

Development of Creativity of Students of Special Faculties at Foreign Language Classes in the Paradigm of Differential and Management Psychology

Розвиток креативності студентів спеціальних факультетів на заняттях іноземної мови в парадигмі диференційної психології та психології управління

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ABSTRACT

The purpose of our research is to show the model of the development of creativity of students of special faculties at foreign language classes in the paradigm of Differential and Management Psychology.

Methods of the research. The following theoretical methods of the research were used to solve the tasks formulated in the article: a categorical method, structural and functional methods, the methods of the analysis, systematization, modeling, generalization. The experimental method was the method of organizing empirical research.

The results of the research. We showed that students in groups E1, C2 had needed help at all stages of solving the problem. We understood that in these groups it was only possible to gradually weaken help and control. Moreover, while working with students of all groups we used such additional methods and techniques of activating the thinking activity of students as: 1) reproduction of certain theoretical material necessary for solving the problem; 2) mastering the ability to expound a number of mental operations: a) from analysis to synthesis (for example, solve subproblems to which the original problem is reduced); b) apply analogies (review a similar, but simpler problem in order to identify a method for solving it).

Conclusions. Summarizing the research available in the psychological literature on this problem and considering creativity as a process of solving problems, we distinguish six main groups of definitions of creativity: 1) definitions of the “gestalt” type, which emphasize the creation of a new integrity; 2) definitions oriented to obtaining a “final product”, or “innovative” definitions, which emphasize the production of something new; 3) “aesthetic” or “expressive” definitions, in which self-expression of the individual is dominant. As an example of definitions of this type, the following is given: “The creative process is the ability to think in a completely unexplored (or partially explored) area, not limited by already acquired experience”; 4) “psychoanalytic” or “dynamic” definitions,

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and which define creativity in terms of the interaction of "Me", "It" and "Superego"; 5) definitions in terms of "solution-oriented thinking", which emphasize the thought process itself rather than the solution; 6) other miscellaneous definitions that do not fit into any of the above categories.

Key words: creativity, Differential Psychology, Management Psychology, solving problems, emphasize the production of something new, self-expression.

Introduction

Scientists (Astle, & Scerif, 2011) understand the creative process as the creation (through a certain action) of a new product. The subject is oriented, on the one hand, to the uniqueness of the individual, and, on the other hand, to the social life conditioned by the surrounding space, events, people and circumstances (Ehri, Nunes, Willows, Schuster, Yaghoub-Zadeh, & Shanahan, 2001). So, foreign scientists (de la Garza, & Harris, 2017) distinguish two groups of approaches to defining the essence of creativity:

- approaches oriented to the search for new sources, meanings, etc. for a person;
- approaches oriented to the process of creative activity.

The first group includes:

1. *Psychoanalytic approach.* Proponents of this approach argue that creativity is the result of intrapersonal conflicts. The creative process is essentially an externalization of the products of imagination through the interaction of both "primitive" and more "advanced" types of thinking. Within this approach, the psychoanalytic theories should be distinguished (Dale, & Duran, 2011). Scientists (Falé, Costa, & Luegi, 2016) believe that creativity consists of a phase of inspiration and a phase of refinement; the scientist suggests that creativity is characterized by a temporary rejection of logical, rational thinking. Only in the second phase does a "strict logical evaluation of ideas" is taking a place. Scientists (Гончарук, & Онуфрієва, 2018) also consider the sphere of the "preconscious" to be the main source of creative thought. At the same time, the scientists dispute those psychoanalysts who believed that neurosis is an essential element

of creativity (Alahmadi, & Foltz, 2020); other scientists (Arrington, Kulesz, Francis, Fletcher, & Barnes, 2014) empirically prove that fear, guilt, and other neurotic manifestations of personality significantly inhibit creativity.

2. *Humanistic approach*. The representatives of this approach believe that creativity arises when the individual has no intrapersonal conflicts. The creative process, in such a way, turns out to be the realization of natural creative potential, but only under the condition that a person eliminates internal barriers and external obstacles. As we have shown by studies of scientists belonging to Humanistic Psychology (Drigas, & Karyotaki, 2017), the need for self-expression turns out to be a basic human need of a person (Engle, 2002).

3. *Psychometric Approach*, the representatives assume that the natural creative potential of an individual is genetically determined and can be measured by standard tests. The creative process is an interaction of two opposing types of thinking: divergent and convergent ones. Within this approach, the most famous is the theory of J. Guilford ("The methodology of Research on Creative Thinking" by J. Guilford, modified by O.E. Tunik, 2023).

To the second group of creative approaches we include: Perceptual Approach, Associative Approach, Gestalt Approach, Step-by-step Approach, Integrated Approach, Mixed Approach.

Among so-called "*perceptual theories*" that belong to this approach, we can single out the theory of scientists (Rezaei, & Mousanezhad Jeddi, 2020), who believe that the motivation for creativity arises from the need of a person to participate in the process of communication with the outside world. Creativity is the result of "perceptual openness", which allows the person to perceive an object from different sides, in its different worldviews and perspectives. The latter allows us to talk about the creativity of the individual. In later studies that directly studied the creative processes of the individual (Ivashkevych Er., 2024), creativity remains one of the components of intellectual giftedness (Івашкевич Ер., & Комарніцька, 2020).

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Representatives of *the Associative Approach* believe that human creativity is the result of their ability to find distant associations in the process of finding a solution to a problem. According to the theory, the more distant the associations that arise in a person, the higher the level of their creative abilities is (Alyami, & Mohsen, 2019).

The Gestalt Approach assumes that creative thinking is neither logical, step-by-step actions nor discrete associations, but only a certain restructuring of a holistic situation. Within this approach, the most famous is the theory of scientists (Gathercole, Pickering, Ambridge, & Wearing, 2004), the main idea of which is that productive thinking requires restructuring the problem.

Special attention should be paid to the approach that focuses on a person's perception of the gradual formation of cognitive functions (it was called "*Step-by-step Approach*"). In particular, the representative of this approach, a scientist (Conners, 2009) drew special attention to the similarity between the stages of the development of mental abilities according to Piaget and the creative achievements of the individual.

The Integrated Approach is worth of special attention, within which the scientists (Hecht, Torgesen, Wagner, & Rashotte, 2001) identified four stages in the creative act: preparation, incubation, enlightenment and verification of the decision having been made. The periods of incubation and enlightenment are subconscious, at their level various combinations of ideas occur, mostly randomly. The scientist emphasizes that even the last stage, which is verification of the decision made, is carried out at the subconscious level of the psyche, because the subconscious mind selects the most useful and valuable principles, focusing primarily on the criterion of beauty.

Within the paradigm of *the Integrated Approach*, so-called mixed theories include the theory of scientists (Ivashkevych Ed., & Rudzevych, 2023), who believe that creative achievement is the result of conscious purposeful action, and subconscious processes in no way play a decisive role. The process of discovery itself

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is not reduced to the formation of a single association (Learning Preferences and Strengths, 2023) and other supporters of the associative theory of creativity (Phani Krishna, Arulmozi, Shiva Ram, & Mishra, 2020), it is much longer and gradual. The theory of scientists (Mykhalchuk, & Bihunova, 2019) also belongs to *Mixed Approaches*, which uses rather unusual concepts, such as a scene of perception or a center from which requests are sent to the external environment or to the apperceptive array.

In the psychological and philosophical directions of the development of scientific thought described by us, creativity is considered in the paradigm of the activity under certain conditions of performance of the latter or as a way of solving a certain problem. At the next historical stage of the development of psychological science, such different views on creativity change somewhat. Scientists analyze it, as a rule, in the paradigm of scientific description through the consequences of the performed activity (creativity as the exteriorization by the subject of the performed actions). Thus, scientists (Greco, Canal, Bambini, & Moro, 2020) believe that creativity is one of the ways of saving an individual from sexual energy. In this case, the process of sublimation occurs through the so-called catharsis. Generalizing the development of the phenomenology of creativity at these stages of the development of psychological thought, we'd like to note that in many concepts, despite their differences, there is a general scientific interpretation of the appearance of the so-called psychic products that have no place in the acquired experience of the individual. That is, creativity is a certain way of the emergence of something new. This method, according to a scientist (Heidari, 2019), is indicated by the concepts of trial and error, insight and catharsis, which are widely used in science to interpret the psychological essence of creativity.

The purpose of our research is to show the model of the development of creativity of students of special faculties at foreign language classes in the paradigm of Differential and Management Psychology.

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Methods of the research

The following theoretical methods of the research were used to solve the tasks formulated in the article: a categorical method, structural and functional methods, the methods of the analysis, systematization, modeling and generalization. The experimental method was the method of organizing empirical research.

An empirical study of students' creativity was analyzed by us during 2023-2024 at the Universities of the philological faculties (the experiment was provided at Academician Stepan Demianchuk International University of Economics and Humanities in Rivne (MEGU) and at Khmelnytskyi National University). 113 students participated in our research. Given the research objectives of our research, students were divided into experimental and control groups by the method of randomization (using technology of paired design):

- experimental groups:
 - E1 (29 students) – students of the 1st course of the philological faculty of Academician Stepan Demianchuk International University of Economics and Humanities in Rivne (MEGU);
 - E2 (28 students) – students of the 2nd course of the philological faculty of Khmelnytskyi National University;
- control groups:
 - C1 (28 students) – students of the 1st course of the philological faculty of Khmelnytskyi National University;
 - C2 (28 students) – students of the 2nd course of the philological faculty of Academician Stepan Demianchuk International University of Economics and Humanities in Rivne (MEGU).

In our research we used "The methodology of Research on Creative Thinking" by J. Guilford, modified by O.E. Tunik (2023).

Results and their discussion

As the criteria for the development of creativity, we took its parameters, such as flexibility, originality, speed, metaphorical thinking, as well as individual psychological characteristics of the individual and creative reflection.

We proceeded from the theory of scientists (Pimperton, & Nation, 2010) about the relationships between creative and intellectual abilities, such as high development of creative abilities is possible under conditions of a sufficient level of intelligence and a sufficient amount of knowledge (IQ = 120), and, therefore, if intelligence has a sufficiently high level of the development (IQ = 115–120), then creativity will take the form of an independent value and its development will not be limited by certain fixed limits. In the case when intelligence is very high (IQ = 170–180) or very low, then the relationships between creativity and intelligence will be negative. Taking into account these facts, in our experimental study we assessed the level of the development of intelligence of students. We also assumed that as for students, there are usually no students with very high and low levels of intelligence, and if there are such isolated cases, they will not significantly affect the overall picture of the study. So, in order to study the intelligence of students, we used "The methodology of Research on Creative Thinking" by J. Guilford, modified by O.E. Tunik (2023).

In the process of experimental research, the activity with methods aimed at studying the personal characteristics of students, their creativity was carried out in a naturally organized test mode. When examining students, their age characteristics, were taken into account. In general, the study took on a group nature with elements of individual activity. The study of the creativity of the personality of students was carried out in such a way: teachers and psychologists, who played the role of experts, solved the tasks individually; students of both the control and experimental groups had to: a) complete the tasks in the usual test mode; b) complete the tasks in situations of creative activity at the lessons of foreign language and specially organized developmental classes by us with a significant role of the creative example of the teacher, who is able to transmit his/her own creative activity to students. In the study of creativity, we took into account the influence of the factors identified by us in the theo-

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retical part of the activity, which determine the development of students' ability to perform creative activities, make creative decisions. It should also be noted that we conducted lessons of foreign language with elements of creativity at both the formative and ascertaining stages of research, because otherwise it would be impossible to investigate the dynamics of students' creativity.

In accordance with the goals and objectives of our research, the necessary mathematical apparatus was used to process the obtained data: correlation and factor analysis and comparative analysis were carried out using the SPSS 11 statistical data processing package. This research has a number of characteristics. At *the first stage of the experiment* to determine the leading factors in the development of creativity and identify the relationships between various parameters of creativity of students, the study in the experimental groups was organized in the form of creative lessons on the subject "Oral and written language practice (the English language)". At the stage of the ascertaining research, a total of 18 lessons were provided in each group. At the formative stage of the experiment (the stage of predicting the development of creative personality traits taking into account the influence of the most significant factors and conditions) in the experimental groups for three years, developmental classes were organized.

In the creative activity of students in creating metaphors, figurative comparisons and original judgments, the leading factor in the motive for choosing a particular statement is, in our opinion, the emotional involvement of the author in a real educational situation. In order to emotionally accept the idea of performing creative tasks as one that is personally meaningful for each student, the classes took on a free, non-evaluative character and continued in a comfortable, friendly atmosphere. The teacher took an active creative position and by his/her example encouraged students to demonstrate creative personality qualities.

Let us analyze the data we obtained on the indicators of verbal and nonverbal creativity of students according to "The methodology of Research on Creative Thinking" by J. Guilford, modified by O.E. Tunik (2023). Students of both the experimental and control groups received rather low results on the indicators of verbal and nonverbal creativity. Also, students' observation during their solution of the tasks proposed by us allows us to draw the following conclusions. Thus, students of groups E1, C1, C2 are characterized by low formation of educational skills, which are expressed in:

- distortion of the content of theorems, which negatively affects the solution of tasks by students;
- lack of skills and abilities: a) purposefully search for a solution to the problem; b) build a connection between data and missing values; c) identify significant dependencies and key points in solving tasks.

In general, these students are dominated by the convergent type of thinking. Students of groups E1, C1, C2, having sufficient knowledge of the program material, can apply them when solving standard problems. Complications, as a rule, are arisen in the process of transition to solving problems of a new type. But, having mastered the methods of solving these problems, students productively solve similar problems. In this case, we can predict the dynamics of the internal cognitive structures of the subject in the future, although at present these students are dominated by the convergent type of thinking.

Group E2 consists of students who are characterized by a slightly higher level of productive thinking than students in other groups, which is expressed in its operational characteristics (analysis, synthesis), etc. For example, they are characterized by:

- reducing a complex task to a somewhat simplified chain of simple subtasks;
- transferring already acquired knowledge to new conditions of this activity;

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- putting forward and justifying hypotheses in the process of solving problems (the ability to create creative products).

Thus, divergent and evaluative thinking prevails in this group, although it has insufficient level of the development, and this does not allow us to speak of sufficiently (or even highly) developed creativity of students. Such differentiation of students by the level of formation of their educational skills, based on the predominance of a certain type of mental operations, types of thinking (convergent, divergent, evaluative, etc.) allows us, when organizing educational activities, to plan the application of all types of differentiated teacher influences on students during the formative experiment.

The data obtained by us using “The methodology for Study of Creative Thinking” by J. Guilford, modified by O.E. Tunik (2023), are also confirmed by the results obtained using the methodology for studying personality creativity (see results in Table 1).

Table 1
Development of creative thinking of students
(in %, ascertainment study)

A high level of creative thinking by its type	E1	E2	C1	C2
Productive-synthetic	18.36	24.79	20.13	19.75
Productive-analytical	31.09	39.16	29.37	28.11
Productive and informational	23.85	29.71	24.09	23.17
Reproductive and prescription	16.58	17.31	14.55	18.37

Thus, we see that few students in the experimental and control groups are characterized by *productive-synthetic* (high and average indicators of the development of all parameters of creative thinking) and *reproductive-receptive* (high and average speed of thinking with low flexibility, originality and elaboration) *types of creative thinking*. A third part of students in all groups have a productive-analytical type of thinking (high and average indicators of flexibility (sometimes it is speed) and elaboration of

thinking), the fourth part of students in each group is characterized by *a productive-informational type of thinking* (high and average indicators of the development of speed (sometimes we mean flexibility) and originality). Although, the results for all types of thinking of students of group E2 are somewhat higher than in a case of students in other groups.

For students of groups E1, C1, C2, the usual ways of solving the tasks we proposed are the obsessive reproduction of the same solution method; these students also tried to prevent the rest from finding the right solution, which, in turn, contaminated the process of creative activity, creative development of the personality, which was the goal of our research. Therefore, we helped students of all groups individually in the case of solving a task of the same level of complexity.

In particular, we took into account that solving a stereometric problem consists of *five stages*: 1) preparation for the solution; 2) search for an action plan; 3) drawing up a solution plan; 4) implementation of the solution; 5) discussion of the solution found (generalization of the found algorithm for performing actions).

During the ascertainment study, as a rule, students in group E2 immediately started to solve the problem on their own. They were provided with assistance only at the second (search for a plan of actions) and the fifth (discussion of the solution found, generalization of the method of actions found) stages. Students in group C1 were provided with assistance at the first stage (preparation for the solution), the second one (search for a plan of actions) and the fifth stage (discussion of the solution found, generalization of the method of actions found) stages.

Students in groups E1, C2 needed help at all stages of solving the problem. We understood that in these groups it was only possible to gradually weaken help and control. Moreover, in working with students of all groups we used such additional methods and techniques of activating the thinking activity of students as:

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1. Reproduction of certain theoretical material necessary for solving the problem.

2. Mastering the ability to expound a number of mental operations: a) from analysis to synthesis (for example, solve subproblems to which the original problem is reduced); b) apply analogies (review a similar, but simpler problem in order to identify a method for solving it) (Fig. 1).

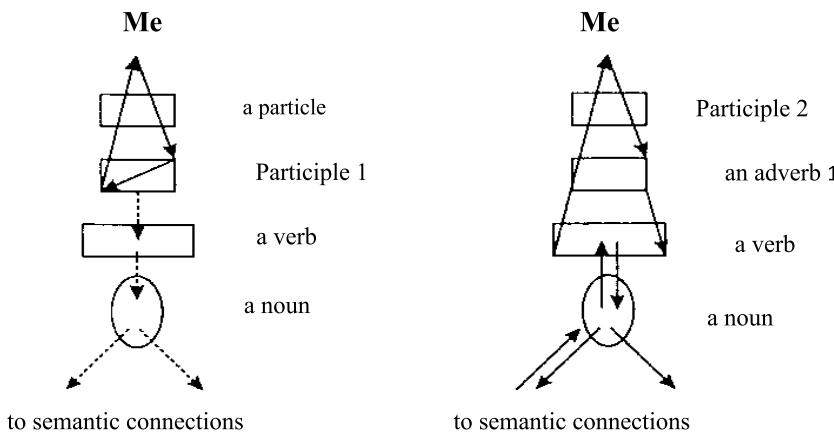


Fig. 1. Differences in the actualization of intentions in the case of a particle and an adverb

These conclusions will also be taken into account by us when planning and organizing the formative experiment. The results described by us in this paragraph are also confirmed by low indicators of the level of development of personal creativity. Data on personal creativity are shown in Fig. 2.

If we take into account that the concept of individuality allows us to consider a person from the point of view of his/her integrity, and the concept of "subject" emphasizes the activity, creativity of the individual, then the individuality of a person is characterized by: 1) spontaneous, random activity, which is mainly independent for the person; 2) creative, self-determining activity, which arises in the process of the subject applying certain efforts during the implementation of creative activity.

Thus, the idea of a creative personality is at the junction of the definitions of "individuality" and "subject", and it represents the basic characteristics of a person, indicators of his/her individual uniqueness, which are formed in the process of the person's creative activity itself. Awareness of oneself, one's individuality, one's capabilities, motives, goals and desires contribute to creative self-expression and self-disclosure of the individual.

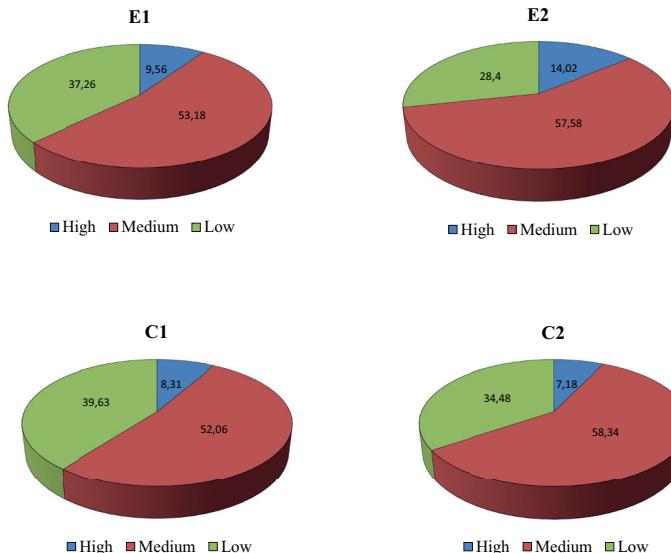


Fig. 2. Levels of the development of personal creativity of adolescents (in %, ascertainment study)

The latter is largely due to such personal qualities as flexibility, variability, courage, determination, which also have a positive effect on creativity as a personal characteristic. Unfortunately, the result is: in group E1 – 9,56%, in E2 – 14,02%, in C1 – 8,31%, in C2 – 7,18%. Therefore, personal creativity as a stable personal characteristic should also be specially developed.

These data allowed us to highlight the features that distinguish a gifted child:

- is very active and always busy with something. He/She strives to work harder than others and occupies himself/herself with a program set by someone;
- persistently pursues the goals set for himself/herself, wants to know more about the chosen object and requires additional information from adults, asks a lot of questions;
- wants to learn, knows a lot, achieves success in any situations. Classes bring pleasure; the child does not perceive classes and studies at school as violence against himself/herself;
- is able to engage in independent activity better than others (perseveres and persistently demands any information about objects, at school conditions independently works with literature, reference material);
- is able to critically consider the surrounding reality and seeks to understand the essence of phenomena, not being satisfied with superficial explanations, even if this interpretation seems quite sufficient for peers;
- asks a lot of questions and is interested in satisfactory answers to them;
- visits classes in kindergarten, and then lessons at school, is interesting for him/her when problem material is used; peers prefer to study algorithmically formulated and absolutely understandable material; compared to his/her peers;
- this child is better than others at revealing relationships between phenomena and their causes, finding common ground, manipulating logical operations, systematizing, classifying, etc.

Conclusions

In general, summarizing the research available in the psychological literature on this problem and considering creativity as a process of solving problems we distinguish main six groups of definitions of creativity: 1) definitions of the “gestalt” type, which emphasize the creation of a new integrity; 2) definitions oriented to obtaining a “final product”, or “innovative” definitions, which emphasize the production of something new; 3)

“aesthetic” or “expressive” definitions, in which self-expression of the individual is dominant. As an example of definitions of this type, the following is given: “The creative process is the ability to think in a completely unexplored (or partially explored) area, not limited by already acquired experience”; 4) “psychoanalytic” or “dynamic” definitions, and which define creativity in terms of the interaction of “Me”, “It” and “Superego”; 5) definitions in terms of “solution-oriented thinking”, which emphasize the thought process itself rather than the solution; 6) other miscellaneous definitions that do not fit into any of the above categories.

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Яцюрик Алла, Дорофеєва Олена. Розвиток креативності студентів спеціальних факультетів на заняттях іноземної мови в парадигмі диференційної психології та психології управління.

Метою нашого дослідження є представлення моделі розвитку креативності студентів спеціальних факультетів на заняттях іноземної мови в парадигмі диференційної психології та психології управління.

Методи дослідження. Для розв'язання поставлених у роботі завдань використовувалися такі теоретичні методи дослідження: категоріальний, структурно-функціональний, аналіз, систематизація, моделювання, узагальнення. Експериментальним методом є метод організації емпіричного дослідження.

Результати дослідження. У статті показано, що студенти груп Е1, К2 потребували допомоги на всіх етапах розв'язання задачі. Ми розуміли, що в цих групах лише поступово можна послабити допомогу і контроль. Причому, в роботі з підлітками усіх груп ми використовували такі додаткові методи та прийоми активізації мисленнєвої діяльності школярів, як: 1) репродукція потрібного для розв'язання задачі певного теоретичного матеріалу; 2) оволодіння вмінням експлікувати низку розумових операцій: а) від аналізу до синтезу (наприклад, розв'язати підзадачі, до яких зводиться вихідна задача); б) застосовувати аналогії (переглянути аналогічну, але більш просту задачу з метою виявлення методу її розв'язання).

Висновки. Спираючись на отримані нами в дослідженні емпіричні результати, розглядаючи творчість як процес розв'язання задач, ми виділяємо шість груп визначень творчості: 1) визначення за типом "гештальт", в яких наголошується на створенні нової цілісності; 2) визначення, зорієнтовані на отримання "кінцевого продукту", або "інноваційні" дефініції, в яких наголошується на продукуванні чогось нового; 3) "естетичні" або "експресивні" визначення, в яких домінантним є самовираження особистості. В якості прикладу визначень такого типу наводиться наступне: "Творчий процес – це здатність мислити в зовсім недослідженій (або частково дослідженій) сфері, не маючи обмеження вже набутим досвідом"; 4) "психоаналітичні" або "динамічні" визначення, в яких творчість визначається в термінах взаємодії "Я", "Воно" і "Над-Я"; 5) визначення у термінах "мислення, зорієнтованого на розв'язання", в яких наголошується не стільки на розв'язанні, скільки

на самому розумовому процесі; 6) інші різноманітні визначення, які не вкладаються ні в жодну з перерахованих вище категорій.

Ключові слова: креативність, диференційна психологія, психологія управління, розв'язання проблем, акцент на створенні нового продукту, самовираження.

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