



## METHODOLOGICAL ASPECTS AND METHODS OF RESEARCHING REFLECTIVE THINKING

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### ABSTRACT

This article discusses the methodological aspects of researching reflective thinking, that is, the scholars who have comprehensively studied various facets of this topic and the methods for studying the reflexivity of thought. In addition, along with the most effective methods for studying the reflexivity of thinking, it provides a description of methodologies that cause difficulties during implementation.

**KEYWORDS:** Reflexivity, stress, disadaptation, reflection, determinant, need, quasi-reflection, introspection, systemic reflection.

### INTRODUCTION

Since the concept of reflection was proposed by John Dewey as the mind's internal attitude toward itself, various views on reflection have taken shape in philosophy and psychology. They considered different aspects of this phenomenon and emphasized its positive and negative consequences. The idea of the positive role of reflection in personality formation was most clearly articulated, among the pioneers, in the works of S. L. Rubinstein [1]. According to him, at first "in the course of activity, consciousness is not yet formed at a reflective level," and a person only reacts to separate events but cannot grasp life events as a whole. Therefore, the life of a person deprived of reflection proceeds without a conscious direction, similar to the flow of natural processes. Reflection enables a person to reassess events in their life not only under the influence of external determinism but also consciously and to adopt a certain position toward them. Rubinstein noted that the formation of reflection is a turning point leading to the conscious organization of a person's life. The capacity for reflection, characteristic of a developed mind, is one of the important conditions for a person's transition from a state of determination defined by external factors to a state of consciously managing their life—self-determination. Here, reflection, as the turning of the mind upon itself, encompasses two aspects: first, a mechanism for the voluntary reworking of ideal contents by sensing the distance between the mind and its intentional object; and second, the ability to direct this process toward itself.

At the same time, scientific studies have also shown the negative consequences of reflective thinking: excessive focus on stress symptoms, depression, maladaptive problem-solving methods, and associations with pessimism and neuroticism have been identified. In our view, these contradictions are related to the term "reflection" being applied to different phenomena in different contexts. Therefore, three forms can be distinguished: introspection—excessive absorption in inner feelings; quasi-reflection—detachment from real life situations and orientation toward contentless objects; and systemic reflection—seeing oneself from the outside and harmonizing subjective and objective facets. Among these three forms, it is

precisely systemic reflection that is the most adaptive and is directly connected with self-determination.

At the beginning of the 21st century, V. D. Shadrikov analyzed the issue of human subjectivity and sought to determine its ontological essence. In the scholar's view, human subjectivity is characterized by a certain symptom complex. This symptom complex includes the following components: motives, inner freedom, intellectual ability, reflection, resistance to arbitrary influence, and a well-founded confidence in the correctness of one's own position.

According to Shadrikov, the effectiveness of these qualities depends on a person's intellect, reflection processes, and internal self-control mechanisms. He writes about this as follows: "The important qualities of subjectivity are resistance to arbitrary influence, an understanding of the groundedness of one's own position, and inner freedom." The scholar interprets reflection as an aspect that characterizes the cognitive orientation of the person toward themselves. [1]

Analyzing the role of reflection in the thinking process in the context of the problem of human mental development, he arrives at the following conclusion: reflection is an important psychic mechanism for recognizing errors, introducing corrections into thinking activity, and solving the final task correctly. According to Shadrikov, the thinking process includes not only solving a problem but also processes of understanding, checking, and controlling one's own thinking activity. As a person organizes their reasoning, they accept an idea of the result as a guideline, monitor and analyze their activity. This process forms a skill of organizing and controlling one's own thinking, as a result of which reflection becomes a personal quality [8]. On the basis of A. V. Karpov's works, V. D. Shadrikov distinguishes between the concepts of "reflection" and "reflexivity." According to him, reflection is a process—that is, the act of analyzing and understanding one's own reasoning, mental and practical activity; reflexivity is an acquired quality of the person that denotes the ability to carry out reflection, to manage it, and to consciously organize the thinking process. He substantiates this view as follows: "Reflexivity as a personality trait directs the thinking process, organizing and managing it, and thereby facilitates the successful performance of any activity... In mastering abilities and managing them, a person's reflexivity is manifested" (Shadrikov, 2007, p. 218). According to Shadrikov's theory, reflexivity participates in all intellectual operations, and its level is determined by the complexity of the tasks being solved and the capabilities of the activity's subject. Reflexivity is especially actively manifested when a person encounters difficulties.[4]

V. D. Shadrikov also analyzes reflection as a factor that occupies an important place within the system of a person's professional abilities. In his view, reflection manifests itself both at the level of individual psychic functions and at the level of components of the psychological system of activity. These components include the levels of goal setting, programming, reflection, and decision-making (Shadrikov, 2010, p. 299). According to the scholar, reflexivity is an important ability manifested at the level of intellectual systems in a person's professional activity. Through self-knowledge, the management of one's own thinking, and the analysis of one's activity, it ensures professional growth. Therefore, Shadrikov evaluates reflection as an ability manifested in professional activity. [4] Shadrikov substantiates the necessity of introducing reflection into the education system and develops a model of reflective education. According to this model, from the very initial stages of the educational process, the teacher should encourage students toward reflective activity. Students should be able to evaluate their knowledge,

identify their mistakes, independently set educational goals, and learn to consciously manage their own learning process. Shadrikov defines the main condition of this process as follows: "The leading conditions of successful educational activity are awareness and voluntariness; the main task is to form the reflection of one's own mental actions." [2] Thus, in the educational process, reflection teaches not only the acquisition of knowledge but also the analysis of one's thinking, activity, and results. Shadrikov also interprets reflection as a process connected with moral and spiritual development.

He puts forward the hypothesis that "conscience is a quality of the person that develops." This quality is formed as a result of the interaction of three main factors: needs—as an internal determinant; morality—as an external determinant; and reflection—as a coordinating mechanism between internal and external determinants. According to him, when a person analyzes their behavior through the criteria of good and evil, forms of moral conduct are shaped, and this process leads to the development of conscience. Shadrikov expresses it as follows: "The reflection, comprehension, and self-reflection of one's behavior in the field of good and evil is the main mechanism of the formation of conscience." [4] Shadrikov's conception interprets reflection not only as a rational process but also as an integrative mechanism that ensures a person's spiritual, moral, and professional growth. Reflection governs human thought, controls actions, and ensures moral development. At the same time, reflexivity is a quality of the person's conscious management of their own thought and activity, and it is the principal psychic mechanism that defines human individuality and uniqueness within the space of culture.

Reflective competence is a multi-level structural component of reflective experience that is formed and developed in the process of the subject's reflective activity and includes informational, instrumental, value-motivational, and behavioral components. Their harmonious functioning ensures the solution of current reflective tasks and the further development of experience as a dynamic system. The elements of the reflective competence system organize reflective activity at three levels (cognitive, metacognitive, and personal). Reflective competence at the personal level can be seen as a system of structures of reflective experience that is formed and developed in the process of solving reflective tasks aimed at resolving the internal contradictions that arise in the subject in problem–conflict situations. Among the main reflective tasks, we distinguish self-determination, self-knowledge, self-identification, self-design, and self-realization. We consider the system of reflective skills for resolving internal contradictions in problem–conflict situations as the instrumental component of a person's reflective competence. Reflective skills as a means of solving problem–conflict situations have been studied in the works of N. I. Gutkina, I. M. Semenov, S. Yu. Stepanov, G. I. Davydova, and others. For example, N. I. Gutkina hypothesized that the skills of self-analysis and identifying new knowledge about oneself are a criterion for the formation of reflective expectations, which are the result of the interaction of personal and interpersonal forms of reflection.

T.V. Komar considered reflective skills as the main components of personal reflection, that is, as its process characteristics. The researcher distinguished the following skills: forming an ideal model of the final goal of activity (in the matter of personal self-development, the ideal image of the "I" can serve as an example of such a model), understanding one's own experience (personal characteristics, skills and competencies, one's own place in a given situation, and

others), identifying the necessary changes that make it possible to bring the real state closer to the ideal model [3].

O. I. Gerasimova distinguished two groups of reflective skills that determine the effectiveness of teachers' professional activities. The first group consists of reflective-perceptual skills, which include the following methods: recognizing one's individual-psychological characteristics, assessing one's mental state, perceiving and adequately knowing one's own personality and others in a multifaceted way. The more complex second group, which is personally determined, includes the following skills: understanding and re-understanding the characteristics of one's relationships with the environment; consciously regulating and controlling one's behavior and its influence on others; forming a sense of the integrity and dynamics of one's inner life [3].

Relying on the works of B. A. Zal'tserman, Ye. V. Piskunova identified the following reflective skills that determine the level of a person's ability for professional-pedagogical reflection, namely: moving from the space of mental or organizational activity to self-analysis and designing of the means of this professional activity; fixing the results of analysis in the form of schemes or representations; introducing changes (redesign) into these schemes and representations [5].

In V. A. Metayeva's work, a model of research competence by Yu. I. Kalinovskiy is described, in which the concepts of "reflective abilities" and "reflective skills" are distinguished. The author includes the following methods in the composition of reflective skills: determining the foundations (values, position) of one's activity; understanding the means used in individual, group, and collective activity and their adequacy to the situation; understanding difficulties such as the absence or inadequacy of the means used; coordinating the goal and result of the activity; identifying the causes of the situation that has arisen; forecasting the future state of affairs based on extrapolation; distinguishing the level of professional consciousness from the level of actualization of personality; implementing a prospective visualization of existing and emerging possibilities; designing goals to be achieved in the future... [8].

The need to study the aspects of reflection related to activity is associated, on the one hand, with the chosen approach, and on the other hand, with the lack of psychodiagnostic tools for assessing reflection. Unfortunately, as I. N. Semenov noted, although there is constructive cooperation on reflection between existing scientific schools in modern psychology, this cooperation is hardly observed precisely in the aspect of activity. The following directions exist in the psychology of reflection: sociocultural, historical-scientific, philosophical-methodological, subject-theoretical, experimental-methodical, and practical. These directions reveal the importance of reflection and reflective processes in increasing the effectiveness and productivity of human activities (learning, labor, communicative, and others).

A. V. Karpov studied reflection as a personality quality and, according to him, reflection manifests itself in two forms in psychological research:

- on the one hand, it is a basic psychological characteristic that serves to understand and manage one's life activity,
  - on the other hand, it is viewed as a method by which the researcher understands sources and results of empirical data [4].
- In developing psychological tools intended for the study of reflection, many authors usually emphasize the personality quality of reflexivity. For example, A. V. Karpov, approaching the issue of reflection on the basis of activity theory, developed a

methodology for determining the level of individual reflexivity [4]. In his opinion, reflection is a single psychological phenomenon that manifests itself in the process of understanding not only a person's inner world but also the external world (including the subjective "world" of others), and it can be called a reflective action. The author conditionally divides the process of reflection into two main types:

1. Personal reflection — understanding the content of one's consciousness, the course and results of one's activity;
2. Interpersonal (understanding another) reflection — understanding the inner world of other people, that is, an attempt to answer the questions of what they think and how they perceive.

The first type of reflection is activity-oriented, where a person focuses on the process of their activity, the psychological states manifested in this activity, and their inner feelings and qualities. This type includes self-assessment and forming the image of the "I" during activity. According to A. V. Karpov, this type of reflection is divided into the following three forms according to the function it performs:

- Situational reflection — oriented toward the current process of activity;
- Retrospective reflection — analyzing past activity;
- Prospective reflection — planning future activity.

The second type of reflection is oriented toward the inner world of another person, where the object of reflection is not the person themselves but the states of consciousness of those around them, how they imagine reality, how they understand and evaluate it. Such reflection signifies thinking on behalf of another person and the desire to find answers to the questions "what do others think?" and "how do they perceive me?"

There are a number of methodologies aimed at studying reflection. One of them is the Differential Diagnosis of Reflection, developed by D. A. Leontyev and his group of authors (Leontyev et al., 2009). This methodology is based on the following main idea: the term "reflection" is used in psychology to denote various phenomena. Therefore, the authors distinguish three qualitatively different forms of reflection: a) Introspection — excessive absorption in one's internal states, experiences, and emotions; b) Systemic reflection — the ability to be self-aware and simultaneously see oneself "from the outside," that is, to encompass both the subject and the object together; d) Quasi-reflection — reflection directed toward an object detached from reality, unrelated to a real life situation. As an opposite quality to these forms, the authors point to areflexia — the absence of reflection, that is, a lack of self-control and a state in which attention is directed only to the external object.

S.Yu.Stepanov views the concept of reflective competence from the standpoint of a person's professional quality; he regards the process of professional activity as an optimal environment for effectively and adequately activating reflective processes and for manifesting reflective ability. This serves to achieve development and self-development, a creative approach to professional activity, and the highest efficiency and productivity in it [9]. Reflective competence is important in any human activity, but in certain professions, including teachers and psychologists, its presence serves as a condition for effectiveness. As the British scholar M. Wallace noted, a distinctive feature of a teacher's professional activity is the presence of a strongly expressed reflective connection in pedagogical work. In his opinion, due to the dynamic and changeable nature of the pedagogical process, it is impossible to draw up general

guidelines for all situations. A method that was effective on the first day may be insufficient or completely inappropriate the next day. Therefore, pedagogical activity itself is a creative activity, and the teacher is a reflective professional who constantly analyzes their work [7.].

Today, numerous studies and investigations have identified the most informative and reliable methodologies for diagnosing reflective abilities as the following:

3. Methodology for determining the level of expression of individual reflexivity (A. V. Karpov).
4. Methodology for determining the level of formation of pedagogical reflection (O. V. Kalashnikova).
5. Methodology for determining the level of expression and direction of reflection (M. Grant).
6. Methodology for determining the level of formation of pedagogical reflection (O. S. Anisimov).
7. The “Matching Familiar Figures” test (J. Kagan).
8. Method for researching the reflectivity of thinking. (V. G. Pashukova)

Among these, A. V. Karpov’s methodology is considered the most widely used and experimentally tested method. This methodology operates on the basis of a list of various situations that reflect a person’s tendency to reflect on their own actions and the actions of others. In it, reflexivity is broadly interpreted as a psychological characteristic of consciousness, and the various states of reflection — as a process, as a state, and as a trait — are analyzed together. At the same time, the direction of reflection is also taken into account. The content of the theoretical construct, as well as the spectrum of indicators of the manifestation of the reflexivity trait defined in it in behavior, indicates the need to take into account the three main types of reflection distinguished according to the “time” principle: situational (actual), retrospective, and prospective reflection [5]. The research results presented in the methodology show that reflection is a mechanism that exerts a structural influence on other personal qualities. [6]. According to the author of the methodology, the reliability level (accuracy and stability of results) of the developed test–questionnaire meets the requirements of psychodiagnostics. The results of checking the validity of the methodology also confirmed that it is sufficient from the standpoint of psychometric requirements.

Also, O. V. Kalashnikova’s methodology “Determining the level of formation of pedagogical reflection” is designed for psychodiagnostics of the pedagogical team, and its questions make it possible to diagnose students of all courses in the field of pedagogy as well. The application of this methodology provides respondents with the opportunity to understand themselves more deeply, to reflect on questions they had not thought about before, and to take a reflective position during the testing process.

The methodology “Determining the degree of directedness of reflexivity,” developed by M. Grant, makes it possible to assess the level of formation of autoreflexion and socioreflexion. Autoreflexion means analyzing personal feelings, internal motives, desires, and goals, while socioreflexion is the understanding and analysis of the feelings and experiences of other people. According to the American scholar, reflection is a human-specific ability that makes it possible to perceive the inner world along with the external world. This is the ability of one’s personal psyche to reflect itself and forms the basis of the property of the phenomenon of consciousness. Grant emphasizes that reflection should be viewed in the context of

communication and interaction. Because it is precisely in the process of communication that a person understands themselves and others and forms the image of one's own and others' "I." Thus, the process of reflection encompasses analyzing one's own thinking as well as thinking on behalf of another person in communication and understanding them. Therefore, two scales are distinguished in the methodology — diagnosis of personal (autoreflexion) and social (socioreflexion). However, the weak point of M. Grant's methodology is the direct form of the questions. Because respondents understand the testing process, worry about the results, and may answer the questions in a specific direction either deliberately (consciously) or unconsciously to pursue their own goals. This may distort the results and reduce the effectiveness of diagnostics. To prevent such situations, it is advisable to include trap questions, provocative questions, and control questions in diagnostic methodologies.

O.S. Anisimov's methodology "Determining the level of formation of pedagogical reflection" is aimed at diagnosing the pedagogical team and is mainly used for senior students who have gained practical experience. This methodology is in the form of a questionnaire and studies reflection according to three criteria:

- the level of a person's reflexivity,
- the level of a person's collectivism,
- the level of a person's self-criticism.

It should be noted that O. S. Anisimov's methodology is more aimed at determining the reflectivity of thinking. Therefore, using this methodology, it is possible to diagnose the level of development of personal, intellectual, and cooperative components.

Another test aimed at determining the reflectivity of thinking is the "Matching Familiar Figures" test developed by J. Kagan. According to J. Kagan's initial hypothesis, this cognitive style characterizes individual differences in the speed of decision-making. This style is especially evident under conditions of uncertainty, when it is required to make the right choice among several alternatives. Impulsive participants respond quickly in situations with many choices, but they do not thoroughly analyze all possible alternatives when making decisions. Reflective participants, in such a case, act more slowly, re-check each assumption repeatedly, and make a decision based on a detailed analysis. The participant is first presented with 2 practice sheets, then 12 main sheets. At the top of each sheet a familiar object image (a sample picture) is provided, and at the bottom there are 8 images that are almost identical to this object. Only one of these images fully matches the sample picture. The participant's task is to find and indicate this exactly matching image. This test is administered face-to-face between the respondent and the researcher with a stopwatch, which creates difficulties when administering it to a large number of respondents. For this reason, many scholars have not used this method in their research.

Another method used to determine the reflectivity of thinking is the "Method for researching the reflectivity of thinking" authored by V. G. Pashukova. This method, in turn, is divided into two smaller parts: part 1 determines the reflectivity of thinking, and part 2 studies the analyticity of thinking. Analytical thinking determines a person's ability to reason logically, the skill of identifying cause-and-effect relationships between concepts, and the ability to analyze and understand complex systems. In the process of applying this methodology, both parts require looking at the clock hands and recording the time taken. This reduces the possibility of administering it to a large number of test subjects.



In addition to the methodologies mentioned above, it is also important to include in the methodological complex of research the tools for diagnosing the following structural components of reflection: self-awareness, self-analysis, self-assessment, self-development, and empathy. Because they are a key factor in developing the competencies of future teachers. The diagnosis of the tendency to self-analysis can be carried out using A. V. Karpov's methodology for determining the level of expression of individual reflexivity. Because self-analysis and analysis processes are mechanisms that activate reflective processes.

### Conclusion

In conclusion, we can say that diagnosing reflective abilities and their structural components helps a person to study their own personality, that is, to understand themselves. Self-awareness, knowing one's capabilities, reconsidering one's personal life position, and understanding internal conflicts are the main mechanisms for activating reflective processes.

### References

1. Abulkhanova-Slavskaya, K. A., Brushlinsky, A. V. The philosophical and psycho-
2. logical concept of S. L. Rubinstein: To the 100th anniversary of his
3. birth. Moscow: Nauka, 1989.
4. Karpov, A. V. Psychology of the reflective mechanisms of activity.
5. Moscow: Publishing House «Institute of Psychology RAS», 2004.
6. Leontiev, D. A., Osin, E. N. "Good" and "bad" reflection: from an expla-
7. natory model to differential diagnostics // Psychology. Journal of the Higher
8. School of Economics. 2014. Vol. 11. No. 4.
9. pp. 110-135.
10. Shadrikov, V. D. Professional abilities. Moscow: Universitetskaya kniga (University
11. Book), 2010.
12. Shadrikov, V. D. Psychology of human activity. Moscow: Publishing House «In-
13. stitute of Psychology RAS», 2013.
14. Shadrikov, V. D. Thought and cognition. Moscow: Logos, 2014.
15. Shadrikov, V. D., Kurginyan, S. S. The study of reflection of activity
16. and its diagnostics through the evaluation of constructs of the psychological
17. functional system of activity // Experimental
18. Psychology. 2015a. Vol. 8. No. 1. pp. 106-126.
19. Shadrikov, V. D., Kurginyan, S. S. Partiality of the reflection of activ-
20. ity // Akmeologiya (Akmeology). 2015b. Vol. 54. No. 2 (in press).
21. Obidova Dilnoza Maqsud qizi "The tradition of approaches to the problem of reflective
22. thinking in the science of psychology."
23. Qo'qon DPI. Scientific Reports, 2025, issue 7. pp. 16-24.
23. Dilnoza, O. (2020). Мия яримшарлари асимметрияси-шахсининг когнитив хусусиятларини белгиловчи муҳим омилсифатида. Журнал Педагогика и психологии в современном образовании, (1).