

Case Method as a Pedagogical Education Method for Creative Problem Solution

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Abstract – Modern people are constantly confronted with a rapidly increasing amount of information and non-standard situations that require decision-making under uncertain problem-setting conditions. This article identifies the role of the case method in the process of pedagogical training for creative problem-solving. The research of the case method in the process of pedagogical training has led to the study of theoretical and practical issues of developing the creative abilities of students. The authors also consider the substantive characteristics of the case method in theoretical and applied aspects of the learning process. The analysis of different approaches to understanding the essence of creative abilities allows concluding that, despite the differences, there is a common emphasis on creative imagination and creative thinking being the necessary characteristics of creative abilities. The development of creative abilities in the educational process through the use of the case method involves the formation of psychological and pedagogical conditions which allow engaging students in creative activity, to provide them with the opportunity to choose activities and modes of action, to individualize training and education, to apply technologies and techniques of developmental and advanced education, as well as to create a subject-developing environment and a comfortable psychological atmosphere to enhance learning efficiency. The use of the case method in the learning process allows students to develop creative imagination, intuition, will, critical thinking, and sense of purpose together with creative abilities. As a result, it allows a person engaged in the learning process to develop a creative personality.

Keywords – *personality, case method, pedagogy, creativity, mobility*

I. INTRODUCTION

This article is devoted to the study of theoretical and practical issues of developing creative abilities of students, as

well as the study of main characteristics and components of the case method in theoretical and applied aspects of the learning process. The purpose of this article is to study the role of the case method in the process of pedagogical training for creative problem solving. The following principles constitute the methodological basis for the study of the case method as a pedagogical education method for creative problem solving: unity and dialectical interaction of theory and practice, system approach, an activity of human knowledge, situational analysis and case-method content.

The rapidly increasing amount of information, as well as the need to solve non-standard situations and to make decisions under uncertain problem-setting conditions, leads to the necessity of developing qualities that ensure viability and mobility of people. This article is devoted to the case method - one of the pedagogical methods aimed at unlocking people's creativity. Modern society is characterized by the large-scale penetration of algorithms and computer solutions in the production process and human activity. This actualizes the reorientation of the labor market needs toward a qualified specialist who has both universal competencies of the 21st century and a developed "human" component, such as creativity, cultural aspects, individual and collective values. On this basis, the use of the case method in the learning process contributes to the formation of an active, creative and successful person.

II. THE ISSUE OF CREATIVE ABILITIES OF STUDENTS: FROM THEORY TO PRACTICE

The study "Russia 2025: From Human Resources to Talent Management", conducted by The Boston Consulting Group with the participation of leading Russian enterprises, BCG

company and in partnership with Sberbank, World skills and Global Education Futures, revealed vectors of change in the modern world: "... the growing penetration of algorithms and computer solutions will lead to a re-orientation of labor market needs towards the "human in man": creativity, cultural aspects, individual and collective values, as well as universal "competencies of the 21st century", which cannot be compensated for by digital technologies" [1, p. 6]. The dynamics of societal development determines the fact that the problem of creativity is in the foreground.

The necessity of developing people's creativity is specified in the federal state educational standards of all levels of education. The federal state educational standard of pre-school education contains the requirement for the development of children's curiosity and cognitive motivation, imagination and creative activity [2].

Federal State Educational Standard of Primary General Education, section II, paragraph 11, states that the metasubject results of mastering the basic educational program of primary general education should include ways of solving problems of a creative and exploratory nature [3]. Constantly and rapidly increasing amount of information and non-standard situations arising in life exacerbate the problem of developing qualities that ensure a growing person's viability and mobility. People with creative abilities are successful in any activity; they can find constructive solutions in non-standard and uncertain conditions.

The authors consider theoretical aspect of the issue and consider some approaches in the study of abilities. B.M. Teplov identified the following type so abilities:

- individual psychological characteristics that distinguish one person from another;
- characteristics related to performance success;
- characteristics that ensure the ease and speed of acquisition of knowledge and skills [4].

S. L. Rubinstein defined abilities as a complex, synthetic entity, which includes some background for successful activity and properties developed in organized activity [5]. Rubinstein established the link between abilities and activity. He claimed that abilities develop primarily due to activity and mastering of cultural achievements [5].

L.S. Vygotsky believed that abilities, as generic qualities of a person, are mental processes of a certain level of organization, which develop in interaction with reality as a result of the holistic development of consciousness [6].

A.N. Luk considered the following to be creative abilities:

- ability to identify a problem and see phenomena in their entirety;
- ability to associate and interpret;
- exceptional memory;
- creative imagination;
- flexible and alternative thinking;

- ease of generating ideas [7, pp. 67-68].

American psychologist J. Guilford found that creative individuals have divergent thinking (thinking in different directions), which is characterized by the speed of finding solutions, flexibility, originality of ideas and solutions, as well as the ability to improve the "product" and give it a finished look [8].

J. Guilford believed that creativity is the universal cognitive creative ability. It is based on the mental operation of divergence. According to Guilford, the main characteristics of creativity are: originality of thought, semantic flexibility (ability to isolate the intrinsic properties of an object, to find non-standard applications), adaptive flexibility (ability to identify new ways of using an object), and semantic spontaneous flexibility (producing original ideas in non-standard, uncertain situations) [8].

In his study on creativity, E.P. Torrance came to the conclusion that creativity is the heightened perception of lack of knowledge, sensitivity to problems, feeling of discomfort and the need to relieve the stress by solving problems, hypothetical thinking [9].

The analysis of various approaches to understanding the essence of creative abilities allows us to conclude that, despite the differences, the aforementioned approaches have a common idea: creative imagination and creative thinking are regarded as necessary characteristics of creative abilities [10–12].

Theoretical analysis of this problem made it possible to identify the following common creative abilities:

- ability to be hypothetical (the ability to make assumptions, hypotheses),
- improvisation (ability to find an original solution to an unexpectedly arisen problem in a limited period of time, based on a person's creative experience),
- variability (divergence of thinking, ability to identify many original ways of solving problems),
- transferability (ability to apply existing knowledge, skills, abilities, experience in new, non-standard and uncertain situations).

Transferring the theory of creative abilities into practice requires study of the psychological aspects of the learning process [13, 14]. This allows us concluding: if a child is curious, fast and flexible in finding solutions, if he has original answers to questions and a developed imagination, if he is able to risk and to defend his ideas without succumbing to others' influence, achieving understanding of the essence of any phenomenon, - then, undoubtedly, he has creative abilities that can manifest in any kind of activity.

The development of creative abilities, as well as the reveal of interests, aptitudes, and needs of children, occurs during activity. The main task of teachers is to create favorable conditions, determine the necessary directions and technologies for the development of children's creative abilities.

III. CASE METHOD: THE HISTORY OF APPLICATION IN THE LEARNING PROCESS

The case method is now actively used in the education system as one of the methods of pedagogical training in solving creative problems and non-standard situations in order to form communicative competences of a young specialist [15–17]. The method can be defined in different ways: as a miniature business game, as a “slice of real life”, as a search for options in solving a communicative problem. The essence of this method lies in the fact that the learning task (material) is given to the student in the form of micro problems, and knowledge is gained as a result of solving the task through independent research [18, 19].

There are three directions in the history of using this method in European and American education. The first one was introduced by Harvard Law School. The focus was on two ways of solving problem situations: finding the only right and correct solution or finding several solutions to one situation. Currently, there are three Harvard schools that are actively building their learning process on the case method: School of Law, School of Medicine and School of Business. On average, Harvard students examine approximately 700 tasks during their studies, and up to 350 new cases are developed at Harvard each year.

The second direction in the development of this method belongs to the Manchester Business School. In the second half of the 20th century, students not only used this method for researching theoretical situations, but also solved problem tasks at firms in the course of their internships. Thus, the theoretical part of the case study was combined with the practical one.

The third direction belongs to the Chicago school, whose representatives used this method in widely conducted empirical researches. The Case Clearing House of Great Britain and Ireland, established in 1973 on the initiative of 22 higher education institutions, is the leader in the collection and distribution of case studies in the modern world. In 1991, it was renamed the European Case Clearing House (ECCH). ECCH is a non-profit organization, which is associated with organizations providing and using case studies in different countries.

The Russian tradition of using this method also dates back to the beginning of the 20th century. Although this method is popular, there is no unity in the assessment of its role among methodologists of modern higher education pedagogy. Different researchers attribute the case-study method to problem-based learning, project-based learning, or discussion learning. Many teachers use this method not systematically, but at will. However, S.T. Shatskyal ready used this method in teaching economics in the 1920s, although he called it the “incident method”. A new wave of interest to the “case study” method appeared in the Soviet pedagogy in 1960–70s due to the need to educate new managerial staff for the economic sector. The new rise of interest to this method (“the third wave”), which still exists, began during the “perestroika” in Russia in the 1990s. The method begins to be widely covered in pedagogical works. However, most of the pedagogical works consider the use of this method in teaching economics, psychology, and sociology of management. At the same time, many teachers note the success of its use in law studies and technical

disciplines only in senior Master’s courses and in graduate school.

IV. EDUCATIONAL AND METHODOLOGICAL CASES: A PRACTICAL ASPECT OF THE IMPLEMENTATION OF THE METHOD

A. Topic “Ethnic auto-stereotypes and hetero-stereotypes”.

Case: Ethnic self-identification experience.

Every person is a representative of ethnos (nation). Some people have ethnic background of several nations. Answer the following questions and describe yourself as the representative of one particular nation, based on your own life experiences, family traditions, and stories.

1. Name your chosen ethnic group (nation).
2. Describe the reasons why you identified yourself as a representative of this particular nation (lineage of one of the parents, upbringing, spiritual closeness, language, etc.)
3. Describe the ways your chosen ethnic identity manifests in:
 - Your appearance (particulars of wearing a headdress, its type; requirements for the outerwear and formal wear, home clothes).
 - Hygienic preferences and rituals.
 - Gastronomic preferences.
 - Rituals of greetings and goodbyes, weddings, funerals, hospitality.
 - Type of relationship with relatives, friends, neighbors, strangers.
 - Gender distribution of roles in the family, at work, with friends.
4. How would you describe a typical representative of your chosen nation in relation to:
 - Moral qualities (five qualities of choice).
 - Anthropological features (facial features, height, body type).
 - The most characteristic external features of the representative (five features of choice).
 - Typical forms of family ties (size, structure, hierarchy, number of generations).
 - Behavioral features.
5. What makes you conclude that a person belongs to your chosen ethnic group (nation)? Describe five main features.
6. How would you describe the relations of representatives of the chosen ethnic group (nation) with other nations:
 - a) Are there any nations to which representatives of the chosen ethnic group (nation) are unfriendly? If so, what are the reasons for this attitude? (two or three examples).

b) Are there any nations to which representatives of the chosen ethnic group (nation) are friendly? If so, what are the reasons for this attitude? (two or three examples).

c) Describe preferences of the representative of the chosen nation in a marriage partner: marriages with representatives of which ethnic groups (nations) are welcomed, which are condemned.

7. How do you think representatives of other nations view representatives of your chosen ethnic group? (three to five examples with three to four assessments).

B. Topic "Reflection of traditions and beliefs in appearance and behavior of the peoples of the Urals".

Case: Experience of ethnos (nation) identification

Based on the proposed criteria, describe any two ethnic groups from the Ural region. Arrange the results in a tabular form. Find and indicate the sources on which you based the description.

1. General description.

1.1. The official name of the ethnic group. Conversational or a household name. Language (languages, dialects).

1.2. Representation in the Ural region: share in the population, geographical distribution, areas of compact residence (data of statistical and ethnographic studies).

2. History and traditions.

2.1. History of the ethnic group: origin (legend / actual); common ancestors; emergence in the Ural region, settlement history; geographical preferences of settlement; traditional activities (peculiarities of agriculture, traditional crafts).

2.2. Historical, religious features: traditional cults / religions; separation into groups adhering to various cults and religious rites; a relationship between these groups.

2.3. Traditional culture: legends and folklore; religious and sacred places; presence of a special group engaged in the preservation of legends, rituals, rites and passing them to new generations.

2.4. Traditional family relationships: family type and composition; structure and hierarchy of family relationships; criteria for determining close / distant relatives; attitude to inter-ethnic marriage, a possibility of such marriages.

3. Which of the above has been preserved so far?

3.1. Which traditions and rituals are currently observed?

3.2. Which legends are preserved among the representatives of the ethnic group today?

3.3. Preserved features of etiquette (formulas of greetings, goodbyes, gratitude, address, hierarchical relations).

3.4. Actual features of the mentality that distinguish this group from others.

3.5. Features of appearance (appearance, a manner of dressing, wearing a headdress, hairstyle features, type of outerwear, a special cut of clothes, accessories).

4. Position in society.

4.1. How much do nation's specific ethnic features manifest and how much is it encouraged in society?

4.2. Does this nation have its own socio-political and / or cultural-religious associations?

4.3. Is this nation in socio-political and / or cultural-religious associations with other nations?

4.4. Is this ethnos (nation) represented by large communities abroad and how close are the ties with these communities?

4.5. Assessment of the current situation of this nation in relation to other nations, assessment of its development: progress / regress / stagnation – in what way?

4.6. The idea of the desired position of the nation in the future.

4.7. Attitude to the migration processes of other nations and changes in the ethnic structure of the region.

4.8. The attitude of the representatives of this nation to the service in the army, police, public service in general. Attitude to public political activities, attitude to national law, common ethics, Orthodox Christianity as the prevailing religion.

V. CONCLUSION

The development of creative abilities of a person in the educational process involves the creation of psychological and pedagogical conditions, such as:

- engaging the student in creative activities;
- providing the opportunity for the student to choose activities and modes of action;
- individualization of training and education (individual educational route, individual educational trajectory);
- application of technologies and techniques of developmental and advanced education;
- subject-developing environment;
- comfortable psychological atmosphere.

The use of case method in the learning process contributes to the formation of creative imagination, intuition, will, critical thinking, and sense of purpose together with creative abilities, which leads to the development of an independent, creative, successful person.

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