

New Method to Activate the Cognitive Process

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Abstract: In this paper, the role of the taxonomy of the American Psychologist B. Bloom in activating the cognitive process is investigated. This taxonomy is fully based on the laws of psychology, psychophysiology, pedagogy, which the teacher uses in the course of training as a controlled process. According to the laws of psychology, the information obtained is first sensed, then perceived, and then presented. Only on the basis of clear, vivid, intensive representations, the cognizer, perceiving cause-and-effect relationships and relationships, gradually forms knowledge in himself.

The article is devoted to the analysis of this complex, systemic process of cognition, where the role of the presentation process is actualized for obtaining scientifically grounded and practically directed knowledge, turning it into skills and abilities.

In the process of studying the patterns of development of professional competence of future teachers during 2012-2018 at the Samarkand State University, the Samarkand branch of the Tashkent University of Information Technologies named after the Samarkand State Institute of Foreign Languages revealed that they have little knowledge of B. Blum's taxonomy. Future teachers have difficulty in providing students with an understanding of the information received. In our opinion, this contradiction is resolved by the targeted use of procedures for ensuring the representation processes between the categories "Knowledge" and "Presentation". In the course of the study, a system of verbs of action was developed that contribute to the development of the representation.

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Note that the term “Presentation” is presented as a special category in the B. Bloom category system. The experiment involved more than 200 university professors, students, masters, doctoral students, and school teachers. They were asked: from the 50 verbs of the action related to the presentation of the presentation, select the 10 most needed to create a quality presentation and number them in order of importance.

Keywords: Bloom's taxonomy, cognitive process, competence, performance, skills.

1. Introduction

The viability of society in a market economy is now directly dependent on the professional competence of the younger generation, on its ability to solve practical problems optimally in a real-time system. The development of professional competence is based on the acquisition of knowledge and skills that determine the quality indicators of abilities. Competence is formed on the basis of a scientifically organized, cognitive process. “To create a person’s personality, not only rational, but also highly moral, spiritually rich, knowing the meaning of his life, believing in the possibility of achieving it, purposefully and actively working in the name of the most complete vital self-realization ...” (Bobur & Alimova, 2017)

The psychological support of the cognitive process of learners is all the more actualized, the more electronic and virtual learning tools are introduced in the learning process. As Russian scientists note, “the activities of teachers in the virtual educational environment have significant differences; they are practically not studied. With virtual education, a teacher bears a significantly greater physical and psychological burden than a teacher in a traditional system” [17, p. 76]. These circumstances of the time urgently require the cognitive process to be strengthened by psychological laws, which is the consciously caused presentation process. (Van Hout & Bingham, 2014)

In this article, on the basis of a long analysis of the process of formation of an

active cognitive process in education, we will try to justify the role of the “presentation” procedure for a clear understanding, application, analysis, synthesis and evaluation of the information obtained. Without imagination imagination is impossible. There is an opinion that the submission must be developed, mainly in the early school years. And in adults, this process, by itself, happens by itself. In our opinion, the ability to represent is necessary, to teach and adults, especially high school students and students.

Currently, all universities of the Republic of Uzbekistan are gradually moving to a modular and credit organization of the educational process. The modular training and its credit organization, as an effective process of creating educational work aimed at ensuring the professional competence of future specialists, which also proceeds on the basis of B. Bloom's taxonomy, actualizes the problem of the scientific development of the “Presentation” category.

The development of professional competences of teachers through modular training is intended to ensure the formation of practical abilities to solve specific tasks of training and education. Ultimately, these abilities are expressed in skills and abilities that are expressed at the level of methodical readiness for action. Such skills and abilities are developed successfully using the above taxonomy in the educational process.

As shown by our research, “unlike smart skills are developed by multiple exercises in the same conditions of activity.

Here the action is automated, control over its implementation is carried out subconsciously. This enables the brain to solve other functional tasks in parallel [9, p.57]”

The development and use of the “Presentation” procedure in the organization of a purposeful cognitive process stimulates mental development.

We judge mental development by the students' knowledge and the formation of skills. However, the second indicator is noted by N. A. Menchinskaya with a greater degree of reliability than the first, characterizes mental development, since knowledge can also be acquired by means of mechanical learning [8, p.25].

There is a certain tendency of the teachers' superficial approach to the psychological and pedagogical foundations of modular-credit training and competent preparation for it. Therefore, for the development of competent professional and pedagogical thinking of future teachers in the classroom in the disciplines of "Pedagogy", "Psychology", "Innovative pedagogical technologies", the special course "Development of skills and competencies", we introduced them to the psychological patterns and peculiarities of the formation of skills and abilities to use the possibilities of activating the cognitive process by the category “Presentation”, which is organically included in the B. Bloom category system.

The function of the category “Presentation” is that from the received and former information in memory, create as brightly as possible longer, longer images of representation, show connections between parts of the image obtained, create as many images and pictures about objects, phenomena and processes as possible.

Which of the students wants to gain even more profound theoretical, fundamental knowledge, are engaged in the procedure of "Analysis" by B. Blum's taxonomy. In this process, the student penetrates into the depth of each phenomenon, process, separates them into parts, examines each part

separately, capturing new properties of these parts.

The function of the “Synthesis” category is based on the obtained new knowledge from analysis, to create new images, ideas in thinking, innovations, to be engaged in creativity. This is the basis for the development of the individual and the state.

In the process of studying the patterns of development of professional competence of future specialists in the university during 2012-2018. at the Samarkand State University, the Samarkand branch of the Tashkent University of Information Technologies, the Samarkand State Institute of Foreign Languages (200 masters and doctoral teachers from various branches of science participated in the study) revealed that they had little knowledge of B. Blum's taxonomy. They can work with the category of "Knowledge" as the presentation of information for the perception of its students, find it difficult to organize the process of "Understanding". This is an extremely complex psychophysiological phenomenon - the realization of the understanding of knowledge, the meaning of the perceived information.

The experiment involved more than 200 university professors, students, masters, doctoral students, and school teachers. They were asked: from the 50 verbs of the action related to the presentation of the presentation, select the 10 most needed to create a quality presentation and number them in order of importance.

According to the results of the study, in order to create a presentation, first of all, it is necessary to do the procedure of restoring the image of the necessary information from memory, hold, systematize, see, design, imagine, structure, anticipate, form, construct.

These patterns, their use in the procedure of organizing the presentation, optimize the cognitive process, activate the development of creative, innovative professional thinking.

Knowledge of the patterns of the category “Presentation” for the development of critical and logical thinking of the knower through the pyramid B. Bloom will ensure the development of thinking skills of a high order, which determines the formation of practical, creative thinking.

2. Materials and methods

The cognitive process - the area of psychology, is the subject of study. It starts from the perception of information and continues in fixing in memory, thinking in thinking and turning the knowledge gained into activity skills. From reflection and sensation to perception and presentation of images based on the information received - all these processes occur according to the laws of psychology and psychophysiology. According to the results of our research, B. Bloom's taxonomy, which reflects the stages of knowledge based on knowledge, understanding, application, analysis, synthesis and evaluation, does not take into account the procedure of consciously causing a clear, clear, long presentation between the “knowledge” and “understanding” procedures. Representation as a result of the interrelated activity of the processes of memory, thinking and imagination, is characterized by us as a special category, the functioning of which is intended to provide the required understanding. We studied the regularities of the students' cognitive process using long-term observation methods, questioning, analyzing the results of their theoretical and practical activities, and also used the experimental method.

Psychologists have revealed the link between the ability of teachers to represent their professional competence in the I-concept system for their choice of a particular teaching style. Teachers who are weak in their professional readiness have low self-esteem and are inclined to use traditional teaching methods. Teachers who have a positive self-esteem, with a pronounced idea of their professional competence, are distinguished by creative

thinking, are able to create an atmosphere of lively communication in class, engaging with students in close confidential contacts and seeking to provide them with all psychological assistance [13, p.246].

3. Results

As stated in the scientific literature, competence is a given requirement for the educational preparation of students and students, and competence is its personal quality (a combination of qualities) and minimal experience in relation to activities in a given field.

The level of competence in solving problems that are formulated by experts of the international study of educational achievements of PISA is also mediated by the development of scientific and practical ability to represent the situation of a creatively working personality and according to experts there are such levels of competence in solving problems:

- understanding of the problem;
- to characterize the problem;
- present a problem;
- to solve the problem;
- reflect on the decisions;
- report a solution.

Here, to present a problem is understood as the development of a form for presenting information, to move from one form of presentation to another. To report a solution to a problem means to choose the form of presentation of the result obtained and to state it clearly for other people “[11, p.45].

The role of representation in the organization of project activities is great, which is connected with the identification of the problem and the ways to solve it. I.A.Zimnyaya in this connection writes that the highest degree of problemativeness is inherent in the learning situation in which a person: formulates the problem (task) himself; he himself finds her solution; solves and self-monitors the correctness of this decision “[6, p.45]

As can be seen from the results of the analysis of the role of representation in the cognitive process of the personality, it is a link of all the processes of development of memory, thinking, imagination, from the qualitative functioning of which depends the development of human knowledge and skills.

At first glance, B. Bloom's taxonomy is simple, understandable, accessible. In fact, it is complex, requiring in its use of consciousness, perseverance, and patience. Therefore, its use requires from the teacher a certain system of professional competence.

Currently, all universities of the Republic of Uzbekistan are gradually moving to a modular and credit organization of the educational process. The modular training and its credit organization, as an effective process of creating educational work aimed at ensuring the professional competence of future specialists, which also proceeds on the basis of B. Bloom's taxonomy, actualizes the problem of the scientific development of the "Presentation" category.

The development of professional competences of teachers through modular training is intended to ensure the formation of practical abilities to solve specific tasks of training and education. Ultimately, these abilities are expressed in skills and abilities that are expressed at the level of methodical readiness for action. Such skills and abilities are developed successfully using the above taxonomy in the educational process.

Under present-day conditions, for deliberate planning of research and development activities, the role of deliberately evoked ideas in the development of instrumental systems of imitation, modeling of objects is great. Scientists such as Yu.N.Pavlovsky, N.V. Belotelov, Yu.I. Brodsky argue about this when they note that "another important means of debugging a model provided by instrumental simulation systems are visualization tools of the results of a simulation experiment [12, c.160]

Scientists, exploring the laws of the cognitive process, the development of the

ability of those who learn to self-esteem is associated with the formation of their ability to represent. Polat E.S. and Bukharina M.Yu. note that "the difficulties of many under-performing children are not the result of their mental or physical inferiority, but rather the result of their self-image as incapable of serious learning. Successes in school, at work and in life as a whole, they say, are no less dependent on a person's perception of their abilities than on these abilities themselves"[13, p.243].

English psychologist Burns R., analyzing the role of representation in shaping the motivation, goals, attitudes, attitudes of a schoolchild, writes that "parents, teachers, peers provide the child with the necessary feedback, convincing him that he is gentle, that he likes it, he is able to gain success in a given case and that in general he has significance in their eyes"[1, p. 27-28].

According to the results of our research among teachers of Samarkand State University, Samarkand branch of the Tashkent University of Information Technologies, Samarkand Medical Institute, which has been conducted over the past twelve years, many have little knowledge of the concept of "pedagogical thinking", the laws of transforming the information obtained to the level of understanding, psychological laws of the competence approach his profession, especially perception and imagination, psychological and pedagogical roots of credit modular and organization of training that are focused on the development of professional skills.

There is a certain tendency of the teachers' superficial approach to the psychological and pedagogical foundations of modular credit training and competent preparation for it. Therefore, for the development of competent professional and pedagogical thinking of future teachers in the classroom in the disciplines of "Pedagogy", "Psychology", "Innovative pedagogical technologies", the special course "Development of skills and competencies",

we introduced them to the psychological patterns and peculiarities of the formation of skills and abilities to use the possibilities of activating the cognitive process by the category "Presentation", which is organically included in the B. Bloom category system.

According to B. Bloom's taxonomy, educational goals are broken down into three parts: cognitive, affective and psychomotor.

The cognitive (cognitive) area includes goals from memorizing and reproducing the material studied to solving problems, during which it is necessary to rethink existing knowledge, to build their new combinations with existing ideas and methods, including the creation of a new one.

In taxonomy, each category performs its specific function. Often these functions are interconnected, mutually defined. The function of the "knowledge" category is that the information should be perceived according to the purpose from different sensory organs, in contact with the information that is in memory, stored in memory.

The function of the category "Presentation" is that from the received and former information in memory, create as brightly as possible longer, longer images of representation, show connections between parts of the image obtained, create as many images and pictures about objects, phenomena and processes as possible.

The function of the "Understanding" category is to capture laws, principles, similarities and differences from the presented images, their parts and interrelations between them, and fix them in long-term working memory.

The function of the category "Application" is understood laws and laws, knowledge, principles, methods and methods must be used in practice.

Knowledge in this situation is understanding, retaining in memory and the ability to reproduce the basic facts of science and the theoretical generalizations that

follow from them (rules, laws, principles, conclusions).

Formation of knowledge as part of the cognitive process more effectively will help the procedure for invoking the presentation of the teacher, teacher, students and students.

Which of the students wants to gain even more profound theoretical, fundamental knowledge, are engaged in the procedure of "Analysis" by B. Blum's taxonomy. In this process, the student penetrates into the depth of each phenomenon, process, separates them into parts, examines each part separately, capturing new properties of these parts.

The function of the "Synthesis" category is based on the obtained new knowledge from analysis, to create new images, ideas in thinking, innovations, to be engaged in creativity. This is the basis for the development of the individual and the state.

The function of the category "Assessment" is to systematically monitor the development of your cognitive process, which determines the formation of a systemic holistic image of the result obtained or obtained, evaluate the positive and negative, conduct marketing research in accordance with today's and tomorrow's market economy needs and optimally manage your development.

The affective part of the cognitive process reflects the fact that a person reacts emotionally. Affective goals are related to human relationships and emotions. Brightness, clarity, intensity caused by the presentation causes bright, clear and intense feelings.

The psychomotor part provides the ability to manipulate tools or instruments. This part develops skills that are also connected with emerging ideas,

In our study of the laws of the cognitive process with the help of B. Bloom's categories, the role of the procedure for creating the representation process is

studied to ensure a more efficient flow of the understanding process.

As we emphasized earlier, representation is a process in which the memory restores the image of a perceived object or phenomenon, as well as the creation of an image through imagination.

In the process of the appearance of the representation, memory, thinking, imagination, emotions, etc. are actually involved. In general, representation is the process and result of the mental reconstruction of images of objects and phenomena that currently do not affect the human senses. It is also known that the images of the presentation are the basis for the reflection in the memory of information, consolidation and reproduction of it.

A significant part of a person's ideas are images that arise on the basis of perception, that is, the primary sensory reflection of reality. From these images gradually formed a holistic picture of the world, which develops consciousness, is reflected in thoughts and words.

The interpretation of the concept of "Representation" is given in the dictionaries. The concept of "representation" has several meanings. The S.Iozhegov dictionary contains five meanings of this concept. Only the fourth interpretation of this concept as "reproduction in consciousness of previously experienced perceptions" is less suitable for its logical understanding [10].

In the Dictionary of synonyms of the Russian language, the concept of "representation" is interpreted as "to see, think, imagine mentally, in its own idea to recreate, reproduce someone who has a lot of things, something." [16].

Psychological vocabulary gives a more specific interpretation of this concept in psychological terms. "Representation is a visual image of an object and a phenomenon arising on the basis of past experience through its reproduction in memory or imagination" [14].

In the Dictionary of the Russian Language, the Bolshoi Explanatory

Dictionary, the Dictionary of Synonyms of the Russian Language, the Training Dictionary of the verbal-noun phrases of the Russian language, the term "representation" is understood in addition to the above interpretations and this understanding of it as a body of knowledge; "Knowledge, understanding of something."

In our study of the notion "Representation" we rely on the interpretation of this concept psychologically, as a vivid image of an object and a phenomenon arising on the basis of past experience through its reproduction in memory, thinking and imagination.

On the basis of such a formation of a submission, a weak or complete understanding of it directly and indirectly depends on the previously and just received information. Here, interactive pedagogical methods come to the rescue: brainstorming, two-part diary, Venn diagram, cluster, sinwine, "ZHU" system, etc.

Russian researchers of the category "Presentation" note that it has a great influence not only in gaining knowledge, acquiring skills and abilities, but also in choosing a profession and personal lifestyle. According to the results of our study, it was revealed that during the course of study at the university, students form a strategy for future professional activity, an image of a professional future, the psychological expression of which is a presentation not only about the particulars of the professional activity, but also about a professional career as a whole.

Ideas about career are dynamic education, reflecting the subjective personality model of the movement of a person in the profession. They have a complex multicomponent structure [5].

In this regard, the self-image becomes more adequate, which is an important prerequisite for further professional self-determination.

From everything noted, it turns out that as a person represents something, he

builds his plans for the future and lives in the same way and works. Representations affect the lifestyle of a person.

The quality and character of the presentation is greatly influenced by the activity. Creative, with innovative intelligence related activities, primarily associated with the development of ideas, which gives rise to the emergence of new ideas and creativity. The ability to represent affects the choice of a profession to be mastered.

Rene Descartes's statement that "in order to improve the mind, one must think more than memorize" is closely related to the development of the presentation.

From the point of view of psychology, the development of the ability to represent in a particular modality (visual, auditory, tactile) is an adaptive mechanism that is inherent in our psyche by nature. Performing this or that activity, the brain adapts to it, gradually improving the quality and efficiency of work.

Consciously evoking representations of students and students by keywords, basic "concepts", "terms", categories of a topic or section of the subject being studied is aimed at improving the efficiency of the cognitive process, thanks to which, mentally trained, capturing cause-effect relationships, learn these laws, moving from simple to complex, from unknown to known, from understanding the form of phenomena, the processes of reality to their essence, which is the basis for the development of knowledge.

In understanding the essence of objects, phenomena, and processes, by using the category of representation, the knower works by dividing the entity into such classes: property (attribute); thing; state; process; event; assessment; modality, etc;

Studying the category, "Presentation" in a complex, from the points of view of pedagogy, psychology, philosophy, physiology and sociology, revealed that it has the following properties:

- Clarity
- Intensity

- Brightness
- Duration
- Fragmentality
- Volume
- Dynamism
- Constancy
- Dullness
- Interconnectedness
- Causality
- Detail
- Templates
- Visibility
- Sustainability
- Instability
- The role of representation in the development of thinking and imagination is enormous. For the development of thinking it helps:
 - in determining the formation of the comparison operation;
 - in designating differences and similarities, for inclusion in the category;
 - in the use of generic understood in reasoning about submitted;
 - in the development of the ability to logical thinking, the ability to capture and understand the relationship of events for successive conclusions;
 - in the definition of concepts, finding out the reasons;
 - in the development of the ability to classify and analyze.
 - in the ability to think logically, the ability to capture and understand the relationship of events for successive conclusions;
 - in the definition of concepts, finding out the reasons;
 - in developing the ability to classify and analyze.

Presentation as a basis for the development of critical independent thinking of a teacher to prepare the ground for the formation of such professional skills:

- readiness for goal setting;
- capture leading, key contradictions;
- readiness for diagnostics and prognostics;
- readiness to plan their actions;
- flexibility, thinking in a new way, perseverance, patience;
- willingness to correct their mistakes;
- reflection of their own mental activity, awareness of their own thinking process;
- recollection, identification and awareness of the main components of its activities (its meaning, types, methods, contradictions, ways of their solution, the results obtained);
- search for compromise results;
- to construct the concept, relations, to formulate a contradiction, functional connections, laws, structures of the structure of the studied material.

All kinds of imagination need to create a bright, clear, voluminous, long-lasting presentation. This requires the teacher to have special knowledge and skills for the development of cognition, which improves their learning activity.

Both arbitrary and deliberate imagination, which develop thinking, flow on the basis of a called presentation.

Recreating imagination as a prerequisite of creativity, and the development of innovative thinking, manifests itself when a person needs to recreate the representation of an object as fully as possible corresponding to its description. The same ideas are recreated with a verbal description. Sometimes a presentation is recreated based on diagrams and drawings. It develops a person's ability to spatial imagination. Here an image is created in three-dimensional space.

The development of ideas goes from the original, incomplete, undifferentiated, often irregular and fuzzy, with little connected with each other images of reality to the construction of distinct, bright,

differing with known completeness and correctness, interconnected with each other representations.

The main stages of this development, associated with the emergence of new qualitative features of representations are: the initial expansion of the future professional life experience of a professional and the accompanying perception improvement; the inclusion of speech in the formation of representations by the verbal designation of its essential features and elements; the use of representations in various activities of the future specialist, in connection with which, representations are activated, verified and refined by practice; the use of special techniques of forming a presentation on the requirements of professional activities of a person, indicating the relationship of this presentation with attention, the development of their brightness and stability in the process of special education and training.

Submissions are based on previous human experience.

The physiological core view is "Footprints" remaining in the cortex of the cerebral hemispheres from the excitations that occurred during sensations and perceptions.

General and individual representations are illustrative: they are images of certain specific features of objects, phenomena, processes, states, etc.

Representation as the basis of imagination determines its productivity. Imagination is the creation of a new in the form of images - representations.

Representation, as well as perception, is denoted by words, a term, and its content is expressed in sentences. Word and sentence are the content components of the linguistic environment of the world.

Representations are formed not only on the basis of direct perception, but also as a result of imagination on the basis of actualized sensations that are in human experience.

Each representation makes sense, that is, those external signs, properties and connections of a sensually - visual image, which were perceived by different senses and which create this image.

It should be noted that in each topic of educational material is clearly defined the content of the idea of the subject, the phenomenon that is formed in the knower. Presentation is a process. This is a reproduced image of objects of the real world, an image of objects, phenomena or processes of reality, which are not currently perceived by people, but which were perceived earlier.

For the process of perception, the causative agent is the subject of external activity, a person to see, hear, touch, smell, touch. For presentation, the causative agent is not an external object, but a word or thought about the purpose of the object. A word or a thought causes an image, a representation, revives the traces of physiological reactions stored in the brain that correspond to past perception processes.

In the process of studying the patterns of development of professional competence of future specialists in the university during 2012-2018. at the Samarkand State University, the Samarkand branch of the Tashkent University of Information Technologies, the Samarkand State Institute of Foreign Languages (200 masters and doctoral teachers from various branches of science participated in the study) revealed that they had little knowledge of B. Blum's taxonomy. They can work with the category of "Knowledge" as the presentation of information for the perception of its students, find it difficult to organize the process of "Understanding". This is an extremely complex psychophysiological phenomenon - the realization of the understanding of knowledge, the meaning of the perceived information.

Such teachers and teachers extremely unsatisfactorily organize and manage the process of turning the received information

into real knowledge in the minds and thinking of students.

Proceeding from such a contradiction, we identified the problem of weak professional competent training of future and working teachers - this is their weak psychological competence, superficial knowledge and their use of B. Bloom's taxonomy.

For the prevention of such a weak psychological competence of future teachers, we have developed another category in B. Bloom's taxonomy - "Presentation".

In our opinion, according to the real laws of psychology, "Knowledge" is understood fully, sustainably and practically, when it (the information) is clearly, clearly, steadily presented. Teachers should know the psychological and physiological roots of the evocation of such representations in cognizers within the limits of reasonable and professional imagination, which feeds on the formation of scientific, practical and innovative thinking.

Consciously evoked representation, which is bright, clear and voluminous, greatly facilitates the origin of such thinking processes as deduction, induction, comparison, definition, classification, analysis, hypothesis. On the basis of these processes, correct and effective thinking takes place. Dialectical thinking is focused on the problem, reveals the contradictions of the object, determines the tendencies of its change and development. The core of such thinking is the skill to open a contradiction, to find ways of resolving it by concrete consideration, analysis of the existing state of affairs. The development of such thinking is the basis of its innovativeness, which is the source of the emergence of invention and innovation.

Stability and clarity of view helps the cognizer to define the concept and classify it. The concept, the volume of which is divided, is a genus, and new concepts are species in relation to this genus. Dividing the scope of a generic concept into specific concepts can also become an object of division, and thus

such a multi-stage, extensive division helps the cognitive to develop the ability to classify. These processes are economical and efficiently occur in the submissions.

The role of representation in understanding of causal relations in the process of thought formation is invaluable.

The causal connection in thinking is found when the individual in the submission discovers the connection of changes in one phenomenon with changes in another phenomenon, while the other circumstances remain unchanged. Here a person catches the fact that there is a causal relationship between these phenomena.

Pedagogical activity is a very complex system of influences, management, control and evaluation, which is directed to another open system - a person who is dynamic, adaptive, rational - sensual. There is a causal effect - the connection is also special, complicated. A difficult cause produces a difficult result. Part of the cause causes a certain part of this result. Future teachers to experiment, start applying new ideas in the practice of educational work, such a procedure can be made in the submissions that greatly simplify the search

and finding effective ways of teaching and education.

The above indicates the invaluable role of representation as the main part of the imagination for the formation of a logical, critical and innovative professional thinking of a cognizing person.

Therefore, in our study, as in the B. Bloom taxonomy, we tried to create a class of action verbs reflecting the structure and semantic significance of the action for the reproduction of a qualitative, practical presentation. The number of such verbs was 50 units. See table - №1.

The experiment involved more than 200 university professors, students, masters, doctoral students, and school teachers. They were asked: from the 50 verbs of the action related to the presentation of the presentation, select the 10 most needed to create a quality presentation and number them in order of importance.

According to the results of the study, in order to create a presentation, first of all, it is necessary to do the procedure of restoring the image of the necessary information from memory, hold, systematize, see, design, imagine, structure, anticipate, form, construct.

Table number 1. Verbs of action, revealing the meaning of the category "Representation"

№	Verbs	Table number 1 Verbs of action, revealing the meaning of the category "Representation"	№	Verbs	Order No. of importance for the category "Representation"
1	Create		26	Compress	
2	Make up		27	To separate	
3	To form		28	Crush	
4	See		29	Throw	
5	Design		30	Highlight	
6	Design		31	To inflate	

7	Catch		32	Skip	
8	Correct		33	Arrange	
9	Mix		34	systematize	
10	Complicate		35	Confused	
11	Specify		36	Heat up	
12	To simulate		37	To bring closer	
13	Imagine		38	Illustrate	
14	To show		39	Reduce	
15	Recreate		40	Exaggerate	
16	Structure		41	To expand	
17	Learn		42	Deepen	
18	To shape		43	Compare	
19	Transform		44	To condition	
20	Restore		45	Vibrate	
21	To fit		46	Streamline	
22	Cut out		47	To tie	
23	Push away		48	Wipe off	
24	Anticipate		49	Outline	
25	Cut down		50	Resume	

These basic ten verbs of action, which in our opinion will help for the emergence of a qualitative presentation in the cognitive process, on which depends a deeper understanding of perceived information and the development of scientific and practical, innovative thinking and consciousness of the individual in everyday and professional life.

Thus, we believe that in the six-level hierarchical structure of B. Blum's cognitive sphere, it is necessary to introduce the seventh category "Presentation", which will be after the category "Knowledge" and before the category "Understanding".

In B. Blum's pyramid, the "Presentation" category performs the function of developing a list of tasks for those who learn to restore previously perceived impressions (temporary neural connections), knowledge, feelings, their causes and possible consequences.

Such tasks are aimed at renewing, recreating and penetrating into cause-and-

effect relations, restoring, capturing connections, relations in the images of representation.

According to B. Bloom's taxonomy for the category "Presentation" there may be such educational objectives:

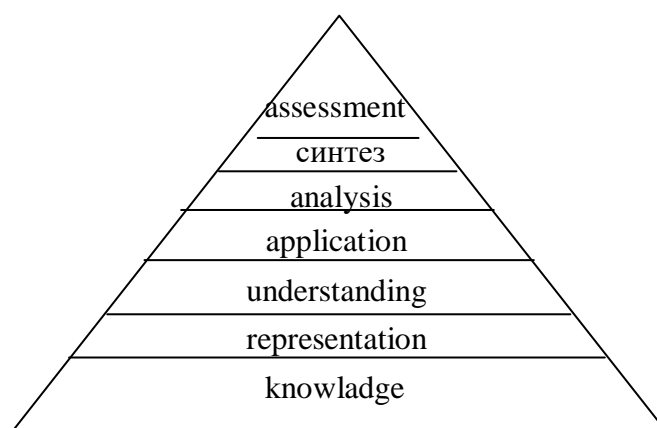
1. Levels of learning objectives.

"Presentation" - reproduction in the imagination and thinking of information, ensuring clarity, brightness, stability the image of the representation, capturing connections between parts of the represented objects, phenomena, showing causes and effects, which provides a deep understanding.

2. Specific actions of students, students to achieve this level.

Vividly, clearly, steadily restore in memory the previously received information, focus attention on the relationship between objects, phenomena, processes, catch patterns, form new knowledge, skills and skills.

1. Choose, rate, predict
2. Relate, create, discuss, experiment
3. Share, study, deepen.
4. Use, apply.
5. Describe, explain
6. Restore, manifest, create, keep
7. Highlight, show, tell.



The above image reflects the interrelation of the requirements of categories with the intellectual and physical actions of the cognizing person.

According to psychological patterns, it is bright, clear, stable and fully possible to imagine:

- subject;
- phenomenon;
- process;
- connections between objects, phenomena and processes;
- cause-and-effect relationships from contact between them;
- capturing these connections, their perception and analysis in thinking for practical reasoning.

4. Conclusion

These patterns, their use in the procedure of organizing the presentation optimizes the cognitive process, activates the development of creative, innovative professional thinking.

Knowledge of the patterns of the category “Presentation” for the development of critical and logical thinking of the knower through the pyramid B. Bloom will ensure the development of thinking skills of a high order, which determines the formation of practical, creative thinking.

Procedures performed from the first to the fifth category develop thinking skills of a high order. The work performed in the sixth and seventh categories develops low-

order thinking skills. The development of thinking skills of a high order directly depend on the skills of thinking of a low order, where the role of representation is great.

The developed ability to represent images of possible processes, phenomena and objects intensifies the formation of skills and abilities to acquire knowledge, its understanding and critical, innovative thinking.

At the “Knowledge” level, the ability to have a clear, clear, continuous presentation significantly improves the memorization and reproduction of the material studied. Here, those who learn on the basis of a representation reproduce the terms, concrete facts, methods, procedures, basic concepts, rules and principles.

At the level of “Understanding”, the cognitives transform the material from one form of expression into another, interpret the material, suggest about the further course of events and events. The effectiveness of these processes is closely related to the ability and skill to purposefully represent. It will help to fully explain the facts, rules and principles.

At the “Applications” level, a developed view will help the formation of the ability to use learned material in specific conditions and new situations. Pupils and students learn to apply this knowledge in new, non-standard, practical situations.

At the level of “Analysis”, the cognitive skill of representatives mediates

the development in them of the ability to break up the material into parts in order to understand the internal structure of the connections between the parts. A clear, continuous presentation of the analysis will help students and students to isolate parts of the whole, identify the relationships between them, define the principles of organizing the whole, see errors, omissions at the level of reasoning, distinguish between facts and consequences, assess the significance of the data.

At the “Synthesis” level, a evoked idea of something develops for those who cognize, the skills to combine elements, parts to create a whole, innovative. At this level to develop the ability to prepare a speech. This level develops the ability to plan experiments, draw up a list of tasks, develops the skills of inventing.

At the “Assessment” level, the use of the category “Presentation” improves the development of the skills of pupils and students to evaluate the value of a particular material, the results of their activities, and other people. The ability to represent clearly and continuously some process or phenomenon develops in pupils and students the skill of evaluating the logic of the information received, its significance, evaluating the conformity of the findings with the available data, and evaluating the significance of a particular product of activity.

Thus, the introduction in B. Bloom’s taxonomy of the category “Presentation” and the management of the cognitive process with its help greatly improve the quality of the knowledge gained, the development of practical skills and skills.

All activities of the teacher and students in taxonomy categories occur according to the laws of psychology, psychophysiology, management and self-management. It is necessary to significantly hang psychological, pedagogical, cybernetic literacy, culture of school teachers and university professors.

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