it is possible to understand how the society generates different types of traumatic phenomena, i.e. to examine how they evolve in culture and to determine their social and cultural place in the society. Such approach presupposes that the whole society could be analyzed as a kind of "clinic" providing certain conditions that provoke certain pathological phenomena.

Therefore, cultural-historical analysis of psychology is to be performed in several levels. First, all the naturalistic researches should be analyzed critically. For instance, statistical research in psychology is in fact naturalistic and atomic. Statistical parameters chosen for research determine obtained results. Moreover, the existing psychiatric classification and culturology of psychiatric clinic – factors that usually remain unanalyzed – determine results (and chosen parameters as well).

The second level of cultural-historical analysis assumes the examination of forms and mechanisms of transformation of external socio-cultural phenomena into internal psychological ones. At this level, the development of culturological and sociological means for description of these processes is of great importance. These means should be properly organized for the goals of psychological research.

The third level of cultural-historical analysis assumes the examination of theoretical and practical methodologies in psychology. Every psychological conception reflects certain cultural-historical situation it emerged from. Therefore, it conceptualizes the experience of its author and certain social group and psychotechnically solves problems relevant for them under the influence of problematic cultural situation. Consequently, it is incorrect to use this theory for solving problems of different social groups without culturological and methodological reflection. However, we can encounter it quite often in modern psychology.

The fourth level of cultural-historical analysis assumes the examination of social institutions, cultural trends etc., i.e. cultural-historical situation modern psychology has been developing in. For instance, in recent years, clinical psychology has been developing within psychiatric clinic (Foucault, 1998, 2010). The psychiatric clinic as a social institution not

only treats its patients and classifies them into categories, but produces certain type of mental activity and pathology as well. Therefore, clinical psychology receives "square" cultural-historical material for analysis. First, psychological problems emerge in certain cultural-historical situations, and, second, already in psychiatric clinic they are organized in certain way from the perspective of psychiatry. Now there is almost no reflected analysis of such cultural-historical processes. Therefore, the analysis of clinic as a social institution from the cultural-historical perspective appears to be actual for the development of clinical psychology. On the other hand, there is another clinic — clinic of consultative psychological centers, private practicing psychologists and psychotherapists. Already K.G. Jung mentioned that different psychotherapeutic schools had their own type of patients and not only their own methods, but their own system of values as well. This clinic has been waiting for its researchers yet.

Finally, the same scheme could be applied to many institutions — for instance, to the institution of childhood the developmental psychology has been developing in. First, the data gained by Soviet psychology may not correspond with psychological reality today and require reconsideration in new cultural situation. Second, to make the developmental psychology to the cultural-historical discipline it is important to examine social and cultural mechanisms and values strongly influencing and even organizing the child's development.

In fact, cultural-historical psychology always was practice-oriented. On the one hand, it developed as a conceptualization of new soviet culture and society that was being formed at that time. On the other hand, it had been shaping within the sphere of formative experiments and was aimed at cultural-historical analysis of cogitation. That was one of the reasons why L. S. Vygotsky actively started to train blind deaf-mute children. He sought to show that cogitation development and closely connected to it competency in self-adjustment were not directly linked to the development of sensory functions. Cogitation appeared to be connected to the capability of operating with signs. These works of L. S. Vygotsky and his followers made an invaluable contribution to general psychology as well as clinical psychology and correctional pedagogy. The latter developed under the influence of L. S. Vygotsky's formation psychology. Thereafter in USSR, the formation psychology was elaborated practically within the framework of children psychology, pedagogical psychology and clinical psychology. Variety of famous clinical psychologists such as Ivanova (1976); Rubinshtein (1965); Zeigarnik (1958, 1986); Zeigarnik and Bratus (1980), etc. worked in this field (Nikolaeva, 2011; Sokolova, 1976).

Applied neuropsychology and neurorehabilitation with the foundation laid by A.R. Luria is widely known in Russia (Akhutina & Pylaeva, 2011; Glozman, 2016). As a fact, neurorehabilitation also follows the guidelines of psychology and psychotechnics of formation psychology, which underlies Vygotsky's cultural-historical psychology. The most famous and elaborated approach to formation is the psychology and psychotechnics developed by Gal'perin (1967, 1989, 1992). He suggests understanding mentality as an orientational activity. Moreover, according to him, this activity can be formed and influenced. Most research conducted within the Galperin's school belongs to the sphere of the pedagogical and children psychology (Podolskiy, 2012; Talysina, 2001). However, this approach appears

to be perspective in clinical psychology as well. If speaking about the clinical patients, this approach is important particularly for mental spheres with diagnosed deficiency. The approach could be applied to formation of patients' mentality, reorientation, organization of psychocorrection and rehabilitation as well. Further elaboration of P.Ya. Galperin's concept was closely connected to the analysis of importance of problematic situations and of reflection in organization of development, to the psychotechnics of exteriorization etc. (Oleshkevich, 2016; Shhedrovickij, Rozin, Alekseev, & Nepomnjashhaja, 1968).

We open up new opportunities of applied cultural-historical psychology, when analyzing reflectively and systematically accumulated experience of applied formation psychology as well as analyzing psychotechnically and historically the history of Western psychology, primarily its applied aspects. That offers a possibility to integrate these two fundamental trends of cultural-historical psychology in one solid cultural-historical psychological approach focused primarily on developmental psychology and psychotechnics. In such case, alongside traditional for Soviet psychology concepts of formation and interiorization, we start to use concepts of projection, exteriorization, self-consciousness, inner dialogues etc. within universal psychological paradigm. It means that applied cultural-historical psychology acquires two perspectives methodologically stipulated by each other: external and internal.

In the sphere of applied inventions, these perspectives appear to be not only a research verification point, but also a supporting point for organization of personal development. Adoption of inner position involving patient's self-consciousness enables to research and to understand phenomenologically structure of her/his inner dialogues, direction of main self-consciousness intentions and to organize from inside and to direct the development and cross correction. However, adoption of external position allows controlling explications of inner world by controlling behavior, activity, objectivization of mentation etc. External perspective affords a possibility of analyzing social and cultural conditions accompanying formation of patient's behavior and of inner structures of self-consciousness. Meanwhile, adoption of these two perspectives offers broader opportunities for application of cultural-historical psychology in a more systematical way.

From our perspective, cultural-historical psychology ingrates developmental, social, clinical psychology etc., because one cannot understand development without analyzing social relations and without considering a possibility of certain developmental crises, which provide a basis for developmental abnormalities. It represents comprehensive psychology and psychotechnics, analyzes the most important features of mentality, defines and builds the schemes for cultural-historical research of mentality.

We understand intuitively that mentality is shaping within certain society and culture. Nobody raises principal objections against the historical nature of mentality, and corresponding cultural-historical psychology should deal with research of this topic. However, the purpose is not to measure mentality in a naturalistic way, but to understand certain mentality and means of its functioning and development as a structure shaped at certain moment of cultural-historical existence. Methodological elaboration of a such concept in psychology and broader — in humanities — corresponds to the theory of relativity in psy-

chics, which showed that received data on object of study depend on an observer position — and this theory reversed the situation in physics. A person always exists within history, therefore in a certain fundamental sense she or he represents and expresses historical psychology from the very beginning. Thus, methodological goal consists in finding the ways to perceive and cogitate perspectives of cultural-historical understanding of person's psychology, which means essentially to understand his/her development. In this regard, sequential methodological development of cultural-historical psychology could make a breakthrough in psychology similar to Copernican revolution. Moreover, it concerns the clinical psychology directly.

References

Akhutina, T. V., & Pylaeva, N. M. (2011). L. Vygotsky, A. Luria and developmental neuropsychology. *Psychology in Russia: State of the art*, 4(1), 155–175.

Bahtin, M. M. (1986). Jestetika slovesnogo tvorchestva [The aesthetics of verbal art]. *Iskusstvo, Moscow [in Russian]*.

Burlakova, N. S. (1996). Internal dialogue in the structure of self-awareness and its dynamic in the process of psychotherapy. *Ph.D. Dissertation. Lomonosov Moscow State University, Faculty of Psychology [in Russian]*.

Burlakova, N. S. (2011). On new opportunities and prospects of development of projective study. *Psychology in Russia: State of the art*, 4(1), 243–260.

Burlakova, N. S. (2012). New perspectives of cultural-historical analysis in clinical psychology. *Moscow University Psychology Bulletin. Series 14. Psychology*, 2, 49–56.

Burlakova, N. S. (2016). Psychodynamics of intergenerational trauma experience transmission in the context of cultural-historical clinical psychology. *Psikhologicheskie Issledovaniya [Psychological Research], 9*(45), 11. http://psystudy.ru/index.php/eng/2016v9n45e/1253-burlakova45e.html.

Burlakova, N. S., & Bykova, P. S. (2015). "Fairytale pedagogy" and non-fairy risks in emotional and personal development of the preschool children. *National psychological journal*, 2(18), 123–133. doi: 10.11621/npj.2015.0213

Burlakova, N. S., & Fedorova, Y. N. (2016). Example of practice-oriented research based on case formulation method. *Konsul'tativnaia psikhologiia i psikhoterapiia [Counseling Psychology and Psychotherapy], 24*(1), 109-129. doi: 10.17759/cpp.2016240108

Burlakova, N. S., & Oleshkevich, V. I. (2001). *Projective techniques: theory, practical application to the investigation of the child's personality*. Moscow.

Burlakova, N. S., & Oleshkevich, V. I. (2010). Development of psychotherapy as an object of holistic understanding and systemic research. *Kul'turno-istoricheskaya psikhologiya [Cultural-Historical Psychology]*.(2), 88–97.

Burlakova, N. S., & Oleshkevich, V. I. (2011). *Psychological conception of identity developed by E. Erikson from the perspective of E. Erikson's personal history*. Moscow.

Burlakova, N. S., & Oleshkevich, V. I. (2012). Levels of cultural historical analysis in clinical psychology. *Voprosy psikhologii*.(6), 35–44.

Foucault, M. (1998). *Rozhdenie kliniki [The birth of the clinic]*. Moscow: Smysl.

Foucault, M. (2010). *Istorija bezumija v klassicheskuju jepohu [Madness and insanity: History of*

madness in the classical age]. Moscow: AST.

Gal'perin, P. Y. (1967). On the notion of internalization. *Soviet Psychology*, *5*(3), 28–33.

Gal'perin, P. Y. (1989). Organization of mental activity and the effectiveness of learning. *Soviet Psychology*, *27*(3), 65–82.

Gal'perin, P. Y. (1992). Stage-by-stage formation as a method of psychological investigation. *Journal of Russian and East European Psychology*, *30*(4), 60–80. doi: 10.2753/RPO1061 -0405300460

Glozman, J. M. (2016). Vygotsky in applied neuropsychology. *Psychology in Russia: State of the Art*, *9*(4), 73–79.

Ivanova, A. (1976). *Obuchaushij eksperiment kak metod ocenki umstvennogo razvitiya detej (metodicheskie rekomendacii) [Teaching experiment as a method of assessing cognitive development (guidelines)]*. Moscow.

Nikolaeva, V. V. (2011). B. V. Zeigarnik and pathopsychology. *Psychology in Russia: State of the Art*, *4*(1), 176–192.

Oleshkevich, V. I. (1997). *Genesis of new psychotechnical culture*. Moscow.

Oleshkevich, V. I. (2002). *History of psychotechnics*. Moscow.

Oleshkevich, V. I. (2011). Cultural-historical analysis in the western "psychotheraputic" psychology and new forms of cultural-historical psychology. *Cultural-Historical Psychology.*(1), 99–107.

Oleshkevich, V. I. (2016). *Psychology as psychotechnics*. Moscow.

Podolskiy, A. (2012). Development and learning. In N. Seel (Ed.), *International encyclopedia on of sciences of learning* (pp. 944–950). New York: Springer.

Rubinshtein, S. Y. (1965). Ispol'zovanie jeksperimental'nogo metoda dlya izucheniya psikhopatologicheskih yavlenij [Using an experimental method to study psychopathological phenomena]. In *Voprosy e'ksperimental'noj patopsikhologii [issues of experimental pathopsychology].* Moscow.

Shhedrovickij, G. P., Rozin, V. M., Alekseev, N. G., & Nepomnjashhaja, N. (1968). *Pedagogika i logika [Pedagogics and logic]*. Moscow (in Russian).

Sokolova, E. T. (1976). *Motivaciya i vospriyatie v norme i patologii [motivation and perception in health and disease]*. Moscow: Izd-vo Mosk. un-ta.

Sokolova, E. T., & Burlakova, N. S. (1997). On grounds of case dialogue analysis. *Voprosy Psikhologii.*(2), 61–76.

Sokolova, E. T., & Burlakova, N. S. (2009). Reconstruction of inner dialogue in the psychotherapeutic process (a case study). In Y. Zinchenko & V. Petrenko (Eds.), *Psychology in russia state of the art. scientific yearbook.* (Vol. 2, p. 413–440). Moscow: Russian Psychological Society.

Talysina, N. F. (2001). Die tätigkeitstheorie des lernens als grundlage einer neuen didaktik. *Jeder Mensch kann lernen–Perspektiven einer kulturhistorischen (Behinderten-) Pädagogik, S*, 204–221.

Voloshinov, V. N., & Bahtin, M. M. (1993). *Marksizm i filosofiya yazyka: Osnovnye problemy sociologicheskogo metoda v nauke o yazyke*. Moscow: Labirint.

Vygotsky, L. S. (1978). *Mind in society: The development of higher psychological processes*. Cambridge: Harvard University press.

Vygotsky, L. S. (1983a). Diagnostika razvitiya i pedologicheskaya klinika trudnogo detstva [developmental diagnostics in a pedological clinic]. In *L.vygotsky, collected works*

(Vol. 5). Moscow: Prosveschenie.

Vygotsky, L. S. (1983b). Istorija razvitija vpf [history of development of hmf]. In *L.vygotsky, collected works* (Vol. 3). Moscow: Prosveschenie.

Vygotsky, L. S. (1983c). O psykhologicheskih systemakh. [on psychological systems]. In *L. s. vygotsky collected papers* (Vol. 1, p. 109-132). Moscow: Pedagogika.

Vygotsky, L. S. (1985). Defekt i kompensaciya [defect and compensation]. In *L.vygotsky, collected works* (Vol. 5). Moscow: Prosveschenie.

Vygotsky, L. S., & Luria, A. R. (1930). *Etudy po istorii povedeniya [studies on the history of behavior].* Moscow: Gosizdat.

Zeigarnik, B. V. (1958). *Narusheniya myshleniya u psikhicheski bol'nyh [disturbances of thinking in psychiatric patients].* Moscow: Gos. NII psikhiatrii.

Zeigarnik, B. V. (1986). *Patopsikhologiya [pathopsychology].* Moscow: Izd-vo Mosk. un-ta.

Zeigarnik, B. V., & Bratus, B. S. (1980). *Ocherki po psikhologii anomal'nogo razvitiya lichnosti [essays in the psychology of abnormal personality development].* Moscow: Izd-vo Moskovskogo un-ta.

Effectiveness Analysis of the 12 Step Recovery Program from the Standpoint of the Cultural-historical Approach

Marya S. Radionova   RADIONOVA.M@LIST.RU

The Moscow Research and Practical Centre for Narcology
Moscow, Russia

Abstract

Some provisions of Vygotsky's concept allow us to understand in a new way the effectiveness of the action of 12 step programs in the recovery of addicts. From our point of view, the program implements the following provisions of the cultural-historical approach: the basis for human mental development is a qualiitative change in one's social situation; training leads to development; thanks to directive training, the addicted people aquire self-regulation; the program promotes the formation of the agency. Becoming a subject of one's own activity for getting rid of this dependency and its reflection, a person begins to change his/her life in many directions. The article analyzes the tools of the program, allowing to develop a agency position in the process of recovery: the content of the program, the community itself as a collective teacher, specific members of the community as role models of a healthy lifestyle.

Keywords :   Cultural-historical approach; 12- step program; Community; Process of recovery of addicts; Developpement; Training; Agency position; Tools of the program.

CR☆RES

The cultural-historical approach of L. S.Vygotsky is traditionally applied to children's development. However, adult development is equally important and hinteresting. Different practices in the field of training, counselling, psychotherapy can be considered as practices of facilitating development (child or adult), and the theoretical basis for their analysis and organizations can serve as cultural-historical psychology (Kholmogorova & Zaretskii, 2011).

In the focus of our attention are not just adults, but people who suffer from chemical addiction, and who have decided to break up with their addiction and try to recover by abandoning psychoactive substances. Recovery from chemical dependency is a long process that affects biological, psychological, social and spiritual spheres of a person's life. This is a process of recovery and development, the reverse of regression in all these spheres, which occurs as a result of the disease. Figuratively, this process can be represented as a gradual climb uphill after a period of descent and fall, as shown in the Jellinek curve (Glatt, 1958; Jellinek, 1952).
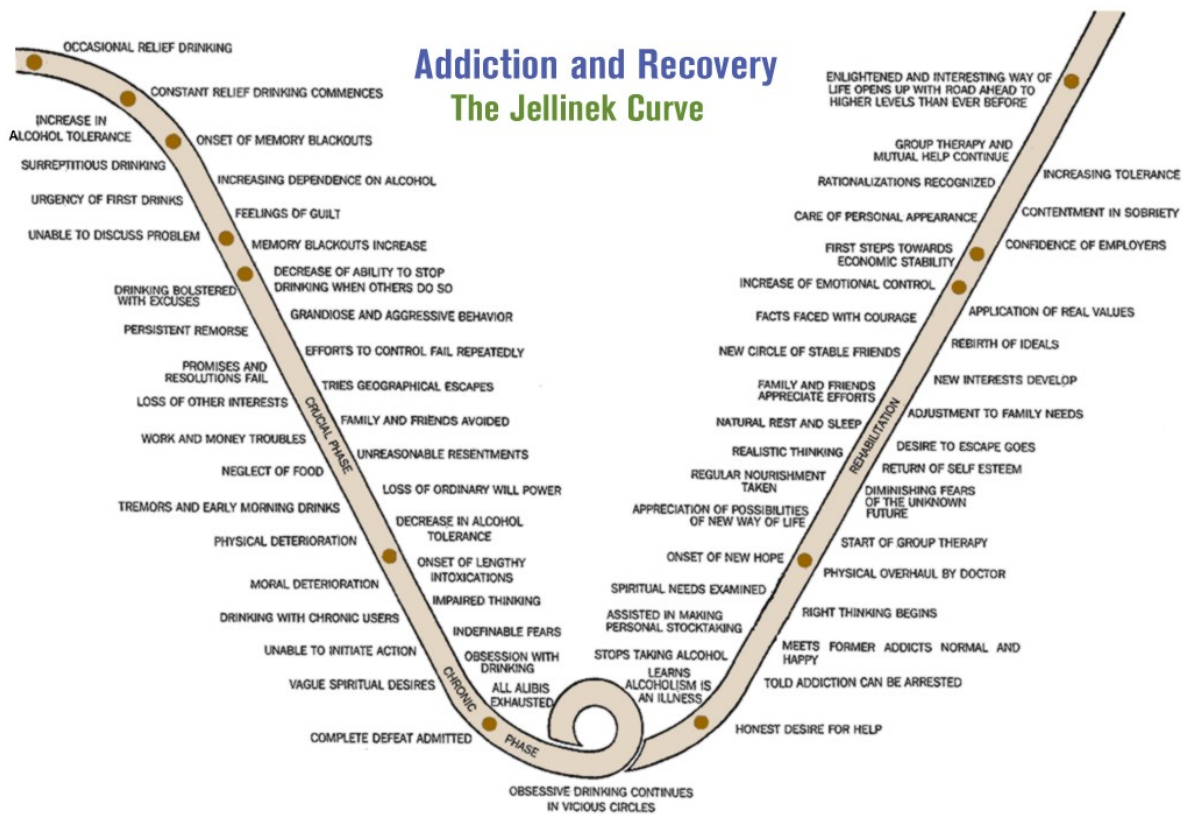

Figure 1. Addiction and Recovery. The Jellinek Curve

There is a telling parallelism between the symptoms of the disease and signs of recovery. As the disease develops, a person moves down the left curve, and the symptoms gradually increase. When he begins to recover (the right branch of the curve), these symptoms do

not just change, but are replaced by their healthy opposite. In order for this to happen, continuous personal efforts of the patient are required. Conditions for the beginning of recovery, in addition to the rejection of a chemical substance, are: seeking help from specialists with further treatment and rehabilitation and / or self-help groups of the AN and the AA, working under the 12-step program.

According to the definition of M. M. Kabanov, rehabilitation involves the restoration of the patient's personal, social and legal status (Kabanov, 1998).

All addicts to alcohol and drugs have symptoms of personality disorder and impaired social functioning, either as a cause or as a consequence of drug use (de Leon, 1999). In addition, addicts often have premorbid traits of personal immaturity (Pyatnitskaya, 1994). Personality immaturity manifests itself in a lack of responsibility, an external locus of control, "inadequate self-esteem, disproportionate claims, weak self-control, impulsiveness, inadequate forecasts and reflection, immature defense mechanisms, unformed moral concepts" (Pyatnitskaya, 1994, p. 394).Therefore, simple recovery from the disease is not enough. In the event that the disease occurred in adolescence or early adolescence, often there is almost nothing to restore, since a person has not yet had time to build his personal foundation. In any case, alcoholism and drug addiction stop the development of personality - deform and destroy its value-semantic and motivational sphere, cognitive processes, their range of its interests is narrowed, social ties are violated. Years later, since the onset of the disease, the addict at best can only partially maintain its previous level and potential. During of treatment and rehabilitation, one must try to restore various spheres of his life. But a reliable result can only provide development (personal growth), which is associated with the formation of an agency position of the addict[1]. An object position occurs when the person is the object of rendering "medical care", "psychotherapeutic influence", where the responsibility for recovery lies with the doctor, therapist, or relatives more than the most dependent. Agency position means that a person recognizes his illness and assumes responsibility for his recovery, but realizes that he needs the help of others, that he alone cannot cope.

On the one hand, in this approach one can see a contradiction: agency is, as it were, "defective". On the other hand, it is necessary to take into account the specific nature of this disease, since the addict personality cannot help itself, because it is dominated by a dependent "I", living in illusions and distorted reality. Therefore, when a person recognizes that he is sick and needs the help of others, this is a manifestation of a healthy part of his "I". This agency position differs from the unproductive position "I myself" ("I myself will stop drinking, using drugs, etc., when I will want"), inherent in the addict who

---

1. Agency (subjectness) - ability to independently create his own life, to make changes in oneself, and in a world that manifests itself in activity, communication and self-awareness (Stakhneva, 2010). The agency position - the position of the individual, which he can occupy in relation to various forms of activity (educational, professional, in communication with others, etc.). The agency position means an active and conscious attitude to the activity being carried out, and is considered as a resource and condition for maintaining and developing motivation for this activity (Zaretskii, 2014). The object position is manifested, when the individual primarily feels himself the receptor of external forces, demonstrating low activity and/or awareness.

protects his addict identity by the negation of his disease. It can be said that the formation of a agency position in the treatment of this disease is a key moment and one of the most difficult tasks, given the typical for addict anozognosia.

State programs for the treatment and rehabilitation of chemically dependent create an opportunity for recovery, and sometimes for development, thanks to a common humanistic approach, principles of respect for human rights and dignity, the principles of informed and voluntary consent to treatment and rehabilitation (http://www.ecad.ru/standarty-reabilitacii-v-narkologii.html). However, with the medical model of rehabilitation, the agency position of the patient is not always supported. This model is a priori more authoritative, because it relies on the authority and responsibility of the doctor.

One of the most successful strategies for helping the addicts is a 12 Step program. However, serious studies devoted to the study of the effectiveness of the AA, AN are unfortunately not available (Brun & Tsvetkov, 2014). This is due, inter alia, to the principle of anonymity, which hinders the conduct of scientific research, but not only with this. After more than 80 years of the existence of the 12-steps program debate over its effectiveness are still on the way. According to Sack, certified psychiatrist, narcologist, director of Elements of Behavioral Health, curator of several rehabilitation centers in Malibu and West Los Angeles, in Florida, Texas and New Mexico:

«There has always been a divide between two schools of thought on addiction: the scientific community and the recovery community. At least in part because of this divide, there is a lack of scientific evidence documenting how and why the 12-Step program works (though anecdotal evidence is abundant). Science has long dismissed 12-Step recovery, leaving a dearth of data where 75 years of history should provide much more, and 12-Step recovery has long rejected the need for and validity of scientific inquiry. But the necessary conclusion is not that 12-Step recovery doesn't work; rather, the research, to date, has been inadequate. It's unfortunate that 12-Step recovery is widely misunderstood and under-researched. Even less fortunate is the fact that these misconceptions drive people away from the process before they can evaluate whether the program might make a difference in their recovery. Like any single approach to addiction, 12-Step recovery isn't for everyone. But for those who give it a fair try, the potential payoff is great. Recovery is not just about stopping one isolated behavior (drug use) but learning a new way of life – and this is the real value of 12-Step recovery».

Indirectly, the effectiveness of anonymous communities is evidenced by the constant increase in the number of groups in different countries. Today the number of groups working on this program in more than 200 countries of the world exceeds 100 thousand. The main task of the program is not only getting rid of alcohol or drugs, but changing the person's view of the world, a complete spiritual reorientation (Brun & Tsvetkov, 2014). It is also included in many existing models of rehabilitation, for example, the Minnesota model. Although it was created without a reference to cultural and historical psychology, we tried to understand the conditions for the program effectiveness through the prism of Vygotsky's approach. From our point of view, the program implements the following principles of the cultural-historical approach:

1. The basis for human mental development is a qualiitative change in one's social situation (Vygotsky, 2000). An addicted person, in accordance with the program, finds him self in a special social environment - a community that conforms to certain principles and traditions. The addict finds himself encircled by other people who used to suffer from similar addictions, and who can share their experience of overcoming it.

2. Training leads to development (Vygotsky, 1956). The entire program is built as a sequential training. For each step a whole system of tasks has been developed, which the addict manages on his/her own, if necessary turning to a sponsor who performs the functions of an assistant consultant. Thus, learning becomes a joint activity of two people, in which development is forming according to Vygotsky. Thanks to directive training, the addicted people aquire self-regulation. Thus, another principle of Vygotsky is realized.

3. The formation of an agency position as a process of mastering one's own behavior through incentives-means (Vygotsky, 1983). Becoming a subject of one's own activity for getting rid of this dependency and its reflection, a person begins to change his/her life in many directions.

4. Thus, one more thesis of Vygotsky is confirmed: "one step in teaching can give a hundred steps in development" (Vygotsky, 1982, p. 230).

Discussion

Personal lifestyles change in particular social environment. Negative views, attitudes and roles are not acquired in isolation, and cannot be changed in isolation (de Leon, 1999). Changing the social situation is vital for the addicts. All previous social connections and relationships are distorted by his illness and require revision, improvement or exclusion (for example, one's circle of joint consumers).To begin the process of positive changes, an addict needs a secure supporting environment. What can constitute such an environment? People who do not have addiction problems?- Perhaps, but among them the addict will most likely feel himself like "an alien", as the bearer of a shameful experience, which is usually to be concealed, and this will not contribute to its integration and profound personal changes. Professionals-psychologists? - Perhaps, but occasional meetings with just one specialist, cannot replace the social environment. An illuminating idea of the founders of AA has been to create a community of recovering alcoholics, and later drug addicts, etc.

AA communities served as a prototype of therapeutic communities (TS), a model that was subsequently used in many rehabilitation programs for chemically dependent people. The community in this model, in contrast to AA and AN, includes not only recovering addicts, but also consultants for chemical addiction (the addict on the long periods of sobriety that passed the program), physicians, psychologists, teachers and administration. In both cases of AA and AN, the community acts as a supportive safe environment for building new healthy, open and honest relations. Other addict members of the group who

have different periods of sobriety and different progression status within the program – act to the beginners as a "mirror", reflecting the process of the changes that are coming to them, as well as the difficulties and problems that he will encounter along the way. This identification is important for the changes needed: it is easier to identify himself with another addict than with a healthy person. In the community, the recovering addict receives the social support he needs. The quality of this support, its availability and intensity are crucial. Using drugs, an addict can also receive social support from joint consumers, from co-dependent family members, which, nevertheless, aggravate his illness, and does not help get out of it. In contrast, social support in the communities of AA and AN stimulates the process of positive changes. This is because all members of the community are united by a common activity – recovery. Those who have advanced in this process share their experiences with the newcomers. The experience of others clearly shows that recovery is possible, that it is attractive and how it can be achieved. The availability of support is associated with the possibility of visiting groups. There are a number of principles of AA and AN, among which is the recommendation "never to be too far from the place of assembly or from a person from the community to talk to" (Gorski, 2009). The intensity of support is related to the frequency of meetings' attendance and of the mentoring intensity. Typically, the newcomer is invited to attend 90 meetings in 90 days, which means daily conventions within the group. Afterwards, meetings frequency is gradually reduced to one or several times a week. Mentoring means finding a "sponsor", a person who will share his experience in completing the steps of the program, and who can communicate with him in any emotionally stressful situation. This helps to realize another principle of AA and AN, which is used when working on stress - described by the "HALT": the convalescents should not be too hungry (Angry), lonely (Lonely) and tired (Gorski, 2009). A qualitative change in the social situation is facilitated by the inclusion of close dependent people in the process of change when they begin to visit the Al-Anon and Nar-Anon groups organized for relatives. This does not exclude, of course, the help of professional family psychologists and psychotherapists.

What kind of training occurs during the passage of the "12 step" program? How does this affect development?

Briefly, and addict learns how to recover, how to fully and comfortably live in sobriety. As T. Gorski writes about this: "Recovery is the process of development. We go through a series of stages. This gradual effort to master new, increasingly complex skills. (. . .) All the skills needed to live long and sober directed to the search for meaning and purpose in life. Sobriety is a way of reflection, a path of action, a way of addressing other people. This is the philosophy of life. It requires daily efforts all over the course of the recovery program" (Gorski, 2009). Training takes place through mastering the experience of those who successfully recover from chemical dependence. Already from the time of creation AA in 1935, even before writing 12 steps (1938) and 12 traditions (1946), the transfer of experience occurred through personal communication - one alcoholic shares his vision of the problem with another. One of the founders of the AA community, Bill, wrote about this process: "First you have to show them their bottom, from a medical point of view, not regretting, tough (...).Tell them about the obsession that makes them drink, andtheir allergy,

as a result of which they either go crazy or die if they continue to drink. Maybe, if these conversations come from another alcoholic (..), one can get to their "I", which is hidden so deep. Then you can try another medicine - the ethical principles that you learned from the Oxford Group". Such was the advice given to Bill by his psychiatrist who treated him from alcoholism, gave to him after Bill, having obtained some spiritual experience, gave up alcohol. Over time, in AA, and then in other anonymous communities, the experience accumulated of thousands of recovering people allowed to generalize knowledge about the process of recovery, as well as "about dead ends and treacherous ravines", which can be avoided by using their instructions (Gorski, 2009).

The process of recovery (= development) includes several directions: setting real goals for personal growth at each stage of recovery, managing one's psychoemotional state, reassessing past life experience, correcting relationships with people, resolving current problems without psychoactive substances, the ability to receive and provide social support, development of empathy.

This is served: the content of the program, the community itself as a collective teacher, specific members of the community as role models of a healthy lifestyle.

The content of the program includes the philosophy of the program, steps and recommendations for their passage, a developed system of tasks and slogans.

The philosophy of the program is based on the evangelical life principles, while not being religious, because it does not formulate doctrine, rituals, and has no leaders. She invites to the organization of a person's life in accordance with his faith and open for those who consider themselves unbelievers or agnostics (Savina, 2015). The principle of anonymity is one of the fundamentals. In Fox's view (1993), the Anonymous Communities program is based on the religious philosophy of the Oxford groups. It emphasizes the importance of awareness of her own powerlessness, the need for self-analysis, confession, an analysis of their mistakes, redemption, appealing in prayer to the source of the Force outside of her own self. It also places emphasis on humility and the suppression of its Ego (Korolenko & Dmitrieva, 2012). The importance of certain values for social learning and personal development is emphasized in the community. These values include: truth and honesty (in words and deeds), humility, trust, responsibility, personal responsiveness, concern for other members of the group (ministry and sponsorship), actions in place of illusions. The philosophy of the program is broadcast, including through short rules - slogans, which are clearly presented at meetings, and are also transmitted from person to person. The experience of many generations recovering from dependence is concluded in them.

Examples of slogans are: "First of all - the main thing!" (We are talking about recovery); "Live today, only today!"; "Live - and let's live another"; "Your head is a dangerous place, do not go there alone"; "We are claiming progress, not perfection"; "If you know everything - why are you here?".

Steps not only stop the dependence, but also guide the person along the path of self-knowledge, personal and social changes. For this, it is recommended that all 12 steps be

carried out in sequence. Let us explain some steps. For example, the first step involves recognizing your powerlessness against a drug, your defeat, abandoning the hope for your "I", which is dependent[2]. The second step requires to answer the question what to do next, and what solutions others have found in solving this problem, by exploring he experience of those who could recover to sobriety and live a free productive life. The third step teaches that, even going by way of others, a recovering person will not necessarily receive exactly the same results. Therefore, he should strengthen the belief that "the Higher Power" can have special plans for him and accept what is happening with humility. This step allows us to realize our egocentrism, accept the limitations of our will and desires. The fourth step calls to look at one self honestly, without deceit, acknowledging both own merits and shortcomings, realizing the reasons for what is happening to self. The addicts analyze grievances, feelings of guilt, fear, anger, the situations in which they are manifested, as well as "character defects". The fifth step can be compared with a confession. It removes isolation and guilt, allows you to find a realistic image of yourself. The eighth and ninth steps are concrete actions that allow patients to streamline their relations with others. They assume compensation for damage to those to whom it was inflicted during the period of substance use. The tenth step is continuation of introspection, and recognition of emerging errors, which means the need for daily attention to their actions and their motives.

The tasks developed for each step, in their content, are psychotherapeutic, aimed at increasing the level of self-reflection, reflecting situations, self-control, self-regulation, teaching the understanding and expression of emotions, tracking the manifestations of dependent thinking, and generally increasing the level of awareness. There are general recommendations of the program, for example, daily morning prayer, meditation, evening introspection, analysis of the day. Many dependent people who worked on the steps share the feeling that the program "sprouts", or, in the words of L. S. Vygotsky, it is internalized that the personality changes and this manifests itself in new ways of acting (Vygotsky, 2005, p. 344).

Community as a collective teacher. The community unites people who have a common problem, similar experiences, experience and a common goal - getting rid of addictions. It can say that the community is more than just the sum of individual members. How do they write Korolenko and Dmitrieva (2012): "At meetings of the society, emotions, intuition, "group thinking" and the influence of members of the community on each other are emphasized. During the meetings emerge a phenomenon of group consciousness, the exchange of experiences, personal stories". However, it is important to note that anonymous communities, despite having a certain anti-intellectual shade in their work, differ from cults, which was convincingly shown by Bufe (1991). At the beginning of the recovery path, regular participation in groups is the main guarantor of sobriety. This is the framework that keeps a person from "slide down" into dependence. This social environment, which protects him from loneliness, gives a sense of support and understanding. This is an

---

2. Powerlessness does not mean that the addict is inherently flawed, exempt from thinking for themselves or incapable of recovery, or that they can rely on their higher power to fix everything without taking steps to improve their own lives. That would contradict the entire premise of the 12-Step program. Instead, it is a statement about the nature of the disease, designed to remove the blame and shame that often prevent addicts from getting help, and to show addicts one way of reclaiming power over their lives (Sack, 2010)

opportunity to learn new experiences of life, change beliefs and personality traits, which leads to the transformation of identity (Korolenko, Dmitrieva, 2012). When the program is mastered, the community becomes a way of bestowal, self-realization and service. Service is the practice of helping groups of AA and AN. In a broad sense, it is helping another person, expressing gratitude for own recovery. In a narrower sense, this is a way of gradually accustoming to take responsibility: buying and distributing tea and cookies, cleaning the room after the group, working with the literature of the community (Savina, 2015). 12 traditions are especially important for supporting the work of communities. Among these traditions is the priority of the general over the personal, the spiritual basis of the program, anonymity, the lack of authoritarianism, violence, exploitation, non-involvement in monetary relations, a certain autonomy from public.

Specific members of the community are models of a healthy lifestyle. For "beginners", it is, first of all, "old men" who can overcome dependence and realize themselves. A sponsor, which the "newcomer" chooses himself, is usually such a role model . The sponsor shares his experience of recovery without imitating the professional help of a psychologist (Savina, 2015, p. 598). This is a very important element of the program to maintain motivation for sobriety. The sponsor - this is not a "guru" and his words are recommendatory in nature. The communication with the sponsor can rightfully be called cooperation. It stimulates the development of the subjective position of the convalescent, the main characteristics of which are awareness and activity.

From all the above it follows that anonymous communities are built on the awakening and development of the **agency position**. Mastery of the program is possible only if you have your own activity and awareness. In the beginning, as is known, addict is characterized by externality, negation and avoidance. However, to come to the program and start participating in it, one must already show activity and an initial awareness of the existing dependence as a problem. In the future these two components of the subject position are maintained and developed through the working tools of the program. It should emphasize the importance of the following tools of the program: the introspection, the seeking help, the ministry, the steps, the visiting groups, the praying, the meditating, the communicating with the sponsor. For the development of the subjective position of the recovering, such principles of the program as honesty, openness for the new and readiness for action in place of illusions are also important. Such actions can be: a simple phone call in case of emotional instability, visiting groups, helping others, serving. In the process of passing the program, addicts take full responsibility for their recovery. The key position in the 12-step program is: "It's not our fault (and nobody else's) that we became addicted, but our responsibility is to recover". An even more difficult task for the addict, which can be solved during the passage of the program, is mastering one's own behavior.

Concerning Vygotsky's thesis: "one step in teaching can give a hundred steps in development", we see the 12th step of the program, which involves the application of program principles in all cases and the delivery of these ideas to other people, is particularly significant.
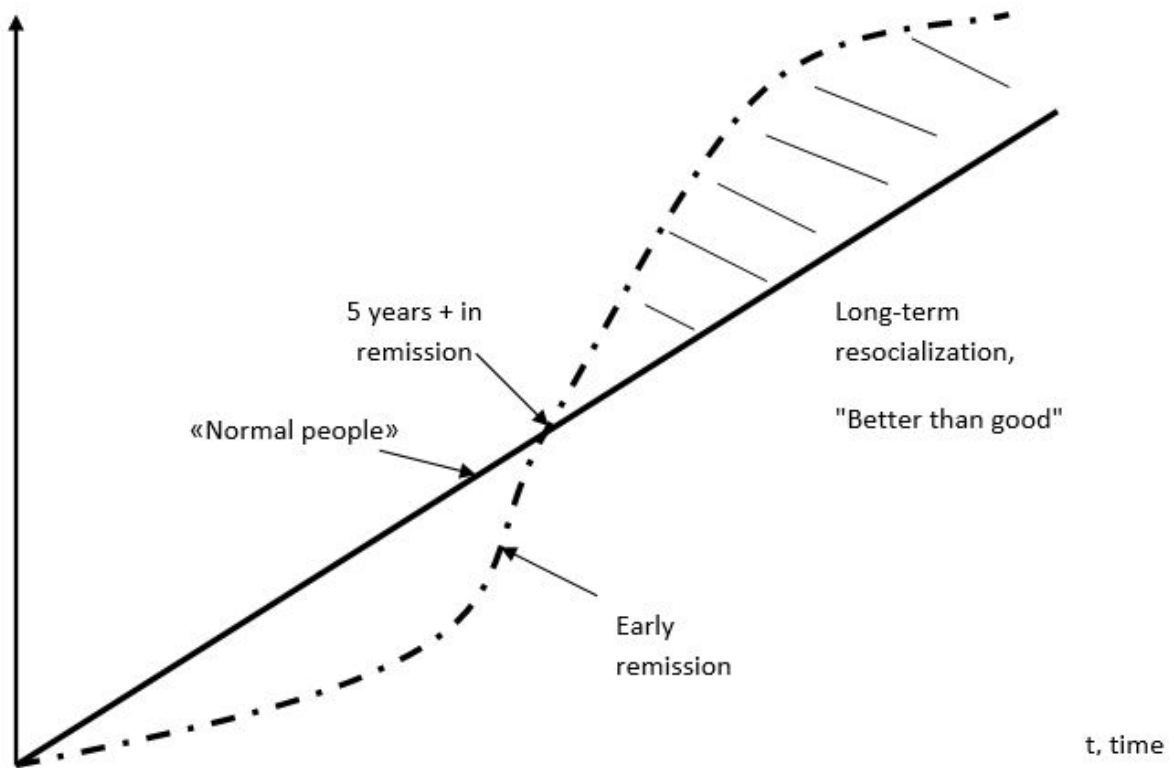
Figure 2. Change in personal potential of drug addicts when drug use is stopped.

With the course of remission, the personal potential of dependent people is sometimes more developed than that of "healthy people". This type of resocialization was called "better than just good" (de Leon, 2010). This phenomenon is associated with the hyper-compensation of psychological and personal qualities dependent on drugs and alcohol, which go into a state of stable remission.

Conclusion

1. The scientific approach of L. S. Vygotsky allows one to answer questions about how and why the 12-step program works.

2. The main advantages of this program are: the creation of a qualitatively new social support environment; The focus on development and personal growth, which are provided by the reorientation of the value-semantic sphere and the training of skills necessary for long-term, sober life.

3. Stimulation and development of the subjective position of the convalescent manifests itself in the early stages of recognizing the illness and assuming responsibility for recovery, and further on in mastering one's own behavior.

4. Changes in the life of addict, recovery-based 12 steps proceed according to several vectors of development: managing their psycho-emotional state, reassessing past life experience, correcting relationships with people, resolving current problems without psychoactive substances, the ability to receive and provide social support, the development of empathy.

5. The content of the program (program philosophy, steps, slogan rules), the community itself as a collective teacher, specific members of the community as role models of a healthy lifestyle and the bearers of the recovery experience, serve as the common tools for recovery.

6. Specific tools of the program that affect the development of the agency position are: self-analysis, appeals for help, ministry, work on steps, visiting groups, praying, meditating, communicating with the sponsor.

References

Brun, E. A., & Tsvetkov, A. V. (2014). *Practical psychology of dependence*. Moscow: Nauka.

Bufe, C. (1991). *Alcoholics anonymous: cult or cure?* San Francisco: Sharp Press.

de Leon, G. J. (1999). Therapeutic communities. In M. D. Galanter, D. Herbert, & M. D. Kleber (Eds.), *Textbook of substance abuse treatment.* Washington, DC: The American Psychiatric Press.

de Leon, G. J. (2010). Is the therapeutic community an evidence-based treatment? what the evidence says. *Therapeutic communities, 31*(2), 104-128.

Glatt, M. M. (1958). Group therapy in alcoholism. *Addiction, 54*(2), 133-148.

Gorski, T. T. (2009). *Passages through recovery: An action plan for preventing relapse*. New York: Simon and Schuster.

Jellinek, E. M. (1952). Phases of alcohol addiction. *Quarterly journal of studies on alcohol, 13*(4), 673-684.

Kabanov, M. M. (1998). *Rehabilitation of the mentally ill*. Moscow: Meditsina.

Kholmogorova, A. B., & Zaretskii, V. K. (2011). C mozhet li kul'turno-istoricheskaya kontseptsiya L. S. Vygotskogo pomoch' nam luchshe ponyat', chto my delaem kak psikhoterapevty [Can Vygotsky's cultural-historical concept help us to better understand what we do as therapists?]. *Kul'turno-istoricheskaya psikhologiya [Cultural-Historical Psychology]*(1), 108–118.

Korolenko, T. P., & Dmitrieva, N. V. (2012). *Addiction: Handbook*. Moscow: Institute for Counseling and System Solutions.

Pyatnitskaya, I. N. (1994). *Narkomanii [Drug addictions]*. Moscow: Meditsina Publ.

Sack, D. (2010). *Why-the-hostility-toward-the-12-steps.* https://www.psychologytoday.com/blog/where-science-meets-the-steps/201211/why-the-hostility-toward-the-12-steps.

Savina, E. A. (2015). *Spiritual thirst: Recovery from alcoholism and drugs*. Moscow: Meditsina Publ.

Stakhneva, L. A. (2010). *Understanding the subject and subjectivity in modern psychology. scientific notes of orel state university.* Moscow: Humanities and Social Sciences.

Vygotsky, L. S. (1956). Problema obucheniya i umstvennogo razvitiya v shkol'nom vozraste [Issue of learning and mental development in school-aged children]. In *Izbrannye psikhologicheskie issledovaniya [selected psychological works]* (pp. 438–452). Moscow: APN RSFSR Publisher.

Vygotsky, L. S. (1982). *Myshlenie i rech' [Thinking and speech], Vol. 2.* Moscow: Pedagogika.

Vygotsky, L. S. (1983). *Collected works in 6 volumes. Vol. 3. Problems of psychic development.* Moscow: Pedagogika.

Vygotsky, L. S. (2000). *Problema vozrasta [The problem of age].* Moscow: Sobranie socinenij.

Vygotsky, L. S. (2005). *Psihologiya razvitiya rebenka [Psychology of child development].* Moscow: Sobranie socinenij.

Zaretskii, Y. V. (2014). *Sub'ektnaya pozitsiya shkol'nikov po otnosheniyu k uchebnoi deyatel'nosti v raznykh vozrastnykh periodakh [Schoolchildren's position of agency towards the learning activity in different ages.* Moscow: Ph.D. (Psychology) Thesis.

Development of constructive response to frustration in adolescence using arts-based approaches

Elena Yangicher   yangicher.l@gmail.com

PhD in Educational Psychology
Moscow State University of Psychology & Education
Moscow, Russia

Abstract

The article focuses on the problem of the emotional development constructive response in adolescence, which is of increasing relevance within the context of the rise in negative social manifestations, changes in social situation of development. The aim of this research is to formulate a constructive response model's development to adolescent frustration from socially advantaged and disadvantaged groups using art-based approaches (specifically art therapy) combined with traditional psychological tests and modeling experiments.

The study draws on the concepts of L. S. Vygotsky about the peculiarities of adolescents' mental development and the role of this period in the formation of personality, as well as various aspects of affect and needs development in childhood (L. I. Bozhovich). The study considers the position of mental states as a particular psychological category and their (states) integrating function, conception of the regulation of mental states (N. D. Levitov), theoretical and experimental development for the diagnosis, management, and directed formation of the mental states (Yu. B. Nekrasova) as well as the concept of experiencing ("perezhivanie") as described by F. E. Vasilyuk.

A range of methods, combining quantitative and qualitative approaches were used in the study: video observation (outlined in the protocols); mathematical statistics; tests and modeling experiments. Experimental studies were carried out over a duration of five years within three different types of schools in the region of Moscow (n= 203, aged 13-15). One conclusion of the experimental studies, the author's program was implemented in a number of educational institutions in Moscow and other regions in Russia.

Keywords : Reactions to frustration; Adolescents; Psychological and emotional regulation; Mental states; Positive emotional response; Perezhivanie; Self-regulation; Arts-based approaches; Art therapy.

Introduction

Today, the problem of psychological and emotional regulation of a personality in difficult situations becomes evident. The need for psychological support is especially acute for adolescents from socially disadvantaged groups. Analysis of the studies in this area revealed that methods of psychological influence with positive effect on stable stereotypic reactions of adolescents to frustration remain underdeveloped. In defining frustration as a specific mental state that evolves under special conditions, we rely on methodological statements in Russian psychology about mental states, their regulation and directed formation (Levitov, 1967; Nekrasova, 1994; Prohorov, 1990; Vasiljuk, 1984). Such approach opens the door for developing positive emotional reactions to frustration with the help of special means. In this context, we view special means of art therapy as instruments of directed formation of positive mental states and reactions, and self-regulation skills. At the same time, our main focus remains on studying frustration in the context of psychological and emotional functioning of a personality and on regulation of negative states in the process targeted influence. This article is an attempt to analyze some aspects and results of the psychological correction program using the experimental method of Vygotsky (1966, 1998). The article describes the study that refers to theoretical and methodological statements of the Moscow psychological school based on the cultural-historical theory of L. S. Vygotsky that can be used for conducting researches in the tradition of this scientific school.

1. Defining Frustration as a Psychological Phenomenon

Frustration is a complex phenomenon. It has significant differences in definition in psychology. There are a number of key characteristics that differentiate frustration from other related categories of states – conflict, stress, concern, deprivation, etc., for example, the situation must include social influence on a personality and have a certain time characteristic (short time period) (Levitov, 1967; Lukin, 1993; Rosenzweig, 1944; Tarabrina, 1984). Also, important reasons for such phenomenon are internal conflict that gives rise to this state, and unsurmountable (in the subject's opinion) barriers on the way to the goal, caused by both internal and external factors.

Psychology developed a number of theories of frustration, such as a theory of frustration fixation (Freud, 1923), a theory of frustration regression (Barker, Dembo, & Lewin, 1943), a frustration-aggression theory (Dollard, Miller, Doob, Mowrer, & Sears, 1939), "heuristic" theory of frustration (Rosenzweig, 1944). All these concepts reveal controversy between views on the causes and effects of frustration, and diversity of understanding of this phenomenon.

In Russian psychology, the issue of frustration was first raised in the work of Levitov (1964b) who defined this phenomenon as a mental state. According to this statement, frustration is a human mental state caused by unsurmountable barriers on the way to one's goal and reflected in typical feelings and behavior. Such position is a special interest

for researchers in the context of development and formation of constructive reactions to frustration during positive changes in emotional states and reactions.

School psychologists and teachers often have to deal in their work with high frustration among children triggered by hurdles that affect personality development and fix inadequate reactions to frustration. Psychological assistance to adolescents has to aim at prevention and correction of nonconstructive ways of overcoming frustration. Most psychologists say that adolescence is the most difficult age period in emotional development of a personality (Bozhovic, 1968; Kon, 1989; Prihozhan, 2000; Rean, 1999). This age group is particularly sensitive towards external influences, that's why it is essential to create supportive social situation of development (Vygotsky, 1991, 1998) using special methods, and this may become a determining factor in the positive context of further personality development. Undergoing through internal conflicts with oneself, and with others has been called a common psychological characteristic of this age group, when an adolescent realizes himself/herself as a personality. L. S. Vygotsky notes a typical change in interests (dominants) of an adolescent. Russian authors point to the restructuring of established needs and the birth of new ones associated with the solution of internal conflicts and "change in types of activity" (Bozhovic, 1968; Leont'ev, 1971; Vygotsky, 1998). Due to high emotional vulnerability inherent in adolescence, this age group tends to have inadequate reactions that trigger abnormal behavior. Adolescents cannot control themselves because they are not acquainted with self-regulation tools. Hence, a special need for timely psychological correction arises.

In our study, we take as a basis the concept of frustration developed in Russian psychology (Levitov, 1967; Prohorov, 1990; Vasiljuk, 1984), according to which frustration is a mental state that develops in a situation of strong motivation to achieve a goal, find a solution, satisfy an important need, and the existence of obstacles to such achievement, and is manifested in typical concerns and behavior. Reaction to frustration is the response of an individual to insurmountable (objective or subjective) barriers that block the way to his/her goal, and it is accompanies by a wide spectrum of emotions (Krech & Livson, 1969; Levitov, 1967; Rosenzweig, 1944; Tarabrina, 1984; Vasiljuk, 1984).

We divide adolescents' reactions to frustration into constructive and non-constructive. *Constructive reactions to frustration* are characterized by adequate and active behavior, awareness of the situation, and focus on finding solution depending on the subject's capabilities. Nonconstructive reactions are manifested in denial of an adequate solution, recourse to self-defense reactions, focusing on the obstacle, emphasizing the guilt, and accusation of others.

Development of constructive reactions to frustration is driven by: regulation of the emotional state; selection of efficient strategies of reaction; resilience to effects of difficult situations; individual and typological characteristics of a personality; specific needs and motives; mechanisms of volitional regulation (Levitov, 1964a, 1964b, 1967; Rosenzweig, 1944, 1945; Vasiljuk, 1984, 1991). The above factors contributing to develop resilience of an adolescent and frustration mean potential positive changes in reactions to frustration. So, provided a targeted influence is applied.

Our study is based on the theory of frustration as a mental state, which makes it possible to study reactions to frustration only, when by frustration, it meets everything that the source of frustration provokes, including the mental state, and this became the strategic idea of our experiment. The methodology for studying frustration was first developed by Rosenzweig (1945, 1976) who found main types and directions of reactions to frustration. For adolescents, we developed our own classification and singled out indications of constructive and non-constructive reactions to frustration in this age period.

Psychological characteristics of constructive reactions of adolescents to frustration are: 1) optimal intensity of frustration; 2) neutral reactions of necessary stubborn, ego defensive and obstructive dominant types; 3) reactions directed at oneself of a necessary stubborn type; 4) positive mental states as a background for reaction: calm, prudence, openness.

Psychological characteristics of non- constructive reactions of adolescents are: 1) high intensity of frustration; 2) reactions directed at surrounding environment – by the type of emphasis on the situation, fixation on obstacles, denial of one's guilt and accusation of others, insistent demand that another person find the solution; 3) reactions directed at oneself – by the type of self-accusation, by ego defensive type with self- justification and reference to circumstances; 4) negative mental states as a background for reaction: anger, annoyance, aggressiveness.

By defining reaction to frustration and its manifestation intensity as a stereotypic reaction, we assume that manifesting frustration is a norm and inherent to all humans having positive influence on social adaptation. At the same time, the high level of frustration leads to formation of negative personality traits in adolescents, as well as too low level. That's why, it is necessary to develop constructive ways of overcoming frustration in adolescence using special means and methods, which became the primary objective of our study.

2. Theoretical and Methodological Basis

The study draws on the concepts of L.S. Vygotsky about the peculiarities of adolescents' mental development and the role of this period in the formation of personality, as well as various aspects of the development of affect and needs in childhood (Bozhovic, 1968). The study considers the position of mental states as a particular psychological category (Levitov, 1964a, 1964b) and their (states) integrating function, the conception of the regulation of mental states (Prohorov, 1994, 2002); theoretical and experimental development for the diagnosis, management, and directed formation of the mental states (Nekrasova, 1994); classification of reactions to frustration (Levitov, 1967; Rosenzweig, 1945); the theses about using art therapy in development of positive emotional reactions of a personality as well as in self-expression and self-realization in the art products (Kramer, 1975; Malchiodi, 2003; Naumburg, 1973); the concept of experiencing ("perezhivanie") as described by Vasilyuk (1984).

Seeing frustration as a mental state makes it possible to change reactions to frustration by regulating these states. The issue of development and preservation of constructive reactions via mechanisms of mental state regulation becomes increasingly urgent in light of several studies that confirmed the change in and even break of stable personality traits under the influence of mental states driven by difficult relations, critical situations and labor activity. It has been proved that recurrent frustration gives rise to new negative stable personality traits (Kuzmina & Yakunin, 1997).

Mental states are characterized by post-situational reproductibility (like conditioned reflex) and, if relevant and recurrent, can transform into stable personality traits (Kulikov, 1997; Levitov, 1964a, 1964b, 1969; Prohorov, 1990, 1994, 2002; Sosnovikova, 1972). In childhood, a personality is a combination of different fragmentary mental states, and only through work, learning and experience an integration of separate states into personality traits takes place (Levitov, 1969). Character dynamics – acquisition, change, or liquidation - goes through the transitional phase of the mental state. Due to the transitional position of the mental state there is a need to look for methods, means and conditions in order to translate productive states into personality traits (Levitov, 1969; Nekrasova, 1994).

Both character and mental state are difficult to simulate without support on previously analyzed information about human being: there are no identical characters, as there are no identical mental states. However, the changing process may differ – a mental state translates into a personality trait only after its preservation. In some cases, the process is slow (repeated preservation is required), in others – rather quick (Levitov, 1969).

Frustration, like all mental states, can be temporary, transient or typical for human nature. A situation is the trigger for both positive and negative states (Prohorov, 1990, 1994). The situation of frustration works in the same way. The process of living through a situation involves mental states that exist in "actual time period". These states bind processes and personality traits, ensuring adequate response to the situation thanks to its integrating function (Prohorov, 1994). The ongoing time period linked to the person's social functions lasts from hours to days and has an integrating function that forms a personality psychological system.

In longer time periods (a month/a year and longer) mental states regulating mental processes lead to development of stable personality traits, character, and influence the behavior, including the response to frustration. The adolescents tend to have mono states with a large emotional component. By duration, such states are largely either actual (seconds/minutes) or ongoing (hours/days) (Prohorov, 1990; Prokhorova, 1996). Thus, arises the need to look for means of actualization, fixation and development of positive mental states among adolescents.

Our research is aimed at studying frustration through the psychological and emotional functioning of a personality. In this context, the process of mental state regulation, reflected in full in system and function model of Prohorov (2002), draws special interest. One of the most important experimental studies is the work by Nekrasova (1994) on diagnostics, control and directed formation of mental states during social rehabilitation of a personality.

The regulation structure for mental states builds up in the process of life activity, learning, overcoming situations, adaptation to surrounding conditions. Such structure has an integrating function, hence helps organize mental processes. Mental states provide background for mental processes. Mental states and personality traits are interrelated: all traits are involved in the actualization of states that facilitate integration of traits in functional structure. The process of mental state self-regulation is based on integrating function, which provides for the unity of three: traits, state and process (Prohorov, 1994, 2002).

At the level of single state (single mental act) self-regulation is ensured by using particular methods. For example, transition from one state to another (from anger to calm, etc.). Using relevant methods actualizes other state, and thanks to integrating function, a new psychological structure unfolds (processes – actual state – trait). This leads to change in the mental state image that is reflected in new activity, increase in productivity of mental processes, intensity of physiological reactions, etc., and is felt, reflected, and described by the subject differently than in underlying state (Prohorov, 2002). Based on the system and function model of A.O. Prokhorov, the model of single mental state regulation may look like in the Figure 1 below.
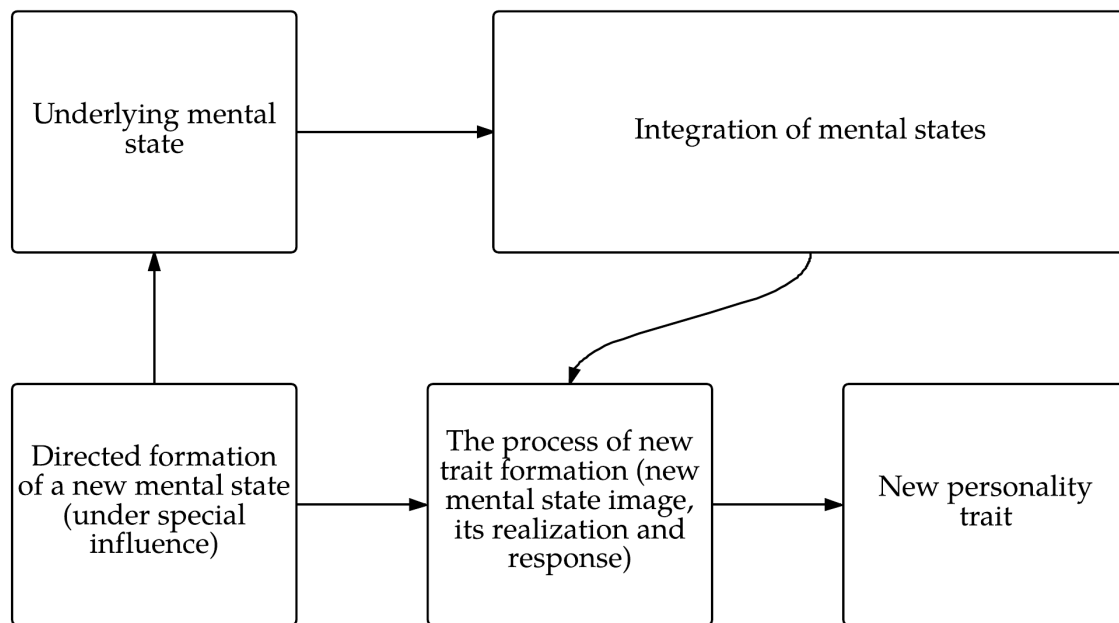

Figure 1. The model of single mental state regulation

The above model clearly demonstrates the importance of directed influence on mental state and its correlation with the process of new trait formation. Our study considers the directed influence approach to mental states (in particular, frustration) in order to develop constructive responses and new reactions (restructuring of existing stereotypes).

In his system and function model of mental state regulation A.O. Prokhorov describes mechanisms outlined by different authors. The basis of this process lies in the integrating function of the mental state that can be attributed to the mechanisms of mental regulation (Prohorov, 1994). The other components of the regulatory process are the image of actual state and the degree of awareness, the completeness and adequacy of this image. The mental image relates not only to activity, but also to system organization of human consciousness (Smirnov, 1981). It is the mental image that presents system of levels at which a person reflects his/her state as objective reality, and displays "an internal picture of actions" on state self-regulation (Dikaya & Semikin, 1984). In certain circumstances, the reflection of interoceptive signals coming out of the internal environment with the potential of becoming conscious may take place. Adam (1998) experimentally proved the existence of conscious "visceral perception", i.e. getting visceral information via verbal communication.

Thus, it is possible that under directed influence a new state image can be formed (based on almost unconscious feelings and perception at psychophysiological level). By using certain methods, a transition from one state to another at different levels of consciousness takes place. It is the "new" state that unfolds the process-traits-functions structure (Prohorov, 2002). One of the main mechanisms of self-regulation processes is a response that triggers not only mental regulation of individual processes (for example, biological response), but also of the entire mental state.

Another mechanism of self-regulation processes is reflection. According to a number of researchers, it is a universal mechanism of self-regulation process that "fixes" the activity process and enables conscious influence on this process. Reflection correlates with the highest forms of volitional behavior as realization of a life plan and with the highest forms of emotional experience, which results in "creative transformation" of oneself and one's own life (Vasilyuk, 1984). As a mechanism ensuring effectiveness of self-regulation, the subject's motivation can also be used (Prohorov, 2002).

To sum up, regulation of mental states is done with the help of integrating function of mental states, actual state image (degree of awareness, level of completeness and adequacy of the state), response, reflection, and motivation of the subject. The principle of mental state self-regulation is the foundation of formation of new traits. Under the directed influence the process of formation and fixation of states in stable traits accelerates significantly.

In the experimental part of our study the development of constructive reaction to frustration was considered through the prism of actual and ongoing time periods: actualization of situational states (sec./min.) and longer states (1-1.5h) that contribute to integration of mental states into the process of mental state formation. For targeted formation of positive (constructive) states, a number of methods, including means of art psychology, are used. One of the key therapeutic mechanisms of art influence on personality has been thoroughly considered by Vygotsky (1972) in "The Psychology of Art", detailing the phenomenon of the aesthetic response and cathartic experience, during which the power of passion is brought to a state of complete discharge, followed by a calming, purification (processed and purified). The esthetic catharsis lies in self-destruction of affects, their explosive reaction that

triggers the discharge of the accumulated emotions (Vygotsky, 1972). From the perspective of mechanisms of mental state self-regulation developed in Russian psychology by Kulikov (1997); Prohorov (1994, 2002) and others, art means, to our opinion, can be viewed as an instrument to form and fix positive states transforming into stable personality traits.

Art therapy has its characteristic features that differentiate it from other methods: self-expression (non-verbal communication channel, visual, plastic and audial expression), metaphoricalness, art and creativity (self-expression and self-realization in art products). During the "constructive art process" kids feel freedom of self-expression. Contact with art material integrates all feelings, strengthening one's "self", what is especially important for adolescents. The exclusive characteristic of this method is triadity, "three voices" of art therapy: an artistic image, a subject, and a specialist (Dalley, Rifkind, & Terry, 1993). It is resource-intensive as it lies beyond the subject's daily experience. The created artistic images help to express emotions at symbol level, realize and verbalize them.

Foreign researchers of modern times (Essex, Frostig, & Hertz, 1996; Moriya, 2000; Riley, 2004) believe that art therapy is the most appropriate way to work with adolescents, with the most successful long- term psychological correction implemented at schools. Art is a natural sensor mode of expression for humans, as it involves physical contact, smelling, and other senses within the sensor experience of a person, with drawing and other art activities mobilizing sensor memory like no verbal expression or interference can mobilize (Malchiodi, 2003; Steele & Raider, 2001). Art therapy process triggers catharsis of esthetic reaction, during which an adolescent defines negative poles of emotions, responses to them and then dispose of them. It was noted, that children from dysfunctional families become calmer during art process and experience "hypnotic state" (Malchiodi, 2003).

Based on the definition of frustration as a mental state it is possible to look at correction of negative reactions from the perspective of mental state regulation by directed influence on them with the help of special means. This position became the basis of theoretical model of the research. The author refers to the assumptions of Russian psychologists about integrating and regulating functions of mental states (Kulikov, 1997; Levitov, 1964a, 1964b, 1969; Prohorov, 1994, 2002; Sosnovikova, 1972), meaning that positive states and reactions can be fixed in personality traits of an adolescent, if special influence is applied (Levitov, 1969; Nekrasova, 1994). Some of important features of mental states are dynamism and post-situational reproducibility (Nekrasova, 1994; Prohorov, 1994). Therefore, the correction process is viewed as a natural psychological and pedagogical experiment, which actualizes certain mental states leading to positive changes.

3. Theoretical Model

The comparative analysis of the above-mentioned theoretical statements helped develop a proprietary theoretical research model (Fig. 2) and to outline main psychological factors that determine evolution of constructive reaction of adolescents to frustration (under di-

rected influence by means of art therapy). The resulted theoretical model became the basis for the experimental part of the study.
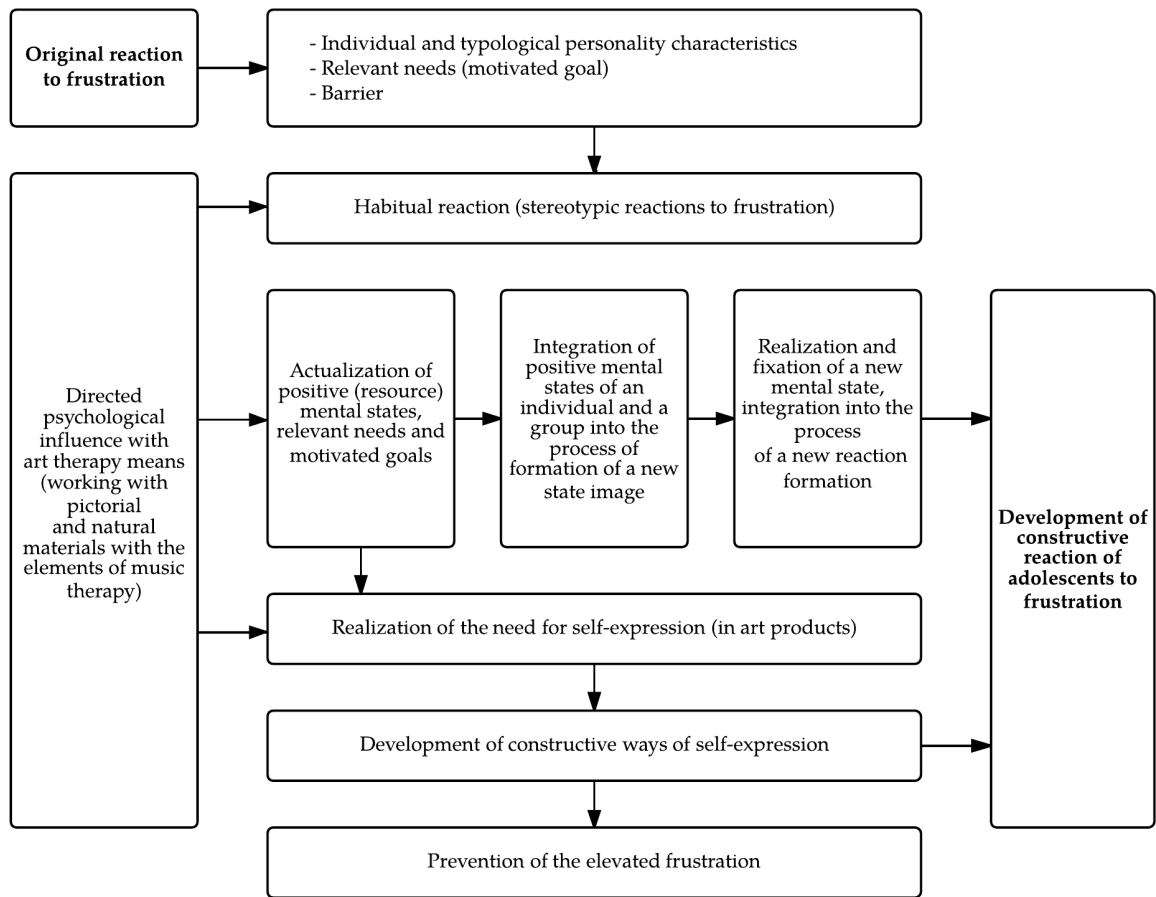

Figure 2. Theoretical model of development of adolescents' constructive reactions to frustration by means of art therapy

The outlined factors drive changes in stereotypes of emotional (in a state of frustration) reactions and have the following characteristics: 1) emotional regulation of reactions during directed formation of mental states: integration of positive states into the process of formation of personality traits (transition from one state to another, tendency to changes in negative states and reactions and replacement of them with positive ones, and, as a result, restructuring and fixation of the reaction); 2) mental regulation of the entire mental state: building of the state image at different levels of consciousness (conscious and unconscious), realization of the state during the feedback phase and, thus, fixation of the constructive reaction; 3) realization of need for self-expression and, consequently, prevention of elevated frustration.

The outlined psychological factors determining the evolution of constructive reactions of adolescents to frustration are based on the theory of frustration as a mental state (Levitov, 1967), system and functional model of mental state regulation (Prohorov, 2002), ex-

perimental works on management and targeted formation of mental states (Nekrasova, 1994), theoretical statements of the art therapy classics, Kramer (1975); Naumburg (1973) and others.

Under the directed psychological influence on a stable stereotypic reaction and its typical manifestations with art therapy means, the hierarchy of components of the reaction to frustration shifts towards a more constructive one, and a positive change in frustration intensity is recorded. The directed psychological influence includes: constructive overcoming of simulated barriers during the art therapy process, directed formation of positive emotional states to be fixed further as personality traits through engagement with pictorial and natural materials (with the elements of music therapy).

The formation of a new reaction implies: actualization of positive mental states, creation of a new state image (awareness degree, its completeness and adequacy, feedback). The integration of positive mental states into the process of a new reaction formation includes the tendency to changes in, fixation and replacement of negative states with positive (constructive) ones.

The change in the negative reaction stereotype occurs during fixation of positive mental states, regulation and restructuring of the reaction during the art therapy process based on the creativity potential of the subject. Specially organized creative activities stimulate self-expression and self- realization of adolescents in art products becoming the factor that prevents and reduces elevated frustration. Art therapy process encourages catharsis of esthetic reaction as relevant feelings and states are given response.

Created visual images serve to help adolescents to work through their desirable projections and past experience in the course of changing these images (on a physical level). Fixation of the constructive reaction is ensured by the awareness of the new state image through activation of sensory channels when using combination of special art therapy means: pictorial and natural materials with music elements (visual, kinesthetic and audial channels are involved). The tendency towards fixation is secured by verbal response (repeat of the positive part of the process) and reflection. The format of the exercises (thematic art therapy group) contributes to fixation of a new positive experience (adolescents watch, listen, and cooperate, facilitating feedback in the group). Theoretical modeling of the development process for adolescents' constructive response to frustration by means of art therapy became the basis for the experimental part of the study.

4. Objectives and Methods of the Study

The study used a combination of methods with both quantitative and qualitative approaches: observation; video observation (outlined in the protocols); methods of mathematical statistics (one- way analysis of variance, Student's t-test, Chi-square test); ascertaining and modeling experiments (development and implementation of a special art therapy program that includes author's methodology "Floristic collage"). The work used diagnos-

tic methodologies: methodology of studying reactions to frustration by Rosenzweig (1945) that defines types and directions of reactions; verbal frustration test by L. Sobchik (for adolescents) that reveals the intensity of frustration; modified matrix for defining consolidated measure of social well-being of a child.

The purpose of the work was to study changes in adolescents' reaction to frustration under directed influence by means of art therapy, and the expected result was the development of constructive reactions to frustration.

The general hypothesis was that special means and methods of art therapy (the author's art therapy program that includes engagement with pictorial and natural materials with the elements of music therapy) contribute to development of constructive reactions of adolescents to frustration, with positive implications for directedness, type, and intensity of the reaction.

Objectives of the study: 1. Explore the peculiarities and specifics of reactions to frustration of adolescent schoolchildren from socially advantaged and disadvantaged groups, and find indications of constructive and non-constructive reactions based on age characteristics. 2. Define main psychological factors that determine development of constructive reactions of adolescents to frustration (under directed influence by means of art therapy) and, based on them, build a theoretical model of constructive reaction development for adolescents. 3. Develop and test a special art therapy program (that includes author's methodology "Floristic collage") aimed at development of constructive ways of emotional reaction to frustration by directed formation of positive mental states and reactions. Describe the nature of influence of the developed program on adolescents' reactions from socially advantaged and disadvantaged groups. The research was conducted at three schools in Sergiev Posad, Moscow region: Secondary School No 22, Evening School, and Gymnasium School No 5. The total number in the selected groups was 203 pupils from 8th and 9th grades. The adolescents from socially disadvantaged group included the most vulnerable category of children being under risk due to poverty, special educational needs, family problems and unlawful behavior. The research took five years.

5. Experiment

The experimental study consisted of 4 stages: 1) ascertaining experiment – diagnostic study; 2) check phase – mathematical analysis of the findings, composition of control and experimental groups, confirmation of diagnostic value of sample groups that enter into the modeling experiment; 3) modeling experiment – development and testing of a special program aimed at positive changes in adolescents' reactions to frustration; 4) interpretation stage (analysis of the results of the modeling experiment) – second diagnostic snapshot of control and experimental groups, interpretation of data, and drawing conclusions. Each stage has its own objectives, goals, hypothesizes, and applied methods. The general hypothesis of the ascertaining experiment was based on the assumption that most adolescents from upper secondary school tend to have non-constructive reactions to frustration – both

in socially advantaged and disadvantaged groups. In ascertaining experiment, 203 adolescents took 8 part (110 – from a socially advantaged group, and 93 – from a socially disadvantaged group). The methods used were Rosenzweig test for studying reactions to frustration, verbal frustration test by L. Sobchik, methods of mathematical statistics (One-way analysis of variance, Student's *t*-test).

The analysis of the ascertaining experiment results showed that in both social groups non- constructive reactions prevailed (combination of the dominant type and direction of reactions is characterized by explicit aggressive behavior – active denial of one's guilt and accusations of others). However, the degree of frustration differs significantly in two groups (by significance level $p<0.01$ according to Student's *t*-test). Frustration level of the adolescents from the socially advantaged group is close to norm, while that of adolescents from the socially disadvantaged group is elevated.

At the second stage of the experiment, two groups were formed – control group and experimental group (separately within each social sampling) – to trace the forming effects of the developed program. During the check phase, a lack of relevant differences between socially advantaged and disadvantaged groups was detected, and this confirmed the diagnostic value of the data obtained at the forming stage of the experiment.

At the third stage of the study, the modeling experiment was conducted: a program aimed at making positive changes in emotional reactions of adolescents from the experimental groups was developed and implemented. The forming experiment was based on the development model of constructive reactions of adolescents to frustration by means of art therapy (Fig. 2). Theoretical model laid the ground for the development of a special program, implemented in the experimental groups, that implies active influence on psychological characteristics being studied (type, direction, and intensity of reactions).

In the modeling experiment 129 adolescents of 13-15 years old participated. They were divided into 4 groups:

- Experimental group of adolescents from socially advantaged group – 37

- Control group of adolescents from socially advantaged group – 38

- Experimental group of adolescents from socially disadvantaged group – 27

- Control group of adolescents from socially disadvantaged group – 27

The *purpose* of the experiment was to examine how the developed program influences adolescents' reactions to frustration. The *hypothesis* of the experiment was based on the assumption that the author's special art therapy program has positive influence on direction, type and intensity of constructive reactions of adolescent schoolchildren to frustration.

At the fourth stage of the experiment, the second diagnostic snapshot of experimental and control groups was made using methods from the first analysis.

6. Program

Program on "Development of constructive reactions to frustration among adolescents by means of art therapy" consists of 3 sections (14 sessions to be held at school): 1) Introduction section (4 sessions), 2) Main section (4 sessions), 3) Consolidation section (6 sessions). The realization takes 1-1.5 hours a week for each group.

Program objectives: 1) development of positive mental states and imbedding them in adolescents' reactions and in traits being developed; 2) development of constructive means of self-expression among adolescents; 3) development of constructive reactions to frustration.

Program tasks: 1. Acquisition of self-regulation skills. 2. Learning constructive ways of self- expression. 3. Realization of adolescent need for self-expression (in constructive forms). 4. Prevention of elevated frustration.

Main phases of the program: 1. Actualization of positive (resource) mental states, relevant needs and motivated goals. 2. Integration of positive mental states of a personality and a group in the process of new state pattern formation. Realization of the need for self-expression. 3. Restructuring and recognition of new reactions. Preservation of positive tendency toward development of constructive reactions to frustration.

In the context of development of constructive reactions to frustration mechanisms of psychological protection as means of personality adaptation play a major role. Frustration sets in motion a whole set of defense reactions, and one of them takes a central place. The most constructive way of adaptation contributing to personality development would be conscious, active reaction aimed at resolving frustrating situation. Development of constructive reactions is driven by: emotional state regulation; selection of productive reaction strategies; resilience to difficult situations; personality traits according to individual types; differences in nervous system; specifics of needs and motivations sphere; mechanisms of volitional regulation (Kuzmina & Yakunin, 1997; Levitov, 1967; Rosenzweig, 1944, 1945; Tarabrina, 1984). Special methods of art therapy may become means of self-regulation development in the process of directed formation of positive mental states and reactions to frustration.

Directed actualization of positive (resource) mental states among adolescents has become an important part of the art therapy process in the developed program. During exercises, negative psychological defense is withdrawn, and the hidden state becomes open (reacting to emotions — desire to speak out). The process of recognition of one's state pattern is actualized on different levels (conscious, unconscious) thanks to feedback, positive impression of one's potential is built, and constructive ways of self-expression are developed. During exercises, the following processes take place: transformation of negative states into positive (resource) ones, search for solution and decision- making in the art product. Positive mental states are integrated into the process of formation of sustainable psychological traits. Need for self-expression is fulfilled which contributes to preventing frustration and developing constructive reactions to frustration among adolescents.

The program was designed to give adolescents an opportunity to overcome created barriers during the art therapy process, and this was one of the specific tasks of the experiment. The aim of situations simulated by the psychologist was to frustrate the emotional sphere of adolescents. During exercises, emotional reactions underwent certain changes: 1) initial reaction to the exercise; 2) search for solution and making decision; 3) completion of the exercise overcoming barriers during constructive art process; 4) unconscious fixation of the reaction in the process of creative self-expression (catharsis of the reaction and verbal response). In offered exercises, frustration was triggered by the following factors: unusual nature of the tasks (work with natural and pictorial materials, special background music, tactile contact with natural material, sparking off a range of emotions unknown to adolescents before). Targeted usage of music therapy elements was intended to provoke catharsis and counter- catharsis states while experiencing ("perezhivanie") both positive and negative emotions (overcoming frustration). The main purpose of using music therapy elements in the program was linked with the fact that dynamics of music determines dynamics of states.

1st section of the program. During the first phase of the work, demonstrated dynamics is seen in actualization and growth of positive states through their multiple repetition while doing exercises. After repeatedly overcoming barriers in art therapy exercises, positive (constructive) states were noted: satisfaction, interest, joy, success, etc., meeting the objective of the preparation phase and reflected in willingness and desire to explore oneself more deeply. The end purpose of this phase was to response to those emotional states, remove psychological barriers, become able to go deeper in understanding oneself, one's psychological problems and specifics, boost motivation to further participation in psychological correction.

2nd section of the program. Tendency to constructive reaction to frustration. In the second stage, mental states of the participants (directedness, intensity and other characteristics of emotions) became common for the whole group as they are simulated in the same situation for all members of the group (exercises are designed to be done in a group accompanied by special music). The productivity of exercises is ensured by the consolidation of the group at the first stage. By the end of the second section of the program we saw communication readiness, decisiveness to face challenge/overcome barrier and materialization in the artistic image, signs of fixation positive emotions through verbal feedback. A new group mental state is formed: the adolescents become emotionally open and get more confident and ready to move to the third stage.

3rd section of the program. Fixation of positive mental states and transformation of positive (constructive) states into the process of formation of constructive reactions. The main strategy was to repeat positive mental states in each new exercise, moving from one state to another, and, as a result, integrate positive states into the process of formation of stable traits. Specific feature of states appearing in response at the third stage is their common nature for the whole group. Experiencing satisfaction, success, inspiration, boost at both group and individual level, creative work and co-work with verbalization and fixation of new positive states and feelings.

Author's art therapy methodology "Floristic collage" (2nd and 3rd sections of the program, 10 sessions) was used in exercises with natural materials to form positive mental states and reactions among adolescents, deepening art therapy effect and, in addition, activating sensory systems: visual, audial, and kinesthetic. The methodology uses selected psychological factors that determine positive change in reaction to frustration and bases on the leading factor: integration of positive mental states into the process of formation of personality traits through deep art therapy influence (activation of sensory systems) (Yangicher, 2009). The more perceptive channels are engaged in the process of influencing on mental states of adolescents, the more effective is the transition from mental states to the process of formation of stable traits. Thus, along with other art therapy means (drawing activities, music therapy) our experimental study was focused on using natural materials that influence emotional sphere of an adolescent.

Sessions with natural materials are aimed at creating positive mental states such as calm, confidence, satisfaction, interest, joy, inspiration, etc. that, being repeated in the following sessions, are reflected in the adolescents' art works. We see floristic material as resource-intensive for art therapy in respect of adolescents. Foreign researchers point out that the growing techno-genetics influence deprives children of communication with nature, discourages personal contacts and leads to social closure. They stress that in this context, art therapy has the most effect in problem solving, which opens the door wide for the method in the future (Klorer, 2009). Consistent contact with different art materials invoking kinesthetic sensations and perceptive affects, helps to work on emotionally relevant situations and traumatic experience at sensory level (Malchiodi, 2003). Contact with natural materials lays the ground for producing the above effect, as it is inevitably associated with learning the texture, form, color, smell, etc. and thus activating visual, audial, and kinesthetic channels.

In order to build an experience, each exercise provokes frustration caused by unusual requirements, difficult creativity tasks to be completed, the need to find solution on one's own. During exercises, creative self-expression is activated, and new experience in constructive overcoming of model barriers is obtained. By presenting art products to the group, verbalizing the experience received in the form of states, analyzing key moments of work, the adolescent repeats the positive part of the process at the end of the session fixing new constructive reaction to frustration in his/her experience. Therefore, the following factors contribute to development of constructive reactions: solving an unusual problem at the emotional level, activation of leading sensory channels and tactile sensations; the factor of "living through" the artistic image, which teaches how to think outside the box and destroys stereotypes in reactions; the group factor (adolescents watch, listen and cooperate). All sessions are accompanied by instructions, verbal feedback, discussions with other participants.

6.1 Session blocks (as per the main sections of the program).

Objectives of the 1st section: establish personal contacts in the group, consolidation of the group, build trust relationships, motivate the group to complete tasks, alleviate emotional tension (relaxation); relieve from negative emotions and states; realize the experienced emotions and express them in the artistic process.

1st session block.

Session 1. Drawing in a circle. Group drawing in turns (consolidation of the group, realization and verbalization of relevant emotions).

Session 2. Drawing of figures (continuous blind drawing of geometric figures). Alleviation of emotional tension (relaxation); relief from negative emotions, verbal self-assessment of the experienced states.

Session 3. "Language of sound and color" (including elements of music therapy). Expression of emotional state induced by music in drawing; simulation of frustration (unusual nature of tasks): to picture psychological and emotional states (fear, anxiety, joy, sadness, calm, happiness, etc.) using art means.

Session 4. "Me real, and me ideal". Picturing one's inner self: real and ideal, comparison of images. Working on positive and negative mental states, personality traits. Overcoming internal conflicts, realizing them and finding solution in art products. *Materials used.*

In exercises of the 1st section adolescents use sheets of paper and colored pencils (session 3 is accompanied by compositions of *Mussorgsky, Schubert, Mozart, Vivaldi, Tchaikovsky*).

Objectives of the 2nd section: integrate positive mental states of an individual and a group into the process of formation of a new image; activate tactile sensations and sensory perception during targeted engagement with texture of the materials used in order to speed up the integration process; realize the need for self-expression in art products; reflect realized feelings in works with natural materials. *Materials used in the 2nd and 3rd session blocks.* Adolescents use floristic material of different texture (leaves and bark, spruce branches, moss, feathers, seashells, small stones, dog-rose branches, prickles, petals, chestnuts, etc.). Cardboard boxes serve as a base for collages. In the 2nd block floristic material may be glued to the base; in the 3rd block the usage of glue is not recommended what is explained by specific objectives of the methodology. Session 9 is conducted under the accompaniment of nature sounds: wind, rain, storm, heat, summer morning, birds in the wood, etc. (at the discretion of the group supervisor). Session 10 uses compositions "The Seasons: Autumn Song" by Pyotr Tchaikovsky and "The Four Seasons: Winter" by Antonio Vivaldi.

2nd session block.

Session 5. Working with collages: "Rhythm". Introduction to the technique and art means of a floristic collage (texture, form, line, spot, silhouette, color, contrast, rhythm, integrity, harmony, artistic image). Reflection of feelings and emotional states in the created image using art means.

Session 6. Floristic collage in cool colors "Early spring".

Session 7. Floristic collage in warm colors "Leaf fall". Experience emotions and reflect them in the created artistic image using given colors. Directed formation of positive psychological and emotional states. Control of one's state using given art means (color, contrast, temperature of the color). Restructuring of the emotional reaction to the set task (overcoming the barrier: transition from a "difficult" (for adolescents without artistic skills) task to a positive solution found in the art product – catharsis of the esthetic reaction). Acquisition of self-regulation skills.

Session 8. Floristic collage "Home nature". Realization of one's emotional state and its expression in the created image. Realization of relevant feelings in the process of verbalization (by each participant as well as by the whole group). Directed formation of positive psychological and emotional states of the whole group. Integration of resource states into the process of formation of a new image.

Objectives of the 3rd section: restructuring and realization of a new reaction; fixation of the positive tendency to the development of constructive reactions to frustration; acquisition of self-regulation and self-expression skills in challenging situations; prevention of elevated frustration among adolescents.

3rd session block.

Session 9. Floristic collage "Language of nature sounds".

Session 10. Floristic collage "The seasons". Creation of an associative image of nature. Expression of the emotional state triggered by nature sounds and compositions in the created images. Formation of a new mental state at different levels (conscious and unconscious). Expression of the new image in visual, audial, tactile form; realization of a comprehensive response after influencing a range of sensory channels. Realization of the new state image and its verbalization. Easing and prevention of frustration in the course of directed formation of mental states (consecutive playing of nature sounds and compositions ranging from alarming, exciting to calming). Prevention and easing of anxiety. Finding response to aggressive reactions in constructive form. Relief from negative states. Relaxation.

Session 11. Floristic collage "My emotions: experience, realize and express". Development of emotional regulation. Directed formation of positive states by means of specific arrangement of exercises (picture a negative state you want to be relieved from; change the state image into a more positive and desirable one with the help of art means). Alleviation of inner tension by transferring emotions into the created image. Formation of positive

emotional experience and realization of one's state. Restructuring and fixation of positive emotional reaction to frustrating exercise (verbalization).

Session 12. Floristic collage of a "A person's character". Directed formation of positive mental states, experiencing and realization of social emotions and feelings during tailored exercises: 1) reflection of a personality trait of an adolescent in the artistic image (at one's discretion); 2) change of the created image in the course of group work; 3) creation of integral "ideal" character by the group (lay out the common collage on the floor, replace negative personality traits with positive, exchanging materials in cardboard boxes and moving them). Integration of positive mental states into the process of formation of a new mental state image of the individual and the group. Acquisition of self-regulation skills and learning constructive ways of self- expression.

Session 13. Floristic collage "Me real, and me ideal". Constructive overcoming of difficulties while creating artistic images (determined by the given sequence). Accepting emotions as relevant. Formation of a positive attitude towards one's inner feelings. Accepting oneself. Realization of all aspects of one's mental state. Response to emotions related to the perception of oneself. Changing the mental state to a positive one. Creation of ideal desirable proportions in the image. Realization and fixation of resource mental state based on "visceral information" received through verbal feedback. Directed formation of positive (resource) states of an individual and a group.

Session 14. Floristic collage "Me in the group". Realization of one's role in the group. Accepting oneself and others as equal partners from the tolerance point of view. Reflection of individual needs and relations with other people. Boosting self-confidence, realization of the need for self-expression (in constructive form).

7. Data Analysis

After the forming stage (upon implementation of the program in experimental groups) significant differences between sample groups (control and experimental groups) were recorded in a number of characteristics. The data analysis showed that the most positive dynamics was seen in directions of reactions Rosenzweig (1945), while types of reactions remained almost unchanged. It was found that dynamics of reaction characteristics in experimental groups (in different sample groups) is the same: there were positive changes in directions and intensity of reactions. At the same time, in both control groups adolescents' reactions to frustration have stable manifestation forms in the absence of special influence (Yangicher, 2008, 2009, 2010).

The qualitative data analysis that included: examination of art products, monitoring of interim dynamics at session level, description of group and individual dynamics of changes in adolescents' reactions based on observations and video recordings, drawing up observation protocols, analysis of brief psychological history of each participant – showed

that during art therapy process positive changes in emotional states of adolescents in the experimental groups were recorded at each session.

At the beginning of session, they experienced negative mental states such as tension, aggressiveness, apathy, restraint, anxiety, confusion, fright, fear, offence, shame, anger, hostility, hate, anguish, while at the end of sessions they noted such positive states as calm, joy, enjoyment, excitement, love, gratitude, interest, happiness, etc. Adolescents described their emotions both orally during verbalization practices in classes and in writing filling special "emotion forms" where they noted states experienced at the beginning and at the end of sessions. Below are examples of dynamics of constructive reactions of adolescents from socially advantaged and disadvantaged groups (extracts from protocols of observation and video recordings).

7.1 Example of step-by-step dynamics of constructive reaction of an adolescent from socially advantaged group

Kostya, 15 years old, pupil of the 9th grade. The boy is from a two-parent, well-to-do family (second child, has an elder sister). In good health, likes sports, interested in machines. School results are medium. Non-committed to public orders, but hard- working, helps with household chores. He has many friends in his age group. Timid, respectful towards elders. After school, he wants to become mechanic. He is emotionally stable, capable of constructive dialogue with his peers and teachers. During the forming experiment, the dynamics of psychological and emotional states of the adolescent was monitored at main stages of the art therapy program. The analysis of one session reveals a number of interim mental states. 1. Task is set; confusion, realization of the challenge, passive protest. *Kostya: "I don't understand how to do that".* 2. Tension, anxiety, search for solution. 3. Search for solution, attempt to get away from the problem; tendency towards creation of a new state image. *Kostya: "This is good and bad mood" (picture: crossed lines, green band and the sun).* 4. Overcoming frustration (tendency towards changing and replacing negative states and reactions with positive ones). 5. Exit from the state of frustration – new state image creation; realization of the experienced states (verbalization); catharsis of the esthetic reaction; self-expression in the art product. Restructuring of the reaction. *Kostya: "This is a beautiful green meadow. . . I like it".* 6. Fixation of the new positive state in the reaction (feedback in the group). *Comments of the group participants: "he wanted to say that he wants to be more confident", "he wants more joy and light in his life, that's why such bright colors", "the square is crossed, seems that there was some anxiety inside, something kept him from expressing himself. . . and even the sun in the corner is pale. . . "* – Kostya takes the yellow pencil and turns up saturation of the sun. *The group leader: "Do you think, the guys are right?". Kostya: "Yes, they are right" – and continues painting with a smile.*

7.2 Example of step-by-step dynamics of constructive reaction of an adolescent from socially disadvantaged group

Pasha, 14 years old, pupil of the 8th grade. The boy is from a one-parent family (parents are in divorce), has a younger sister. According to the teachers, Pasha is characterized by hyperactivity, excitability, emotional expansiveness, in the moments of excitement his pain threshold reduces (he can extinguish a cigarette on his hand). Pasha attended art therapy sessions with pleasure, was active. During exercises demonstrated impulsive reactions. By the end of the art therapy program, significant changes in the intensity of frustration were detected. Positive dynamics was seen at the single session level, but due to time deficiency of the program, it was not fixed in stable manifestation forms. Dynamics of reactions to frustration at the level of a single session: 1. Task is set. Confusion, frustration. 2. Selection of art material to complete the task. 3. Search for solution (group interaction). 4. The process of "constructive creativity", expressive description of the created state image, self-expression in the art product. Verbalization: *Pasha: "I'm volatile: sometimes I'm kind, sometimes... (throws up his hands)", "there are roses, they also sometimes make me good... and this is prickle, bad prickle!" The group leader: "And what part is bigger?" Pasha: "The good one... roses, feathers". The group leader: "Do you have something else?" Pasha: "Love... for people, love... here while I'm kind".* 5. Response to the experienced emotional states in reactions (verbalization). Catharsis of the reaction, relief from negative states, decrease of the elevated reaction impulsiveness.

Findings showed that the psycho-correction of adolescents' reactions to frustration (from both socially advantaged and disadvantaged groups) was possible by intervention directed at the regulation of the mental states where the emotional reaction took place, through targeted art-based approaches (specifically art therapy methods).

The course of action directed at the mental states led to the modification, substitution and retention of negative to positive mental states, which resulted in the restructuring of the emotional response and led to long term changes in the stereotypical reaction.

8. Conclusion

There is a controversy over understanding of problems of psychological and emotional regulation and the concept of frustration phenomenon between foreign and Russian psychologists. In Russian psychological school, this phenomenon is predominantly studied as a category of mental states. This stance, in our view, provides an opportunity to consider correctional influence on non-constructive reactions of adolescents to frustration. In this context, psychological correction process implies targeted influence with special means on the process of formation of new positive mental states integrating into stable personality traits (in the course of changing and replacing negative states with positive ones, and their fixation, which leads to the restructuring of the reaction and change in the established stereotype). The key to this psychological correction process is the category of mental states that becomes interim and helps to integrate and fix positive experience (during special in-

fluence) in new stable personality traits. As instruments of psychological influence can be considered special means of art therapy methods that contribute to directed formation of positive mental states and reactions in adolescence and facilitate integration of positive (resource) metal states into the process of formation of a new reaction, as well as realize the adolescents' need for self-expression (in constructive forms) preventing and reducing elevated frustration

Longer-term forming influences with the aim to fix positive mental states in stable personality traits and to change established stereotypic reactions are seen as prospective areas for further studies. Special prolonged influence on adolescents' mental states using art therapy means opens the prospect of formation of constructive behavioral reactions.

References

Adam, J. (1998). *Visceral perception: understanding internal cognition*. New York: Springer Science & Business Media.

Barker, R. G., Dembo, T., & Lewin, K. (1943). Frustration and regression: An experiment with young children. *University of Iowa Studies in Child Welfare*, *18*(1).

Bozhovic, L. I. (1968). Lichnost'i ee formirovanie v detskom vozraste: psihologiceskoe issledovanie (personality and its development in childhood: A psychological investigation). *Akad.ped. nauk SSSR. [Academy of Educational Sciences of USSR]*.

Dalley, T., Rifkind, G., & Terry, K. (1993). *Three voices of art therapy: Image, client, therapist*. New York: Routledge.

Dikaya, L. G., & Semikin, V. V. (1984). *Problem of control of human operators state*. Moscow: Mezhdunarodnaya Kniga.

Dollard, J., Miller, N. E., Doob, L. W., Mowrer, O. H., & Sears, R. R. (1939). *Frustration and aggression.* New Haven: Yale University Press.

Essex, M., Frostig, K., & Hertz, J. (1996). In the service of children: Art and expressive therapies in public schools. *Art Therapy*, *13*(3), 181–190.

Freud, S. (1923). Certain neurotic mechanisms in jealousy, paranoia and homosexuality. *The International Journal of Psycho-Analysis*, *4*, 1.

Klorer, P. G. (2009). The effects of technological overload on children: An art therapist's perspective. *Art Therapy*, *26*(2), 80–82.

Kon, I. S. (1989). *Psikhologiia rannei iunosti [The psychology of the early youth]*. Moscow: Prosveshchenie.

Kramer, E. (1975). Art as therapy with children. *American Journal of Art Therapy*.

Krech, D., & Livson, N. (1969). *Elements of psychology.* New York: AA Knopf Inc.

Kulikov, L. V. (1997). *Psikhologiya nastroyeniya (Psychology of mood)*. St. Petersburg: Peter.

Kuzmina, E. I., & Yakunin, V. A. (1997). Study of determinants of freedom and of unfreedom from frustration. *The Issues Relevant to Psychology*(24), 86-94.

Leont'ev, A. (1971). *Potrebnosti, motivy i jemocii* (Vol. 187). Moscow: Izd-vo Mosk. un-ta.

Levitov, N. D. (1964a). *Detskaja i pedagogicheskaja psihologija [childhood and pedagogical psychology]*. Moscow: Prosveshhenie.

Levitov, N. D. (1964b). *O psihicheskih sostojanijah cheloveka [about the mental states of a person]*.

Moscow: Prosveshhenie.

Levitov, N. D. (1967). Frustracija kak odin iz vidov psihicheskih sostojanij [frustration as one of mental state types]. *Voprosy psihologii [The Issues Relevant to Psychology]*(6), 118-129.

Levitov, N. D. (1969). *The psychology of character*. Moscow: Prosveshhenie.

Lukin, S. E. (1993). *Frustration test of S. Rosenzweig*. St-Petersburg: Imaton.

Malchiodi, S. (2003). *Handbook of art therapy*. New York: Guilford Press.

Moriya, D. (2000). *Art therapy in schools*. Ramat Hashron: Turbo.

Naumburg, M. (1973). *Studies of the free expression of behavior disturbed children as a means of diagnosis and therapy*. New York: AA Knopf Inc.

Nekrasova, J. B. (1994). O psihicheskih sostojanijah, ih diagnostike, upravlenii i napravlen-nom formirovanii (v processe socioreabilitacii zaikajushhihsja) [about mental states, their diagnostics, control and directed formation (in the process of sociorehabilitation of stutterers]. *Voprosy psihologii [The Issues Relevant to Psychology]*(6), 37-41.

Prihozhan, A. M. (2000). *Trevozhnost' u detej i podrostkov: psihologicheskaja priroda i vozrastnaja dinamika [Anxiety among children and adolescents: psychological nature and age dynamics]*. Voronezh: Izd-voNPOModjek.

Prohorov, A. O. (1990). Samoreguljacija psihicheskih sostojanij v uchebnoj i pedagogich-eskoj dejatel'nosti [Mental states self-regulation in learning and teaching activity]. *Voprosy psihologii [The Issues Relevant to Psychology]*(5), 156-161.

Prohorov, A. O. (1994). Integrirujushhaja funkcija psihicheskih sostojanij [An integrating function of mental states]. *Psihologicheskij zhurnal [Psychological Journal]*, *15*(3), 136-145.

Prohorov, A. O. (2002). *Psihologija psihicheskih sostojanij: Sb. statej [Psychology of mental states: Coll. articles]* (Vol. 4). Kazan: Izd-vo Centr innovacionnyh tehnologij.

Prokhorova, V. N. (1996). *Russkaya terminologiya (leksiko-semanticheskoe obrazovanie)[Russian terminology (lexical-semantic education)]*. Moscow: Filologicheskiy fakul'tet Publ.

Rean, A. A. (1999). *Social pedagogical psychology*. St-Petersburg: Peter.

Riley, S. (2004). The creative mind. *Art Therapy*, *21*(4), 184–190.

Rosenzweig, S. (1944). An outline of frustration theory. In J. Hunt (Ed.), *Mcv, personality and behavior disorders* (p. 379-388). New York: Ronald Press.

Rosenzweig, S. (1945). The picture-association method and its application in a study of reactions to frustration. *Journal of personality*, *14*(1), 3–23.

Rosenzweig, S. (1976). Aggressive behavior and the rosenzweig picture-frustration (P-F) study. *Journal of Clinical psychology*, *32*(4), 885–891.

Smirnov, S. D. (1981). The world of images and the image of the world. *Soviet Psychology*, *20*(2), 3–27.

Sosnovikova, Y. E. (1972). Age aspect of mental states. *The Issues Relevant to Psychology*(2), 141-144.

Steele, W., & Raider, M. (2001). *Structured sensory intervention for traumatized children, adolescents, and parents: Strategies to alleviate trauma* (Vol. 1). New York: Edwin Mellen Press.

Tarabrina, N. V. (1984). *Eksperimental'no-psikhologicheskaia metodika izucheniia frustratsion-nykh reaktsii: Metodicheskie rekomendatsii [experimental psychological methods of studying the reactions of frustration: Guidelines]*. Leningrad: Izd-vo NIPI im. VM Bekhtereva.

Vasiljuk, F. E. (1984). *Psihologija perezhivanija: Analiz preodolenija kriticheskih situacij [Life experience: Analysis of overcoming critical situations].* Moscow: Mosk. un-t publ.

Vasiljuk, F. E. (1991). *The psychology of experiencing: The resolution of life's critical situations.* Hemel Hempstead, UK: Harvester Wheatsheaf.

Vasilyuk, F. E. (1984). *Psychology experiences. Analysis of overcoming critical situations.* Moscow: Izd-vo Mosk. University Press.

Vygotsky, L. S. (1966). Development of the higher mental functions. *Psychol. research in the USSR*, *1*, 11-46.

Vygotsky, L. S. (1972). *The psychology of art*. Moscow: Art.

Vygotsky, L. S. (1991). Imagination and creativity in the adolescent. *Soviet Psychology*, *29*(1), 73–88.

Vygotsky, L. S. (1998). The problem of age. In R. W. Rieber & A. S. Carton (Eds.), *The collected works of L. S. Vygotsky* (Vol. 5, pp. 187–205). New York: Plenum Press.

Yangicher, E. V. (2008). Razvitie tvorcheskih sposobnostej i korrekcija psihologicheskih narushenij u detej sirot v processe raboty s prirodnymi materialami [Development of artistic skills and correction of psychological impairments among orphans in the process of work with naturally-appearing materials]. In *Materialy mezhdunarodnoj nauchno-prakticheskoj konferencii «iii levitovskie chtenija» 21 apr.2008 [materials of world science-practical conference «third levitov's readings» 2008 april 21]* (p. 239-242). Moscow: Izd-vo MGOU.

Yangicher, E. V. (2009). Art therapy in development of positive emotional reactions of adolescents. *Art and Education*, *6*, 149-161.

Yangicher, E. V. (2010). *Razvitie konstruktivnyh frustracionnyh reakcij podrostkov sredstvami art- terapii* (Unpublished doctoral dissertation). PhD in psychology, Moscow.

Practice of Teachers' Training on the Basis of the Ideas of Cultural and Historical Psychology of L. S. Vygotsky

Alexey S. Obukhov   A.OBUKHOV@REDU.RU
Moscow State University of Psychology and Education
Moscow, Russia

Abstract

In Russia, new standards of education, which are built in many respects on the basis of the ideas of cultural and historical psychology, are accepted. It is natural that there has occurred a question of modernization of vocational training of the teacher who would not simply listen to or read about these ideas, but would work out their practical way of realization in their everyday practice, self-reflect this experience, embody trial action with children, and selfreflect it again. As the basic ideas of L. S. Vygotsky and his school of sciences, the basis of the concept of modernization of pedagogical education was formed through the following concepts: the development as mastering the culture; the concept of age and logics of an age periodization; a ratio of training and development in a zone of the next development; the change of a social situation of development and crises of a growing; the roundabout ways of development; the causal biography; cultural mediation of the development of the highest mental functions; etc. The fundamental principles of modernization of pedagogical education are the following: logics of creation of education "from an action to a thought" (a practical action with its video fixing – the criteria analysis of this action – the development of the theory describing action mechanisms – the following level of practical action) and social constructivism as the leading way of activity in the situation of uncertainty and variability. The experience of introduction of this model (about 2000 people) within three years has shown its efficiency.

Keywords : Russian education; Cultural and historical psychology; Teachers' training; L. S. Vygotsky; Concept of modernization of pedagogical education; ZDP.

In 2016, the World Scientific Community widely celebrated the 120 anniversary since the birth of the outstanding scientist, "Mozart of psychology" (Tulmin, 1981) – Lev Semenovich Vygotsky (1896 – 1934). In Moscow and in many other countries a series of the actions devoted to judgment of scientific heritage of L. S. Vygotsky and his value for modern science and practice took place (`https://vygotsky.hse.ru/`). The last ten years of his life, the most productive in his scientific activity, from 1924 to 1934, L. S. Vygotsky worked in Moscow Pedagogical State University (MPSU). At that time, that institution was called Second Moscow State University, then Moscow State Teacher Training College named after A.S. Bubnov) – professor and the head of the department of the difficult childhood (http://выготский.рф/архивные-материалы/). MPSU not only reveres the memory of a great professor, but in recent years has made an attempt to build the training of students of pedagogical education on the basis of L. S. Vygotsky's psychological concept.

In the world, the works of L. S. Vygotsky are well known. They enter the obligatory set of texts while studying psychology and the adjacent scientific directions, especially pedagogical psychology, children's psychology, psycholinguistics, defectology, and art psychology. With a support on methodology of cultural and historical psychology, the researches are conducted not only in Russia and other countries - the former republics of the USSR that was brightly presented on round tables within the International network congress to the 120 anniversary of L. S. Vygotsky that took place in Armenia, Azerbaijan, Belarus, Kazakhstan, Uzbekistan (Sakharov, 2016). The researches in compliance with school of sciences of L. S. Vygotsky in Ukraine, in Georgia are known, in the countries of the Baltics where a number of scientists continue to act on the methodological basis and a semantic reference point in development of psychological science and student teaching, especially in the field of the developing training. Specialists in scientific heritage of L. S. Vygotsky work in many countries of Europe (Great Britain, Germany, Italy, Poland, Portugal, Finland, France, the Czech Republic, etc.), in Canada, in USA, in the countries of Latin America, Iran, Japan, etc.

There exist different approaches which L. S. Vygotsky's followers built and developed as educational systems, such as: the system of stage-by-stage formation of educational actions of P. Y. Galperin (Galperin, 1985), the system of developing of V. V. Davydov and D. B. Elkonin's training – (Davydov, 1996), the system of developing of L. V. Zankov's training (Zankov, 1985). These systems of training continue their development not only in Russia, but also in many schools of Ukraine, Belarus, Moldova, Latvia, Kazakhstan and other countries.

The realization of the ideas of L. S. Vygotsky defined the formation and development modern social constructivism in practice of education in Germany (Fthenakis, 2003) and in cognitive schools of Iran (Saeednia, 2011). Under the leadership of Vasilios Ftenakis in Bavaria, Baden-Württemberg and others land in Germany the development programs of preschool and primary education on the basis of cultural and historical psychology of L. S. Vygotsky. They worked out and implemented, first of all based on L. S. Vygotsky's ideas about a ratio of training and development, the zone of proximal development, the sensitive periods of development, a social situation of development, a cultural and sign

mediation of formation of the highest mental functions, the role of formation of an oral and written language for thinking, etc. For the development of all education system in Germany, L. S. Vygotsky's ideas about the role and value of cooperation of the child with an adult, children with each other, and teachers with each other became very important. So the social situation was developing. It means the situation itself should develop all the time (Ftenakis, 2015a).

In Iran, Saeednia (2011) was successful to implement the idea of creation of open educational space into practice, having created a network of cognitive schools. There, the cognitive interest of children in a zone of their proximal development, which is individual for each child, is stimulated and supported. During realization of this interest, children master cultural means of action and sign systems. They find new psychological tools. L. S. Vygotsky's works at these schools, as well as the works of J. Piaget and A. Maslou's works, are manuals for teachers.

In recent years in Russia, the new federal state educational standards (FSES) of the preschool, primary, main general, secondary general education are accepted. These standards are built in many respects in compliance with the scholar school of L. S. Vygotsky – and his flock (Asmolov, 2013; Asmolov et al., 2008; Asmolov & Kudryavtsev, 2016). Naturally, at the same time the question of training of teachers for the educational standards implementation became actual. This issue demanded the modernization of pedagogical education in compliance with the ideas put in FSES.

Since 2014, in MPSU, the group of developers has begun to build teacher training model (Bulin-Sokolov, Obukhov, & Semenov, 2014), making a start from the idea that future teachers have to not only know works of L. S. Vygotsky and his his followers. Proceeding from the fact that "we learn as we were taught", they also have to live their own training in higher education institution as practice of realization of L. S. Vygotsky's ideas.

This teacher training model for practice of work in education system on requirements of the accepted FSES we, by using V. K. Zaretsky's concepts (Zaretsky, 2001), called it reflexive and activity approach in realization of pedagogical education (Bulin-Sokolov & Obukhov, 2015).

The practical experience of training teachers on the basis of reflexive and activity approach, in compliance with the ideas of cultural and historical psychology of L. S. Vygotsky and scholar school has been implemented for three years. Quite a large number of students of a bachelor degree of pedagogical education take part in it, joining in this model from 1 course – about 2000 students of the following profiles of preparation: preschool education; primary education; teacher of the fine arts; teachers of physics and technologies; mathematics teacher and informatics; teachers of foreign languages.

For realization of this plan, we needed to form a team of adherents among the faculty who not just knew L. S. Vygotsky's works, but also were able to work in a paradigm of cultural and historical psychology. We began to solve this problem in continuous dialogue and cooperation – both with colleagues, and with students – in compliance with the ideas

of social constructivism (Ftenakis, 2015b), involving all participants of educational process in the continuous event saturated business having the design forms of realization, creating and setting cultural forms of deployment of a reflection (Alekseev, 2002).

Proceeding from the idea of a functional frontage of reflexive processes (Karpov, 2005), this article is retrospective (on the bases, lying in the course of cultural and historical psychology of L. S. Vygotsky), situational (on the current situation of realization of these ideas in practice of pedagogical education) and a perspective reflection (on possible results and the expected effects for an education system taking into account obvious risks) concerning the process of modernization of pedagogical education on the basis of L. S. Vygotsky's ideas. We also made a start from the semantic course of the importance of the analysis of L. S. Vygotsky's ideas urgent for the development of children's practical psychology today offered by Dubrovina (2013).

The idea about development as about mastering culture.

The key idea of L. S. Vygotsky for psychology of development and psychology of education – the idea about sociocultural development of the child in ontogenesis. "We are inclined to put an equal-sign between the identity of the child and his cultural development. The personality, thus, is a social concept. It covers supernatural, historical component in the person. It isn't congenital, but results from cultural development. Therefore, personality is a historical concept. It covers the unity of behavior which differs in a mastering sign" (Vygotsky, 1983a, p. 315). According to L. S. Vygotsky, the process of cultural development includes mastering culturally-set means: 1 – actions with objects; 2 – relations with other people; 3 – possession of oneself, the mental activity, the behavior. Certainly, in this aspect the development of cultural means happens in ontogenesis. In youth, the means of self-control accustom to that age period in which they are students. This includes the semantic fullness of the subject, the feature of the relations with other people and also at the age level in the context of the solution of urgent vital tasks. Such tasks are, in many respects, connected with the development of the subject maintenance of the future profession, and the social communicative space of a significant personal qualities of a profession. Naturally, the pedagogical profession in these aspects has the expressed specifics (Markova, 1993).

Three lines of mastering the culture allocated with L. S. Vygotsky, have become defining for us for designing the pedagogical education:

- Development of subject material (the subject module of the curriculum of vocational training) – that concreteness through which future teacher will build and realize practice of training and development with pupils. For future teachers of physics, mathematics, biology, chemistry, history, etc. – will be mastering subject knowledge and methods of knowledge acquisition in these or those subject domains which have developed and developing now in the corresponding branches of science;

- Development of psychology and pedagogical knowledge and methods of work with children of various age, taking into account specific and sociocultural features, and also with colleagues, parents and other participants of educational process (the psy-

chology and pedagogical module of the curriculum). This module is built in logic of ontogenesis in process of the child's growing, from the preschool step of education to high school. In it, at a new stage of development of sciences about the child and processes of a growing the ideas, which have been put by K. D. Ushinsky in pedagogical anthropology (Ushinsky, 1867, 1869) are implemented, and after they are in their own way developed in pedology with active participation of L. S. Vygotsky (Vygotsky, 2001). That is the child process of his entry into culture studied in all aspects – physiological, psychological, social, pedagogical, pathological – taking into account the sociocultural situation of development;

- Application of funds of own cultural and personal development (sociocultural module of the curriculum). This module is directed into expansion of the cultural horizons, development of instruments of personal development (development of critical thinking within the course "Critical Thinking and Letter"; development of the corporality within the course "Pedagogical Thinking in Scenic Action"; development of modern information and communicative means as the new sign systems changing mentality and society; implementation of historical projects through which the judgment of concrete phenomena in the context of historical processes is developed, the skills of team work are fulfilled; and many other aspects which considerable part is implemented in the field of elective courses of students). The important component of this module is to support the student's social initiatives to get productive forms. The accounting of such activity happens through the submission of reflexive texts by students about the importance of their participation in this or that event for the professional and personal development.

Reorganization process became a natural problem, more precisely even creation of the new mode of work of teachers – when they don't conduct autonomous courses and when they have a need constantly to correlate the actions in respect of the students with other teachers, proceeding from an image of complete activities of the student for development of culture of a profession of the teacher. The classical high school system of the organization wasn't ready to it, and reorganization of any socially steady and inflexible system causes considerable resistance. Here, we see big risks: the integration processes which demand special efforts and the investments can progress from this or that degree of efficiency with the support "from above" and to joint deduction of a common goal "from below". Without it, processes of integration can sharply break as processes of separation and the centrifugal phenomena minimize the efforts of everyone in local timepoint. Besides, processes of integration happen in a situation of high trust between the participants of social processes that in a situation of changes and uncertainty can decrease rather, than increase (Golenkova & Igitkhanyan, 1999), and very few people understand that integration processes in the long term can be advantageous for all together and for everyone as personal prospect.

Integrity of process of training through practice.

All three modules unite through practice begin with the first-year students. Practice allows through the organization of complete and system activity of the student in logic

of the consecutive interconnected stages (1 – observation; 2 – pedagogical interaction; 3 – pedagogical action) to embody in reality L. S. Vygotsky's idea that "the processes of training are considered [...] not as assimilation of elements and association of these elements in more or less difficult communications and as formation of complete structures without which no training is possible" (Vygotsky, 1972, p. 24). Integrity of educational process for the student goes through practice in logic "about actions to a thought", that is during acceptance and realization of problem tasks on practice, at students the request for the necessary theory which becomes for them the tool of reflection and planning of practical actions, as well as actually the content of interaction with children is formed.

The age as the basis of vocational education of the teacher.

The temporary sequence of deployment of training logic and practical actions of future teachers was defined by L. S. Vygotsky's idea about the value of child age in the general line of development: "A problem of age is not only central for all children's psychology, but also a key to all questions of practice" (Vygotsky, 1984, p. 260). Thus, students at first go for practice to preschool children, then to younger school students, then to teenagers.

L. S. Vygotsky's idea about the sensitive periods of development together with the line of age has allowed us to build contents of activity of students in practice in logic of "subject eras", the sequence of complication of forms and ways of activity.

So, on the "primary education" profile first-year students go for practice in the preschool educational organizations, developing the main lines of development in the preschool childhood, studying to interact with children in a zone of proximal development, studying the game and mastering the ways of enrichment of game activity, studying and putting knowledge into practice of a role of the developing subject environment for education of preschool children.

On the second-year students go to the first grade where they study the processes of adaptation of pupils to a new situation of development, promoting passing adaptation to school through the realization of the elements of the program of G. A. Zuckerman and K. N. Polivanova "Occurrence into school life" (Zuckerman & Polivanova, 2003). From October to December, students teach in the first grade the subject "The World around" (Lovyagin, 2014) in logic of research and design methods of training that corresponds to urgent interests of pupils and sensitivity at this age and in this situation of development to development of new forms of the doctrine. The problem of development of a group work form and formation of a class as a group, the subject of educational activity is implemented (Zuckerman, 1980). The psychology of research behavior and feature development of research abilities in the course of formation of any and purposeful cognitive activity is studied (Obukhov, 2015; Poddiakov, 2006; Savenkov, 2006). In the 2nd grade, they begin to work with literary reading (Troitsky, 2004) through the semantic analysis of the text and staging. At the same time of the formation of the younger school ability, students start letter reading accompanying transition at them, from primary development of universal educational actions of reading and the letter to semantic work with the text (Elkonin, 1998).

On the third year of training, students pass into the 3rd grade. They give classes in literature, mastering through the reflexive analysis of the translations, verbal games, etc. Basic properties of language, studying at the same time possibilities of formation of conceptual thinking master pupils reflexive abilities from external forms of the organization to the internal plan of reflexive action. In the 4th grade, students teach the course of applied mathematics (Semenov, 2004) within which children try to apply the mathematical apparatus mastered by them at mathematics lessons to the decision of vital tasks. On the course of it students try to understand how to develop logical thinking, understanding of sign systems, other aspects of thinking of pupils. In the long-term students shall go in the subsequent classes to see – that as well as why changes in development of children already at teenage years.

Being repelled from L. S. Vygotsky's idea that "[. . .] for any training they are separated, i.e. optimum periods. A withdrawal from them up or down, i.e. too early and too late periods of training are always from the point of view of development harmful, unfavorably reflected in the course of mental development of the child" (Vygotsky, 1996, p. 127) is in constant search – what object, methodical, psychology and pedagogical and sociocultural competence at what moment and in what sequence will be better mastered by students, taking into account the sensitive periods of development of children of those age groups to which they go on practice and the sensitive periods of development of pupils.

The main difficulties which overcoming we look for permanently is the fact that many questions can be mastered sequentially, and in practice all can be important at the same time. Everything can't be mastered directly, therefore, in what sequence, with focusing on what questions and problems shall happen to students taking into account the logic of development of children, on the one hand, and on the other hand – taking into account the logic of the subjects they teach at school.

Development of the personality is an integral process. At each age stage, it includes the development of informative and emotional and strong-willed processes, consciousness, self-standing and self-determination, many other aspects (Asmolov, 2002; Mukhina, 1999). Nevertheless, it is very difficult to master all the aspects at once and it is necessary to operate in logic of consecutive focusing, allocation of a dominant of attention on this or that aspect of development of the personality. Of course, there is a consecutive change of the leading activity that defines natural accents in studying with students of subject and manipulative activity, a game, educational activity, communication, etc. (Elkonin, 2001) in consecutive transition from one age step to another in practice. However, all these aspects of development of the personality and kinds of activity in one form or another are present at each age, that is also important to consider. Educational literature and classical logic of theoretical high school courses are most often built so that each aspect of a complete phenomenon – personality and its development – are studied and analyzed apart from each other.

In this regard, we see a natural problem of constant correction of creation of the sequence of contents and a form of work with students, and students with children at integration of subject, methodical, psychological and pedagogical aspects of professional activity. It

raises an uncertainty situation in the course of development of a profession that demands transition of all participants of education from a position of the performer of the tasks set from the outside to a position of constant search, the reflexive analysis, changes of habitual plans, the critical relation to fulfilled to action forms, etc. Transition from the performer's position to a position of the director and the offtake of semantic tasks (under constantly changing conditions) is difficult and very few people are ready to it. However, "the abilities to set and the abilities to solve problems can unevenly grow or degrade: for example, the person can well learn to complete the tasks set by someone (to become the good performer) and to forget at the same time to see and set problems, to degrade as the potential director of tasks" (Poddiakov, 2015).

Change of a social situation of development and crises of a growing.

Immersion in a new social situation of development as crisis of a growing is the key for L. S. Vygotsky's idea about a social situation of development acts. "Environment for the person, eventually is the social environment because is where it acts even as nature. Nevertheless, in its attitude towards the person, it is available the defining social moments. In the attitudes of people towards it, they always use social experience" (Vygotsky, 1991, p. 88). At the same time for us, after L. S. Vygotsky, it is important to consider a social situation of development together with age: "Each age has the known image the environment organized for the child so the environment, in purely external sense of this word, changes for the child upon transition from age to age" (Vygotsky, 1966, p. 76). For us, it becomes essentially significant to fix both the attention, and the attention of students on in what measure this or that environment acts as a development source (where? whom? how? at the expense of what?), as "[. . .] the environment acts concerning the development of the highest properties, specific to the person, and forms of activity as a development source" (Vygotsky, 1966, p. 93).

Training students for pedagogical activity with children of this or that age, naturally, we have to consider also the age features of students. Most, it is important to do at occurrence their new social situation of the development of students, and also at identification with a new social role of the teacher. The idea that "at turning points of development, the child becomes rather difficult because change of the pedagogical system applied to the child doesn't keep up with rapid changes of his personality" (Vygotsky, 1984, pp. 252-253) fully belongs to students too. When there is a change of a social situation of development, there are new aspirations, requirements, opportunities. And the system of requirements, expectations, activity forms – new, not mastered yet is not appropriated.

We faced the choice: to soften the situation of adaptation to university with that process was most similar to previous – as at school. Or as much as possible, to use a situation of entry into a new situation of development for a changing a "scholastic" position which for most of students as it has been revealed, existed in passive forms of education, in a transmitting paradigm. Our choice was defined on the option of an aggravation of crisis of a growing at the organization of special maintenance of his passing to situations of adaptation of students to a new social situation of development. For this purpose, we have

created the "Immersion in New Pedagogics" program which lasts for September. Its tasks are:

- Active entry of students into the new educational environment in which most part of the program demands from the student, not just hearing and watching, and action, interaction, creation various products in the form of the letter, a photo, video, etc.);

- Acquaintance to university as new social space of life through the system of search tasks, creative tasks, and social actions;

- Acquaintance to new and various forms of the doctrine to minimize lectures, and a variety of active and interactive forms of the organization training – workshops, excursions, games, discussions, and trainings;

- Expansion of the cultural horizons which is an exit out of limits of the developed stereotypes. This includes a variety of subjects, a meeting with bright and extraordinary people, not triviality of discussion known, original forms of representation of the unknown, an exit of process of the doctrine and activity in various cultural and social spaces, out of limits of university;

- Creation of a situation of the conscious choice with the responsibility for it. This requires every day the student to choose an occupation/seminar/action which will be interesting to him);

- Training the team work call student to do many tasks. Those tasks are set so that they can be realized only in group;

- Interactive communication of teachers. It involved experts and students, including in the information environment (INFODA MPSU on the basis of the Moodle platform – the virtual training platform on which teachers place tasks students in turn spread the performed works and receive feedback from teachers and each other, can finish and improve the works).

Refrain through all the Immersions programs there passes the question – "What is it to study?" We try to set representation to students not only about didactics (science how to learn), but also a Mathletics (science how to study). Bringing to understanding that we study first of all in active forms of activity, we find the ability to the development of the ability to study – through a reflection about process of the doctrine. The visualized information on implementation of this program is provided in the video blog of MPSU (http://video.xn--c1arjr.xn--p1ai/category/pogruzhenie-v-pedagogiku/).

Ratio of training and development.

Zone of urgent and proximal development. The central factor of the development – cooperation. In domestic pedagogical psychology, it is accepted as the fundamental idea of L. S. Vygotsky that training leads development in a zone of the proximal development:

"Developments don't coincide with training process . . . developments go after processes of the training creating zones of the proximal development" (Vygotsky, 1983a, p. 51). This idea defines a trajectory of the movement on the way to individualization of educational process, the accounting of personal features of each pupil. "Pedagogical value of the concept "Zone of the proximal development" allows to answer a question of when there is a development at what moment this step — transition to new quality is made" (Zaretsky, 2007, p. 96). The children of one age in the same educational situation can have this point at different time. In many respects, it is set by a social situation of development, unique for each child, – that system of the relations and interactions on significant others in which he is both objectively, and subjectively, and also his experience of activity and his individual inclinations and abilities.

"[. . .]An essential sign of training is that it creates a zone of the proximal development, i.e. brings it to life for a child, induces and sets a number of internal developments in motion. Now, for the child these processes are possible only in the sphere of relationship with people around and cooperation with companions, but, prolonging internal process, they become internal property of the child" (Vygotsky, 1991, p. 388). Proceeding from these ideas, we are from the very beginning of training of students immerse in situations in which they show borders of the zone of the proximal development. They realize limits of the opportunities. They find ways of cooperation with teachers and classmates as an extender of these borders and overcoming limits. Students appropriate a method of reflexive realization of an essence of difficulties in educational process and seize methods of an address request for the help in overcoming these difficulties. The "Immersing in New Pedagogics" program, and also specially entered course for first-year students – "Technology of personal development" is in many respects directed to it. After mastering on themselves the principle of development in cooperation, when overcoming urgent difficulties, students quit on practice and, first through observation over children, then through interaction with them – to build such method of creation of a pedagogical situation in which the zone of the proximal development of each pupil was considered. In case of frontal forms of operation, it can't be realized. Therefore, the key in mastering the pedagogical profession is mastering the methods of the organization of the group form of operation in which it can be implemented different forms of cooperation of children and the teacher, children with each other. We also understood that frontal forms of operation with students, that is a classical lecture, don't support this student's mode of work with children. After having saved continuous occupations, we rebuilt them in interactive forms of the training organization. Such occupations, approximately on 150-180 people, are built in a format of group operation. This group contains the general input at the beginning and the general reflexive final, with fixing and representation of different elements of process of operation or with its results by groups (or individually) in the information environment.

The teacher begins to execute here a role, not the role of the reader of the text who is already available to students in the information environment, and the moderator of group operation, the organizer of joint activities, proceed by the discussion and the analysis. The teacher doesn't give answers to all questions rather, and sets a problematic situation and gives instruments for its decision, showing – as norms of group operation step by step can

be entered. And, after such cohabitation, students are offered to simulate group forms of operation with children, taking into account their age features and a personal zone of the proximal development.

In this situation students gradually begin to move with the idea about the need of the stringent scenario of occupation. In such way, teachers at schools usually implement considering only the sequence of presentation of a subject. But, he does not consider all variety of specific features of a zone of the proximal development of pupils in a class on the idea about need of sequential introduction of group norms of operation and a modelling of occupation taking into account specific features of children as well as the developed activities norms in group, the development of children solving problems by means of a subject, but not just broadcasting object knowledge

Transition to such model of pedagogical work, with a support on L. S. Vygotsky's ideas about training and development, centration on a problem of creation of problem situations and development of ability to cooperation at their overcoming, happens not so simply. We initially understood that standards of such work in mass educational practice are practically not observed. And we trained students that they will hardly see such standards at most of teachers as most of teachers prepared in a paradigm of influence and broadcasting, but not interaction and dialogue earlier. Initially students, having plunged into practice at school, really, have taken an isolation position from authoritative model of frontal work with a class, from centration on a subject, but not on problems of development of children.

However, the environment of school, comments and remarks of teachers, absence in classes in general of norms of group work that complicated use and realization of model of cooperation at one-two lessons when pupils are accustomed to other model of interaction with the teacher, gradually has caused identification with model of frontal broadcast of knowledge in many students. It has conflicted to the fact that at university, they were accustomed to model of the organization of educational activity in cooperation in a situation of overcoming problem tasks. Students, actually, have got into a situation of a social cognitive dissonance. Students had had an inquiry (even in the form of a claim that haven't taught it) – on a technique of the stringent scenario of class in one textbook, on one workbook, etc. (that there was no choice of problem, that there was no problem of own creation of the lessons).

To work on the set sample, without noticing complexity and – same it seems to instability of live systems more simply. For students, there was a question of the choice of model – already not in words – and in the real strategy of own pedagogical action, in creation of own internal position of the professional. The students faced the problem of the valuable choice – to go on the way of conformism and to merge with the typical environment of school or to consciously accept a call of construction - the aligned training model, being in resistance with system. Understanding these risks and problems which have arisen on the middle of training of students at university, we began to work with student's phenomena of social psychology of education – pressure of the majority and minority, adoption of the group decision, cooperation and the competition, the personal choice, etc. We also constantly draw the attention of students to examples of discussions around progressive

ideas in education in our country and in the world, to what has to be tomorrow, but not to what we can't get rid of. We observe that transition to variability of education as to "culture of advantage" happens not very simply – not only on social, but also at the individual level.

"Through the developing motivational and semantic variable education, the road from totalitarian culture of usefulness, culture of "the made heads", the identity of the person suppressing manifestations and beginning to be in agony in uncertain critical situations of different historical cataclysms, – to the culture of advantage maintaining identity of the person and by that possessing a wide reserve of non-standard social actions during various historical turns and dramas" runs (Asmolov, 2012, p. 240). We constantly draw the attention of students that centration on problems of development of the child, the training model as social constructivism is not just positive part of history of our domestic psychology, but also what became the basis of rapid development of variable models of education in the world. According to L. S. Vygotsky, "education is carried out through own experience of the pupil which entirely is defined Wednesday, and the role of the teacher at the same time comes down to the organization and regulation of this Wednesday" (Vygotsky, 1991, p. 85).

Roundabout ways of development.

Other problem field which for us was difficult is a training of students for work in a class with an inclusive situation. Initially we aligned attention of students to differentiations of so-called children with school difficulties (that is with adaptation problems, difficulties in regulation, etc., caused owing to inadequate actions of the teacher) and children with special opportunities of health and special educational needs. We have, in many respects solved this problem, having created a situation of the shipped observation of how there is a process of adaptation to school in 1 grade when students all September every day observed how the behavior of children depending on features of work of the teacher changes. However, in a situation of a real inclusion which became mass in educational practice we have faced other problem. So, the involved high-quality experts from the Center of Medical Pedagogics who are able to compensate very complex problems in development in children with the expressed special educational needs haven't given the answer to students on a question: What to do pedagogically when in a usual class there are such children? We have no experts owning from the teacher's position, methods of pedagogical work in an inclusion situation – in the country practically. And independent transfer of methods of work from specially organized conditions on a situation of a usual class – students aren't able to make and most often it is very difficult. The matter for ourselves is in a zone of the proximal development if not to tell – perspective. So far, we build in common with students a search algorithm of "roundabout ways of development" (Vygotsky, 1995), considering concrete difficult a case from student teaching, keeping the idea – making a start from what resources and the child's opportunities with special educational needs, taking into account the general situation in a concrete class. It is possible to promote as much as possible his inclusion in educational process.

Causal biography.

L. S. Vygotsky's idea that for adequate identification of any manifestations of the child they need to be understood in development is especially significant for us. "The general and essential to drawing up scientific history of development of the child is the requirement that all this history of development and education was the causal biography. Unlike a simple story, from simple transfer of separate events (in one year there was that, and in another – something different) the causal description assumes such statement of events which puts them into cause and effect dependence, opens their communications and considers this period of life of the child as uniform, coherent, moving entity. Any new stage in development of the child needs to be understood as following with logical need from the previous stage" (Vygotsky, 1983b, pp. 303-304). From the very beginning of practice, we set a format of the observation of students of children prolonged in time. At the same time, it is observed with an obligatory video and the subsequent analysis which initial task is a distinction of objectively observed fact and its interpretation. Interpretation has to have justifications in the previous observed situations or become a hypothesis for further observations. And, taking into account conditional age norm, the student has to offer a reasonable explanation for observed manifestations of the child – as far as they are in limits of age norm on what signs, in what and why individual variations of manifestation of age norm of development are observed. The video has to reflect the child in kinds of activity, natural to his age. Interaction with peers and adults becomes an important aspect of the analysis of the recorded observation.

The ideas about the highest mental functions and conceptual thinking.

Development of a pedagogical profession in many respects is the development at the new level of the highest mental functions and the period of formation of professional conceptual thinking. We make a start from the fundamental idea of L. S. Vygotsky that "any highest mental function arising in the course of historical development of the person appears on the stage twice: at first as function of social and psychological adaptation; as form of interaction and cooperation between people, as the category of interpsychological; then – as a form of individual adaptation, as function of psychology of the personality, as the category of intrapsychological" (Vygotsky, 1960, p. 450).

Certainly, L. S. Vygotsky considered transformation of natural mental functions to the highest first of all as the process happening at early stages of ontogenesis. However, the "formula" presented in the quote in many respects in own way works when changing social development and need of development by the person of the new problems of social and psychological adaptation demanding new cultural means. We consider entry into a profession in many respects through development of system of concepts – as cultural tools of formation and organization of professional thinking. Our task – to accompany transition from everyday concepts to scientific. We adhere to L. S. Vygotsky's idea that scientific concepts aren't appropriated mechanically, by storing of abstract definitions: "aren't acquired and aren't learned by the child, don't undertake memory, and arise and develop by means of the greatest tension of all activity of his own thought" (Vygotsky, 1982, p. 198). We also share the idea that "the development of scientific concepts will rely by all means on

the known level of maturing of spontaneous concepts" (Vygotsky, 1982, p. 199). Proceeding from it, we immerse students in practical pedagogical action (proceeding from the idea of development "from action to a thought"), step by step developing his professional conceptual thinking through a reflection on him:

- we ask to describe at first an observed situation by the own words, using in many respects everyday terms;

- we discuss a video of specific action with students, translating everyday concepts in scientific and gradually complicating and increasing a set of professional terms and concepts which give more differentiated and thin understanding of observed processes – in a live situation of communication of the person who speaks the professional language (teacher) with purposefully mastering this language (students);

- we ask to give and interpret the description of an observed situation with use of terms, presented in the concrete scientific literature offered students in the information environment;

- we ask to describe difficult, complex pedagogical situations on the professional language, solving also a problem of search of necessary theoretical literature for the adequate terminological description of the concrete situation recorded on video.

In this aspect, we are in constantly search optimum of a way, a phasing of complication and expansion of introduction of professional psychological terms that they became an important part of conceptual thinking of the teacher. In the long term, we plan to bring students to a position of the author's description of own researches or methodical developments with adequate and exact use of professional terminology of the - as the appropriated, natural language of the professional teacher understanding psychology of the child.

At this stage, we can tell only about the intermediate results reflecting effects of new model of training of the teacher on the basis of long ago known, but very urgent now, the ideas of cultural and historical psychology of L. S. Vygotsky. Most illustrative social effects which we had gained from employers – directors of the educational organizations. Many of them began to invite to work of our students who are only on their third year, and in certain cases – even on the 2nd year. At the same time, refusing employment of undergraduates and dismissing graduates of pedagogical universities who studied on the previous training model ("from the theory to practice"), finding in them, first of all, fear and inability to work with children in a situation of their natural unpredictability and variety in individual manifestations, and also inability to organize activity of pupils out of frontal forms of work (in an interaction paradigm, but not influences).

Exclusive concentration on broadcasts of a subject and deduction of the formal scenario of occupation, lack of social constructivism in practical work with children, inability to consider a zone of the next development of pupils – any more won't allow the graduate of pedagogical higher education institution to work according to new educational standards,

won't meet the accepted professional standard of the teacher (Yamburg, 2014) by which directors a schoolbook with adequate and exact use of professional terminology of the language- as the appropriated, natural language of the professional teacher understanding psychology of the child begin to be guided.

References

Alekseev, N. G. (2002). Design and reflexive thinking. *Development of the personality.*(2), 85–102.

Asmolov, A. G. (2002). *Psychology of the personality: principles of the all-psychological analysis.* Moscow: "Sense", "Academy".

Asmolov, A. G. (2012). *Education optics: Sociocultural prospects.* Moscow: Education.

Asmolov, A. G. (2013). Variable education in the changing world: sociocultural prospect (theses about what to be to elementary school). *Science and Education*, *8*(107), 3–13.

Asmolov, A. G., Burmanskaia, G., Volodarskaia, I., Karabanova, O. A., Salmin, N. G., & Molchanov, S. V. (2008). *Kak proektirovat' universal'nye uchebnye deystviya v nachal'noy shkole: ot deystviya k mysli [how to project universal educational actions at elementary school: from action to a thought].* Moscow: Education.

Asmolov, A. G., & Kudryavtsev, V. T. (2016). Preschool education in the mode of innovations. (1).

Bulin-Sokolov, E. I., & Obukhov, A. S. (2015). Reflexive and activity model of training of the teacher for formation of the future. *Science and School*(6), 22–27.

Bulin-Sokolov, E. I., Obukhov, A. S., & Semenov, A. L. (2014). Future pedagogical education. direction of the movement and first practical steps. *Psychological science and education*, *19*(3), 207–226.

Davydov, V. V. (1996). *The theory of the developing training.* Moscow: Intor.

Dubrovina, I. V. (2013). L. s. vygotsky's ideas about the maintenance of children's practical psychology. *Psikhologicheskaya Nauka I Obrazovaniye [Psychological Science and Education]*(3).

Elkonin, D. B. (1998). *Development of an oral and written language of pupils / Under the editorship of V. V. Davydov.* Moscow: INTOR.

Elkonin, D. B. (2001). *Psychology of development of the person.* Moscow: Aspect Press Publisher.

Ftenakis, V. (2015a). Need of changes: early education in the modern world. *Obrazovatelnayapolitika*, *4*(70), 101-120.

Ftenakis, V. (2015b). With - designing: metodiko-didactic approach without passive participants. modern preschool education. *Theory and practice*, *2*(54), 58–65.

Fthenakis, W. E. (2003). Zur neukonzeptualisierung von bildung in der frühen kindheit. In W. E. Fthenakis (Ed.), *Elementary education according to pisa. how children's day centers can become educational institutions* (pp. 18–37). Freiburg: Herder.

Galperin, P. Y. (1985). *Methods of training and intellectual development of the child.* Moscow: Publishing house MPSU.

Golenkova, Z. T., & Igitkhanyan, E. D. (1999). Processes of integration and disintegration in social structure of the russian society. *Sociological researches.*(9), 27–34.

Karpov, Y. (2005). *The neo-vygotskian approach to child development*. Cambridge: Cambridge University Press.

Lovyagin, S. A. (2014). How to make so that at school there were more good teachers of physics, chemistry and biology. *Management of school*(4), 23-24.

Markova, A. K. (1993). *Psychology of work of the teacher: Book for the teacher*. Moscow: Education.

Mukhina, B. C. (1999). *Phenomenology of development and life of the personality: Chosen psychological works*. Moscow: Moscow psychological-social institute, Voronezh: NPO MODEK.

Obukhov, A. S. (2015). *Development of research activity of pupils. 2nd prod., republished. and additional*. Moscow: National Book Center.

Poddiakov, A. N. (2006). *Research behavior: strategy of knowledge, help, counteraction, conflict. 2nd prod., and additional*. Moscow: PER SE.

Poddiakov, A. N. (2015). Training psychology in the conditions of novelty, complexity, uncertainty. *Psychological researches. Online magazine.*, *8*(40), 6.

Saeednia, Y. (2011). Self-directed learning among children of ages nine to eleven in tehran: Generating a persian version of sdlr-abe. *US-China Educational Review*, *8*(12), 94–100.

Sakharov, T. N. (2016). *The collection of reports on results of a scientific and practical conference "the person in the world of uncertainty: methodology of cultural and historical knowledge", dated for L. S. Vygotsky's 120 anniversary*. Moscow: MPGU.

Savenkov, A. I. (2006). *Psychological bases of research approach to training*. Moscow: Axis-89.

Semenov, A. L. (2004). A modern course of mathematics and informatics at school. *Questions of education*(1), 103-118.

Troitsky, T. S. (2004). *Literary education of younger school students. communicative and activity approach: Monograph*. Moscow: Mnemozina.

Tulmin, P. (1981). Mozart in psychology. *Philosophy questions*(10), 127-137.

Ushinsky, K. D. (1867). *Person as education subject. Volume I*. SPb.

Ushinsky, K. D. (1869). *Person as education subject. Volume II*. SPb.

Vygotsky, L. S. (1960). *The development of higher mental functions*. Moscow: Publishing house of RSFSR.

Vygotsky, L. S. (1966). *Lectures on pedology*. Izhevsk: Publishing house Udmurt un-that.

Vygotsky, L. S. (1972). *Structural psychology*. Moscow: MSU.

Vygotsky, L. S. (1982). *Collected works in 6 volumes. Vol. 2.* Moscow: Pedagogika.

Vygotsky, L. S. (1983a). *Collected works in 6 volumes. Vol. 3.* Moscow: Pedagogika.

Vygotsky, L. S. (1983b). *Collected works in 6 volumes. Vol. 5.* Moscow: Pedagogika.

Vygotsky, L. S. (1984). *Collected works in 6 volumes. Vol. 4.* Moscow: Pedagogika.

Vygotsky, L. S. (1991). *Pedagogical psychology / Under the editorship of V. V. Davydov*. Moscow: Pedagogics.

Vygotsky, L. S. (1995). *Defectology problems*. Moscow: Education.

Vygotsky, L. S. (1996). *Training and development at preschool age*. Moscow: Publishing house of Shalva Amonashvili.

Vygotsky, L. S. (2001). *Lectures on pedology*. Izhevsk: Publishing house Udmurt un-that.

Yamburg, E. A. (2014). *What the new professional standard of the teacher will bring to the teacher?* Moscow: Education.

Zankov, L. V. (1985). *Chosen pedagogical works*. Moscow: Publishing house of Pedagogics.

Zaretsky, V. K. (2001). About reflexive and activity pedagogics. In V. K. Zaretsky & M. M. Gordon (Eds.), *Summer school for children with features of development in nytvensky district: experience from 1996 to 2001* (pp. 29–41). Nytva.

Zaretsky, V. K. (2007). Zone of the proximal development: about what vygotsky hasn't managed to write. . . . *Cultural and historical psychology*(3), 96–104.

Zuckerman, G. A. (1980). *Formation of educational activity in the collective distributed form (on material of experimental training of the native language at elementary school)* (PhD dissertation). Moscow State University of Psychology and Education.

Zuckerman, G. A., & Polivanova, K. N. (2003). *Introduction to school life. program of adaptation of children to school. 2nd prod*. Moscow: Genesis.