

## The Basic Algorithms of Developing Mathematical Models of the Mental Potential of the Future Specialist

Nasim Tulegenovich Rustamov, Almat Ermakhanovich Bekaev, Bakhyt Apsitovna Ospanova, Abdilda Tursynkhanovich Meirbekov, Saltanat Tynybekovna Nyshanova, Kamalbek Meirbekovich Berkimbaev

H.A.Yasawi International Kazakh-Turkish University, B. Sattarkhanov Avenue 29, 161200 Turkistan town, the main campus, South Kazakhstan region, Kazakhstan

[saltanur@mail.ru](mailto:saltanur@mail.ru)

**Abstract:** In terms of the psychological study of personality, an assessment of the capacity of the human psyche is of great interest. Potential (from Lat. - Force) - in a broad discourse is treated as available resources, as well as tools that can be mobilized, powered, used to achieve a certain goal. The first successes in modeling the mind achieved in the mid XX century based on digital and analog computers. Currently, there is quite a lot of models of individual mental processes and states, developed by various researchers including foreign psychologists.

[Rustamov N.T., Bekaev A.E., Ospanova B.A., Meirbekov A.T., Nyshanova S.T., Berkimbaev K.M. **The Basic Algorithms of Developing Mathematical Models of the Mental Potential of the Future Specialist.** *Life Sci J* 2013;10(11s):217-220] (ISSN:1097-8135). <http://www.lifesciencesite.com>. 38

**Keywords:** creative activity, mental potential, model, future specialists.

### 1. Introduction

Spatial representations are a complex matrix structure of the psyche, the study of which involves appeal to different kinds of human activity. Direct spatial gnosis and praxis, somatognosis, drawing, transforming and moving mental image require meticulous evaluation, factor analysis of the experimental and theoretical understanding[1]. This is due to the fact that spatial concepts play a role in the development of reflexive structures of consciousness. They will make their debut in the ontogeny as one of the first, that is, they are base-born, one of the first they "became old." Any form of disontogenez, as experience shows, is primarily characterized by some type of deficiency of these processes. Proper qualifications and the timely establishment of the personality of spatial representations is one of the most important conditions for increasing its achievements.

Modeling as a cognitive technique is inseparable from the development of knowledge. Mechanism for the acquisition of knowledge is still quite poorly studied. For solutions of at least some of these problems and the proposed study of psychological processes of knowledge with the use of mathematical methods and modern innovative technology to further use these materials in the construction of the original models of the processes of cognition.

Application side of this issue is directly related to the prediction of human behavior, his identity, the identity as "I", which as a subject, consciously appropriates everything coming from his deeds and actions and accepts responsibility for them, as the author and creator. Problem of assessing the psychological potential of the individual does not end

the study of mental personality traits, her abilities, temperament and character, it ends opening consciousness of the person who has practical implications [2].

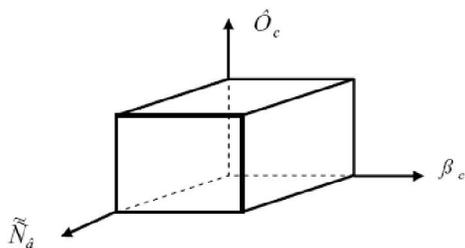
If we turn to the concept of reflection in the psychological and educational literature, it means the process of individual reflection of what is happening in his mind. Reflection (from Lat. Reflexio - rear-facing) is understood as a process of self-discovery of the subject as internal mental acts and states. That is why connection is necessary to examine not only the individual in the activity, but also work through self-identity. Hence the self-estimate is seen by us in connection with the problem of forming creative person, when in the process of activity, communication is necessary to evaluate the self-image [3].

In adolescence focus on creative activities is increased. Its participation in the creative activity facilitates the formation of a positive self-concept. Psychological conditions of creativity are the internal resources of the individual account and request a specific professional activity, where personal motivation to work, i.e. social orientation and locus of control, revealing the externality or internality personality are crucial.

Creativity involves internal motivation, the ability to take reasonable risks, willingness to overcome obstacles, to resist the opinion of others [4]. Manifestation of creativity is not possible, unless there is a creative learning environment.

Consequently, the activity of the individual is its functional and dynamic quality that provides the individual the opportunity structure differently vital functions (communication, activity, cognition) career.

Human activity from the earliest years of experience is regulated by all humanity and the requirements of society. This type of behavior is so specific and in psychology it is indicated by a special-term activity.



**Fig.1. The spatial dependence of the basic mental parameters which form human activity**

Activity is an internal (psychological) and external (physical) human activity, adjustable by the aim

The activity of design work strategy of behavior and communication of personality, dictates the choice of the best options, and includes a variety of personal orientation.

In order to talk about the activity, it is necessary to identify, the presence of human activity goals. Specifically, the purpose reflects the social rights and formed his "I". Every activity has a direct and indirect result. Any result is important, and the effect on the identity, which receives or doesn't receive the result of the activity. All other aspects of the activity - its motives, methods of implementation, selection and processing of the necessary information - can be realized or may not be realized[5]. It all depends on how he developed a fantasy. Whatever the level of awareness of this activity, cognition goal is always necessary to sign it. This psychological process is regulated by the power of human will. Will-conscious regulation of man's behavior (activity and communication).

In fact, these three psychological parameters are interrelated (Fig. 1) and define direction of the person's activity.

Spatial representations are a complex multifactorial structure of the psyche, the study of which involves appeal to different kinds of human activity. While interpreting the results of the survey and the choice of certain methodological aids it is necessary to consider both quantitative and qualitative differences that arise in performing tasks according to age, level of education, etc.

Improving the level of functioning of spatial ideas inevitably lead to assimilation of the basic algorithms that facilitate with an avalanche of rising (outside and inside) information.

### **Purpose of the study.**

Formalize the psychological basis of determining the direction of human activity.

### **Method of solving of problem.**

Determination of the direction of the person solves a lot of applied issues related to social problems. All this is due to the definition of the relationship of "I"-concept, imagination and will power of man [6]. In cases where there is no such connection, there is no activity in the human sense, but there is an impulsive behavior. In contrast to the activity the impulsive behavior is controlled directly by the needs and emotions. It merely expresses emotions and desires of the individual. Thus, impulsive man, blinded by anger or passion irresistible.

The activity is suitable acquisition of objects by subject for receiving a product that meets a certain need. This interaction of the subject with the object, in which the process of the object becomes subjective form of images, focusing on its transformation. Products of activities that meet the relevant requirements, form its motif. The transformation of the original object in the product, a complex and multi-step process, which is shared in time. Therefore, it singles out the intermediates. Getting each of them acts as a goal. System goals defines the general direction of activity, the steps and the sequence of the transformation of the original object into the product. Course of this process is regulated by force of will.

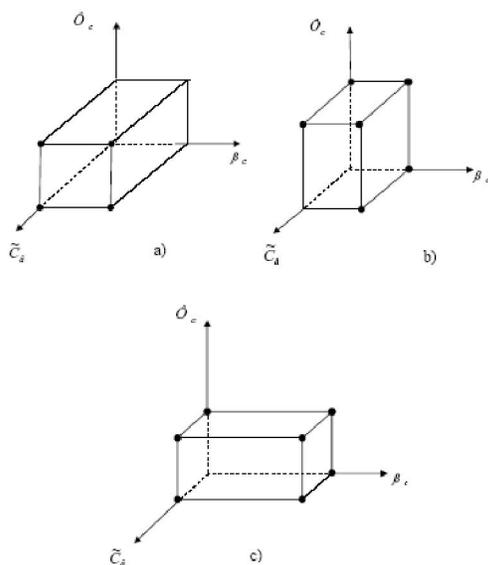
Goal - is an individualized category. It is formed on the base requirement of - motivational sphere. In the process of development of the identity of each new target, which it sets itself and realizes, leads to change and motivational sphere, which, in turn, creates the possibility of setting a new target. In the formation of goals develop psychological potential of human (Fig. 2.).

One of the internal factors that regulate the level of human activity, is the image of the "I", that is, representation of the person about themselves, their abilities, in particular[7].

The image "I" is based around the performance evaluation of the "I", its successes and failures. Everyone has a set of existing images of the "I", and it can be the way a person perceives himself at the moment, or in such a way he thinks his ideal of "I" or what "I" would be if all our plans come true: or how it looks in the eyes of others, and so on (Fig. 2c). In this fantasy plays an important role (Fig. 2b). As a subject, the image of "I" is not just an idea or concept of man about himself, and a certain predisposition or as they say social attitude, the attitude of the person himself. It expresses the psychological power of man.

Since, in any setting, in the form of "I" in psychology isolated by component:

- cognitive self-importance, self-consciousness;
- attitudinal-value attitude to yourself;
- behavior - especially the regulation of behavior.



**Fig.2. Spatial representation of the potential psyche of the individual**

The strength of will - a person's ability, manifested in the self and self-regulation of its various mental processes in their operations. The concept of "willpower" was originally introduced to explain the motives for the actions undertaken by its own decision rights, but does not meet his wishes. Then, it was used to explain the possibility of free choice in the conflict, human desires associated with the formulation of the problem of "free will." As social growth of the psyche, caused by the development of employment, can be represented as a system of different mental processes, or as a special internal action, which includes a variety of internal and external funds.

Voluntary regulation of behavior and action, is the voluntary regulation of human activity (Fig. 2a). It is formed and developed under the influence of control over his behavior on the part of society, and then self-personality. Voluntary regulation appears as a personal level of voluntary regulation, characterized in that the decision on voluntary regulation is based on the individual and in the regulation of used personal funds [8]. One such means is to change the meaning of actions. The purposeful changing of the meaning, which leads to a change in motivation can be achieved through the re-evaluation of the

significance of the motif, by attracting additional motives, through anticipation and experience of the consequences of the action by updating the motives through an imaginary situation, etc. The development of voluntary regulation is primarily associated with the formation of a rich motivational sense sphere, resistant attitudes and beliefs of the individual, and the ability to strong-willed efforts of the special situations. The development of this ability is related to the transition from the external sense of changing the meaning of activity to internal.

Fantasy - 1) synonym of imagination, and 2) the product of the imagination. Fantasy changes the face of reality, reflected in the mind; it is characterized by transposition (permutation) of the elements of reality. Fantasy allows you to find a new point of view on the known facts and therefore, has a great artistic, scientific and cognitive value. Creative activity which generates fantasy is spontaneous, related to personal talent and individual experience form in the process of activity. Every fantasy creates something new, changes; transform what is given to us in perception (Fig. 2b). This change, transformation, deviation from this can be expressed, firstly, that the person on the basis of knowledge and the experience he imagines i.e. creates, a picture of what actually he has never seen. Fantasy can, further, anticipating the future, create an image, a picture of what did not exist. And the more productive fantasy and more valuable is a fantasy which transforms reality, deviating from it, while still considers its essential aspects and the most important features [9]. Development of imagination is based on such features as flexibility and originality of thought.

Self-actualization can be understood as a motive, as a process and as a result. In our view, self-actualization as a motive is innate human desire for the full implementation of its essence, its capacity, built into human nature, the tendency of self-development, self-fulfillment [10]. Self-actualization as a process is a conscious human activity in its development, updating, transfer from status of possibility to the status of nature and essence. Self-actualization as a result is the final or intermediate result of the exercise of human essence and nature, which is characterized by certain indicators.

Indicator of self actualization of personality is the willingness to self-development. Readiness for self-development of the student requires not only awareness of the need of self-actualization, but also a high degree of reflection of implement creative activity to overcome barriers to self-actualization.

Reflection - "this is a thought process for the analysis, understanding, and self-awareness. Consequently, reflexivity as the quality of the individual is manifested in the ability to carry out this

process, in particular, to analyze the features of personality, actions and behavior, relationships with others, to understand and possibility of self-activity.

The use of the creative potential, stimulating students' creative abilities is the key to improving students' learning motivation at an extremely low level of cognitive needs.

In this study, creativity on the one hand is one of the leading factors for the creative activity of man, and on the other is one of the main problems of the psychology of personality and its development.

**Corresponding Author:**

Dr. Nyshanova,  
H.A.Yasawi International Kazakh-Turkish  
University, B. Sattarkhanov Avenue 29, 161200  
Turkistan town, the main campus, South Kazakhstan  
region, Kazakhstan  
[saltanur@mail.ru](mailto:saltanur@mail.ru)

**References**

1. Ananiev, B.G., 2008. Man as the object of knowledge. L.: LSU. pp:339.
2. Kon, I.S., 2000. The problem of the "I" in psychology. The psychology of consciousness. Reader. pp:672.
3. Csikszentmihalyi, M., 1996. Creativity Flow and the Psychology of Discovery and Invention. Harper Perennial. pp: 372.
4. Ospanova, B.A., 2010. Professional self - development of modern specialist in the context of creative acmeology. International scientific-practical conference-France, Paris, pp:55-59
5. Pricken,M., 2008. Creative Advertising. Thames and Hudson. pp: 302.
6. Rogov, E.I., 2003.Choice of the profession: development of professional. VLADOS-Press. pp:336
7. Finke, P.A., T. Band and S.M.Smith, 1995. The creative cognition approach. Cambridge. pp: 205.
8. Goldenberg, J., D. Mazursky and S. Solomon, 1999. Creative Sparks: Science. pp: 275.
9. Sloan, P., 2007.The innovative leader: How to Inspire your team and drive creativity. Kogan Page. pp:196.
10. Tharp, T., 2006. The creative Habit: Learn it and use it for life. Simon and Schuster. pp:256.

16/10/2013