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**RATIO OF MANIFESTATIONS OF CONCEPTUAL,  
METACOGNITIVE ABILITIES AND FEATURES OF MORAL  
SPHERE**

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*Abstract*

The problem of personal's moral development in adolescence is particularly acute in the context of studying the productivity of intellectual activity, that is, conceptual abilities and metacognitive abilities. 90 older adolescents were sampled. Research methods: "Interpretation of the moral dilemma", "Conceptual Synthesis" "Methods of diagnosing the level of reflexivity", "Comparison of similar drawings". The results of the study prove that none of the manifestations of conceptual abilities and metacognitive abilities correlates with the peculiarities of research participants' moral choice. Such data can be explained by the immaturity of these constructs, when they are only at the stage of formation and are not represented in their integrity in the individual mental experience of the individual. The obtained results are pioneering in view of the undetectable links between the manifestations of conceptual abilities and metacognitive abilities and the peculiarities of the moral choice of research participants. The data provided in the article enrich our knowledge of the manifestations of conceptual abilities and metacognitive abilities in older adolescence and inspire us to expand the methods of studying both the concept itself and its components, as well as potential factors influencing this construct. Of particular importance is the study of the manifestations of conceptual abilities and metacognitive abilities in other age periods, to determine the dynamics of the revealed patterns.

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**Keywords:** Moral development, concept, metacognitive abilities, immaturity.



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## 1. Introduction

The problem of the moral and moral development of the individual in adolescence is particularly acute in the context of studying the productivity of various types of intellectual activity, especially in the context of regulating one's behavior, including intellectual one (Dudnikova, 2017; Volkova, 2017a, 2017b). This statement is argued by a variety of facts, among which are the ongoing fundamental socio-economic changes occurring in modern Russia. In this regard, it is necessary to note the processes of globalization, involving the active interaction of representatives of different ethnic groups, characterized by a cultural-specific value system. Along with this, modern realities of social development of the Russian society require particular attention. They consist in the transformational processes of transition from traditional collectivism to individualism, in which relations of exchange and benefit replace relations of cooperation and cooperation. The above transient processes associated with the refraction of values, initiated about 20 years ago, have so far not been sufficiently studied, which is reflected in the lack of a clear opinion about changes in the new standard of moral norms and values, and the rules of interaction between subjects in the new social environment. In addition, along with the need to adapt to the changed ideological schemes at the level of the whole society, this process is particularly acute in the individual ontogenesis, in particular, this phenomenon becomes more topical as one of the key tasks in adolescence. A person should build its own system of moral values (Erickson, 1996) in this period due to the special sensitivity of this period of human life, when significant changes occur in different spheres of human life, among which - moral and intellectual (Vekker, 1976; Erickson, 1996; Sabadosh, 2015, 2017).

## 2. Problem Statement

Indicating theoretical and practical ideas about the problem of moral education of stakeholders, developed by a number of authors (Duska & Whelan, 1975; Flavell, 1967; Kohlberg, 1984; Molchanov, 2011; Ozhiganova, 2015), it is necessary to say, that the authors note the relationship between the manifestations of moral judgments and the formation of moral thinking, which mediates the formation of moral consciousness. Piaget (2008) argues that the degree of development of the moral judgments of the child is determined by the level of formation of his thinking.

Along with this, there is reason to combine both areas of research - the study of conceptual (conceptual), metacognitive (voluntary and involuntary) abilities and moral development of the individual - based on the analysis of textual activities of older adolescents. So, in the research Sipovskaya (2016) argued the importance of measuring the characteristics of self-generated text (using the interpretation of moral dilemmas as an example) in the context of following the productivity of intellectual activity (intellectual competence indicators, conceptual (conceptual), metacognitive (voluntary and involuntary) and intentional abilities). Accordingly, the author's text can be considered as such a product of the mental activity of the subject of activity, in which multi-mental mental resources are represented.

Thus, the characteristics of the sample were identified — older adolescents took part in the study — and the variables of the study, which consist in manifestations of conceptual (conceptual), metacognitive (voluntary and involuntary) abilities and features of the moral and moral sphere of the individual.

### **3. Research Questions**

Thus, the object of study is older adolescents (students of 9th grade of secondary schools), in whom conceptual (conceptual), metacognitive (voluntary and involuntary) abilities and moral and evaluative judgments are formed in the process of life activity.

The subject of this research is the ratio of manifestations of conceptual (conceptual), metacognitive (voluntary and involuntary) abilities and features of the moral and ethical sphere of the personality of the research participants.

### **4. Purpose of the Study**

The purpose of the study is to discover the ratio of manifestations of conceptual (conceptual), metacognitive (voluntary and involuntary) abilities and moral choice of older adolescents.

Theoretical hypothesis of this study: there are links between indicators of the level of conceptual (conceptual) formation, metacognitive (voluntary and involuntary) abilities, and the moral and moral choices of older adolescents.

#### **Sample**

The study involved 90 older adolescents (average age 15 years).

### **5. Research Methods**

As a methodological base, the methodology "Interpretation of the moral dilemma" was used (a methodical technique for evaluating the peculiarities of moral choice; indicators of the complexity of the interpretation were evaluated)

Interpretation (essay) on one of the moral dilemmas of A. I. Podolsky and O. A. Karabanova (quoted in Asmolov, 2010) is a type of text that, along with characteristics of its content and features of argumentation, reflects motivational and personal attitude to the situation (Yakovleva, 2010; Yadrovskaya, 2012; Kholodnaya & Gelfman, 2016; Ozhiganova, 2016). The qualitative characteristics of the text were considered as a manifestation of the student's intellectual competence.

For writing the essay, the students were provided with one white sheet of A4 format, on which they were asked to write as much text as they deemed necessary, to interpret the following moral dilemma (the moral dilemma itself was presented orally):

"Kolya and Petya worked in the garden in the summer - they picked strawberries. Kohl wanted to buy a sports watch, which he had already looked after himself for a long time. Kohl is from a low-income family, so parents cannot buy him such watches. Peter wants to improve his computer with the money he earned.

Kohl is much inferior to Petya in strength and dexterity, and he rests more often, so Petya collected much more strawberries. In the evening the brigadier came to pay the guys for the work done. Recounted boxes of strawberries collected by both guys. I counted the amount they earned and asked, turning to Petya: "Well, guys, do you want to pay evenly, or did someone collect more, do they need more?"

The peculiarities of the moral development of the research participants were determined by the criteria that older adolescents used to make their judgments about the possibility of resolving a

problematic situation of moral choice. The criteria are the criterion of empathy (all research participants thought out friendly relations between boys), the criterion of equality of opportunity and justice or criterion of respect for the identity of each other. In the first case, the choice was made in favor of equal distribution of incentives, in the second - inequality, and in the third - equal sharing of money before the team leader and the subsequent "fairer" - each other (or solving the dilemma by donating a watch or an improved computer - that is, mediated justice and "conscientiousness", as adolescents expressed).

Methods for diagnosing conceptual abilities. Methodology "Conceptual Synthesis" (Kholodnaya, 2012).

The material of the "Conceptual Synthesis" method, which makes it possible to assess the level of formation of conceptual abilities, is aimed at identifying the ability to independently construct a semantic context based on three words that are not related in meaning, while offering the maximum possible number of their combinations in the form of meaningful sentences. On A4 forms, one triad of words is printed on each form:

- a shell - a paper clip - a thermometer;
- computer - tornado - pin;
- planet - electrical outlet - hourglass.

The study participants were verbally read out the instruction, in accordance with which the students were asked to establish different versions of semantic connections between these three words, to write down each version as one or two sentences so that all three words were used at the same time. A total of 3 triads of words were presented, the time for working with each of the triads was 3 minutes. Using the "Conceptual Synthesis" technique, the variable "conceptual abilities" is estimated. Criteria for assessing the answer:

0 points - no written proposals; only two words were used (for example, for the second triad of words - "I was sitting at home and watching a tornado film on a computer");

1 point - a simple enumeration of words in a sentence (for example, for the first triad of words - "A shell, a paper clip and a thermometer were on my table");

2 points - creation of context within the description of a specific situation or specific circumstances (for example, for the third triad of words - "Previously, time on our planet was measured only with an hourglass, and then electrical outlets and mechanical clocks appeared");

3 points - a sentence with the use of comparisons, metaphors, generalizing categories or expanded causal relationships (for example, for the first triad - "A shell sawn in half has curls similar to the bends of a paper clip, and if this shell is warmed to 200 degrees, it will melt and it will turn out glass for the thermometer and other objects").

Points for all triads are summarized. Indicator: the sum of points characterizing the level of formation of conceptual abilities (ability to conceptual synthesis).

Methods for the diagnosis of metacognitive abilities

1) "Methods of diagnosing the level of reflexivity" (Karpov, 2003).

This technique diagnoses the level of expression of such metacognitive ability as reflexivity. The text of the questionnaire consists of 27 statements, each of which in the form of answers in front of the

question number of the research participant is put a number corresponding to the variant of his answer: 1 - absolutely wrong; 2 - wrong; 3 - rather wrong; 4 - I do not know; 5 - rather true; 6 - right; 7 - quite right. The points are added together and the total score is set. There was no conversion to the walls due to the lack of standards for older adolescence and the use of the average value as the norm. Indicator: level of reflexivity as an aspect of metacognitive (arbitrary) abilities, in points.

2) Modification of the technique "Comparison of similar drawings" by J. Kagan (as cited in Lobanov, 2008a, 2008b).

The Matching Familiar Figures Test (MFFT) test is used to diagnose the cognitive style of impulsivity / reflectivity. This cognitive style, in accordance with the initial assumption of Kagan (Kagan, Rosman, Day, Albert, & Phillips, 1964), characterizes individual differences in the cognitive pace: tendencies to make decisions quickly or slowly. Within the framework of this empirical study, a modified version of the technique "Comparison of similar figures" was used for a group survey developed and tested by Lobanov (2008a, 2008b). The study participants are presented with 2 training, then 12 basic sheets, on each of which there is an image of a familiar object (standard figure) on top, and 8 almost identical images of the same object, among which only one is completely identical to the standard figure, are arranged in two rows at the bottom. The research participant must find and indicate an image that is identical to the reference figure, highlighting it. After the image is detected, the subject must raise his hand so that the researcher inserts the exact time of detection of the figure in the individual form of this research participant and signs the possibility of continuing the procedure. Upon completion of the study, all sheets with pictures were collected, and using a key, an assessment of the correctness of detecting a figure identical to the standard was carried out. That is, unlike the original version of the test, in this case only one answer was recorded for each of the 12 presentations, which the subject himself considered to be the "right choice". The introduction of a modified (abbreviated) version of the test was due to several reasons: the research was carried out after hours (after the end of all the lessons), so we had to take into account the fatigue of the participants; strictly limited time for conducting research, established at parental meetings and in the course of agreements with adolescents themselves.

Indicators of impulsivity / reflectivity as an aspect of metacognitive (involuntary) abilities: 1) latent time of the first answer (the sum of the time of all the first answers); 2) the total number of errors.

## **6. Findings**

At the initial stage of the work, a check was carried out for the normal distribution of the obtained statistical data, which made it possible to argue the use of non-parametric methods of analysis.

Further, a correlation analysis was carried out (the Spearman method) of variables (Table 1).

**Table 01.** Correlation matrix of indicators of conceptual (conceptual), metacognitive (voluntary and involuntary) abilities and features of moral choice (Empathy) of research participants

Indicator of intellectual competence	Indicator of moral and evaluative choice		
	Empathy		
	Cor. Sp	$\rho$	N
Engineering (conceptual) abilities	-,065	,0574	78
Reflexivity (arbitrary metacognitive abilities)	,054	,636	
Kagan_time (involuntary metacognitive abilities)	,107	,351	
Kagan_errows (involuntary metacognitive abilities)	-,014	,904	

As follows from the data presented in Table 1, none of the manifestations of metacognitive abilities, as well as the indicators of conceptual abilities in older adolescence correlate with the peculiarities of the moral choice of research participants, which can be interpreted in terms of the maturity of mental structures (Volkova, 2011, 2016; Voronin & Goryunova, 2016):

- with the maturity of constructs that characterize certain mental abilities, he is in a situation of becoming so fully differentiated and integrated content that they separate and are present in the individual human experience as separate metasystem formations;
- with the immaturity of constructs characterizing certain mental abilities, in the situation of their formation and fragmentation, lack of integration and weak differentiation in the individual mental experience of the individual.

In this case, there is a high probability of a second version of the explanation of the facts obtained, due to the particular age of the study participants (older adolescence as a period of ontological crisis). In older adolescence, there is a transition from one stage of intellectual development to another through some kind of "shapeless intellectual education" (Volkova, 2011), in which old relationships between constructs are destroyed and fundamentally new formations are created that are adaptive in relation to the changed conditions of the subject's activity, forming new forms and styles of behavior.

In addition, it should be noted, that Ivanova (1999), Vinokurova (1999) and Nazarova (2001) also indirectly echo the facts, cited in the article. The authors argue that in a situation of increasing the number of correlations between these or other constructs, we should speak about the emergence of a new quality. Since no significant correlation was identified in the presented study, it can be concluded that the new for this age of education - the moral and ethical experience of the individual - is not formed or is insufficiently formed.

Along with this, it should also be said about transitivity in the context of the worldview of modern society: there is a turning point not only in human ontogenesis, but also in society - the "collectivism" stage is superseded by "individualism" in the socio-political sphere of modern Russian society.

Accordingly, there is reason to conclude that in older adolescence, no correlation was found between the indicators of conceptual (conceptual), metacognitive (voluntary and involuntary) abilities and peculiarities of moral and ethical development.

The results obtained did not demonstrate the contingency of the indicators of conceptual (conceptual), metacognitive (voluntary and involuntary) abilities of the research participants with manifestations of moral and ethical development.

## 7. Conclusion

The presented empirical research provides answers to questions related to the development of the moral and ethical sphere of older adolescents in the context of manifestations of conceptual (conceptual), metacognitive (voluntary and involuntary) abilities. Nevertheless, it leaves a number of questions about the development of the moral sphere of the personality, the time of its maturity. In this regard, the question of finding new methodical tools for diagnosing different types of abilities is particularly acute.

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