

# Modelling of the Professionally-Oriented Situations Ascondition of Forming the Independence of a Junior Medical Staff in the Process of Professional Preparation in the Institutions of Higher Learning of the I – II Levels of Accreditation

O. O. Kovalenko\*

Department of General Pedagogics and Pedagogics of Higher School, Kharkiv G.S.Scovoroda National Pedagogical University, Kharkiv, Ukraine

\*Corresponding author: [zelenskaya\\_ludmila@ukr.net](mailto:zelenskaya_ludmila@ukr.net)

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**Abstract** In the given article the concepts of the definition condition, pedagogical condition, modeling are defined; the value of modelling of the professionally-oriented situations and methods of its realization are exposed in the process of a professional preparation of students in higher medical educational establishments of the I – II levels of accreditation are viewed; expediency of modelling of the professionally-oriented situations, tasks that require the non-standard approach to their solving are grounded for forming of independence of a junior medical staff.

**Keywords:** *modelling, professionally-oriented situation, independence, junior medical staff, professional preparation*

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## 1. Introduction

The increase of quality of life, grant of highly skilled medical services, integration into European educational and scientific space require cardinal new approaches to the preparation of junior medical staff, capable not only to follow doctor's prescriptions and provide a supervision upon patients but also carry out an individual approach to a patient, prove to defend an individual point of view, compare and analyze facts, critically to behave to the sources of information, accept the professionally self-weighted decisions in non-standard situations.

The above-mentioned is possible on the condition of forming of the students of higher medical educational establishments of I – II levels of accreditation of such personal and professional quality, as independence, that finds its display in necessities, abilities, capabilities of a person individually, independently, initiatively to pull out aims, formulate meaningful problems, elect facilities of their solving, show a persistence, taking the decision of certain problems to the positive results, and also give estimation to their own activity.

### 1.1. Analysis of the Last Researches and Publications

The analysis of the state of scientific problem testifies that the questions of preparation of junior medical workers, an increase of their quality in the conditions of higher educational establishments are studied by researchers in such aspects: forming of professional orientation of students-physicians (N. Aniskina); professional self-improvement of students of medical colleges (S. Statcuk); forming of a professional fitness of nurses (N. Semenkov); modeling of the portrait of medical sister for her specialization and raising of quality of professional activity (T. Bugaeva).

At the same time, without regard to existence of different rather sufficient researches of separate aspects of professional preparation of junior medical staff, in scientific space practically are absent works where the problem of forming of independence of students of higher medical educational establishments of the I – II levels of accreditation as professionally meaningful quality could be integrally all-round examined to provide effectiveness of implementation by the last of the functional duties in the conditions of reformation of medical industry in Ukraine.

## 2. Main Text

### 2.1. Aim

The aim of the article is to exposure and ground the pedagogical terms that assist forming of independence of students of higher medical educational establishments of I– II levels of accreditation.

## **2.2. Defining the Essence of the Concepts “condition” and “pedagogical condition”**

In the process of a scientific search it was founded that a condition or a fact is called a reason, a motive force of any process, phenomenon that determines its character or separate lines. Condition is a philosophical category that passes connection of an object with the surrounding phenomena without which it cannot exist. Unlike the reason that generates this or that phenomenon or a process, condition forms that environment where the last arise up, exist and develop. A term of "pedagogical condition" expresses connection where the subject of the theory of studies with the surrounding phenomena, without which it cannot exist. Pedagogical terms must correspond to certain requirements, for example: to have a system character, in particular an innovation must be correlated with all the other components of the investigated system, to describe changes that is this system; to have a clearly certain structure and provide connections between the elements of this structure; to take into account the peculiarities of students' studying in the process of their activity.

## **2.3. Substantiation of Expediency of Creating Special Conditions with a View to form the Independence of Junior Medical Staff (Nurses, Paramedics, Obstetricians) While Getting Professional Education**

The study of psychological and pedagogical literature allowed to state, that independence is not an innate property of a person. It is formed in the process of a whole life. The level of development of independence depends on terms a personality develops. The most favorable in this sense is a senior youth age that coincides with the period of getting professional education in the institution of higher learning. Yes, to senior youth age such social and psychological characteristics are inherent, as an increased reaction on concrete situations, thirst to the searches of something new, mobility of vital options, strained interest in person's inner world and others like that. Exactly in this period mental, physical, emotionally-volitional, civil maturity is formed, claim of permanent structure of character, a requirement appears in self-determination, aspiration to produce person's own attitude toward surrounding reality.

## **2.4. Modelling the Professionally-Oriented Situations**

However, as an analysis of scientific sources testifies [2,5,7], the formed system of higher learning does not provide the proper terms where students would form their own setting on a creative work. An observation of specialists-beginners' activity, including a junior medical staff, testifies that having a sufficient theoretical preparation, the last feel uncertainty in the decision of professional situations, that require, as a rule, the acceptance of independent decisions.

Scientists [2,4,7,8,9] mark that an outstanding value for the removal of existent contradiction has the use in the educational process of institution of higher learning, in particular of a medical profile, such professional situations the decision of which gives an opportunity to interchange the opinions and supervisions to the students, correlate the looks and estimations in accordance with professional requirements with the looks of other participants, prove an individual opinion, accept an independent decision.

The above-mentioned served as a basis for determination of one of the terms of forming of independence of a junior medical staff in the process of professional preparation in the institution of higher learning of I – II levels of accreditation modelling of the professionally-oriented situations, tasks that require the non-standard approach for their solving.

In the aspect of the investigated problem consider for a necessity to mark that a concept of modelling has a few meanings: a method of cognition of objects through their models; a process of construction of these models; a form of cognitive activity; modelling of operations of thinking (N. Menchinska, A. Rodionova); a method of forming of person' character (L. Kondrashova, T. Jacenko). As a method of modeling is closely constrained with creation of certain models, and a research process by means of this method is based on the capacities of a person for abstracting, then it is possible to consider fully just a statement, that a process of modeling is a variety of abstractly logical cognition.

For revealing the concept "modelling" in pedagogics and psychology such definitions are used: "recreation", "reflection", "analogy", "accordance", "likeness" and others like that. A necessity for a modelling arises up when a research of the real object is impossible or there are difficulties in connection with inaccessibility of an object, of certain ethic limitations or considerable charges (temporal, labour, financial and other).

Will underline that during the use of modelling appears a possibility of exit outside the perceptible reflection of substantial connections of things, call from memory of scientific information, foresight of conclusions, planning of actions, realization of them in practice. Taking into account this fact, in the conditions of getting of professional education in the institution of higher learning, in particular of medical profile, modelling has for an object the creation of the professionally-oriented situations, tasks, that would allow to decide a certain problem close to life and professional activity. Each of such tasks contains a typical for future professional activity situation in accordance to which a student must define his attitude to it, to set its professional meaningfulness, independently to choose optimal facilities of influence and methods of its motivated discharge.

## **2.5. The Ways of Modeling the Professionally-Oriented Situations in the Process of Junior Medical Staff'S Professional Training**

It is set in the process of scientific search, that modelling of the professionally-oriented situations, tasks during the students' studies in higher medical educational establishments of I – II levels of accreditation can perform due to the use of situational exercises, business games, "method of clinic", method of "brainstorming", method of

projects, and also methods of attempts and errors, analysis and analogies, contradictions, moral choice and others like that. Let's characterize them more detailed.

The method of situational studies consists in the comprehension by the students of the real vital situation and acceptance of the self-weighted independent decision [10], p. 45]. For this purpose a teacher uses situational exercises (cases) that contain description of concrete vital (professional) situation from a real life. During the decision of this exercise a student has a necessity to put himself at the place of a professional and accept his own, personal decision, taking into account certain circumstances.

Will mark that situational exercises must be folded in such a way, that a decision was not obvious, then they develop in students their critical thinking, skills of decision of problems and acceptance of the self-weighted independent decisions.

In medical higher educational establishments of the I–II levels of accreditation it is of great importance to use the "method of clinic" that is the variety of analysis of a situational method. Its essence consists in that at the lesson in detail an approach is analysed to the decision of this or that real problem, when the group of medical workers conducts the analysis of concrete patient. All the participants of discussion work as equals and can express their own opinions [6], p. 58].

The above-mentioned grounds for a conclusion, that the participance of students in the designed situations stimulates the development not only creative skills but also fastens their willingness to be not only performers but also active organizers, readiness to the open dialogue, collaboration, so-creation. The actions of students in the designed situations allow them to avoid mastering of the prepared knowledge; in a cognitive search produce an individual position, an individual point of view on the considered problem, to accept an independent self-weighted decision.

To the modelling of the professionally-oriented situations which are directed to the upbringing of personal professional quality of a future specialist, game forms and methods of studies actively promote. Games in an educational process –in reality are modelled productive situations, that allow student to feel a leader or inferior, specialist, success of decision of this situation depends on his correct decision. In the process of realization of such games, a student gets a possibility to show his personal internals (intellectual, moral, volitional), that's the field of game is a formation of educational environment, where the mastered moral norms are adopted, there is a change of positions, persuasions etc.

Results of analysis of psychological and pedagogical sources [2; 6; 8; 9] specify that games are divided into subject games and games with a plot. Subject games for their setting are directed into the process of cognition of a certain phenomena and conformities, except those that contain relation between people. In contradiction to subject games with a plot games are characterized by the fact that they embrace conformities to law of human activity and communication. With a plot games in turn are divided into productive (imitation, role-play, business) and training. It is considered that a business game is the most difficult form of playing activities that differs from other playing forms of studies that it is necessary to make

decision in the conditions of stage-by-stage multistep clarification of necessary factors, analysis of information that additionally comes and is produced during an educational game. Business games differ in dynamism of situation, reiteration of steps, difficult connection of possible alternatives of actions and briefness of time in an acceptance of decisions.

It's evident, that business games, as a rule, carry intersubject character and envisage the decision of a few scalene and professionally meaningful tasks.

Business games are used in educational aims are various enough. They can be classified according to such characteristics:

1. By the nature of playing process: a) games that envisage the cooperation of participants; b) eliminate it.

2. By the method of transmission and treatment of information: a) games with the use of ordinary communication and transmitters of information (texts, logical charts) means; b) games are with the use of a computer.

3. By the dynamics of modelling processes: a) games with a limited number of steps; b) games with the unlimited number of steps; c) games directed to self-development;

4. By thematic orientation and the character of problems that are subject to the decision: a) thematic games, oriented to the professionally meaningful values of a specialist, and embrace a certain theme or discipline; b) complex games that model the decision of various interrelated problems [2], p. 68].

Will mark that complex games mostly are used at the end of a course (part, module), or a whole course of studies as a number of series of separate relatively independent, but connected fragments (playing situations).

In such a way, a business game is the most widespread form of playing modelling, that assists forming of professional intuition, ability to understand non-standard situations, envisage the possible consequences of these or those decisions, providing in such a way upbringing of independence as a personal and professional trace of a specialist [3], p. 116].

In an educational process of institution of higher learning, in particular of medical profile, one of the methods of modelling of the professionally-oriented situations the method of "brainstorming" serves. Universality of this method allows to examine any problem in the sphere of a person's professional activity.

The study of a scientific literature on the issue of research allows to state, that there are different modifications of "brainstorming", namely: method of direct "brainstorming", method of reverse "brainstorming", double direct "brainstorming", "brainstorming" with the estimation of ideas, that is performed in three stages. The method of a direct "brainstorming" can be used for the decision of different creative tasks of different degree of complication. During the raising of a task is it necessary clearly to form two basic moments: what is the final goal and what interferes to achieve it?

The method of a reverse "brainstorming" formulates rather concrete answers for a question: how to improve this or that situation, and where to pay attention first of all. Such method gives an opportunity for a critical estimation of taken decisions that assists activation of student's independence.

The essence of double direct "brainstorming" consists in that after realization of the first "line" a break of different duration is taken, after which it is repeated once again.

"Brainstorming" in three stages includes such sequence of action: on the first stage each student has a possibility from the given list to choose 3-5 the best ideas and ground their advantage above the others; on the second stage in the process of a discussion a table is formed, where the advantages and lacks of select ideas are fixed, the third stage envisages grouping of ideas and decision-making [6], p. 58].

Will notice that the named modifications of "brainstorming" can be used both in a quality of an independent method and methodical reception during the realization of playing forms of classes and analysis of concrete situations.

In the process of a scientific search it was founded, that among the methods of modeling of the professionally-oriented tasks, that require non-standard approach in making decision, a main place the method of projects occupies. An obtained method is orientated not to the integration of actual knowledge, but to their application and acquisition of new (mostly by a self-education) and allows to create pedagogical situations (situation of vagueness, co-operation and others like that) on the basis of different subject maintenance [5]. It envisages a "purposeful activity that gives an opportunity to find the decision of a problem and carry out changes in an environment (natural and artificial)"; "getting of concrete (practical) result and its public presentation"; "bringing in of totality of research, searching, problem methods after their essence" [8], p. 228-229].

The above named method creates unique preconditions for the development of key competences (social, multicultural, informative, communicative and others like that) and of students independence in the achievement of a new, stimulating its natural curiosity and a creative potential"; maximal approach of personality to a real life and bringing in of it to the decision of concrete tasks in the space of interpersonal and business communication and collaboration. Besides this the work under the project gives an opportunity to involve in the process of studies not only an intellect, an experience or consciousness of a person, but also her sense, volitional qualities.

In the aspect of the investigated problem position of E. Korobova attracts our attention about the fact that the decision of problem situations ("complication that arises up when a person can (or does not know how) to explain the phenomenon, fact, process of reality, cannot achieve an objective the known to her method of an action) assists forming of responsibility, demand, humaneness, independence, confidence in facilities due to the method of projects. [4], p. 33]. Therefore the main thing in the application of method of projects, as B. Lomova thinks, consists in the fact that the educational activity must be organized in such a way, that its performance by a person is "exposed for her these or those sides of public, professional relations, plugged her in these relations". It means that the professional orientation of an educational activity by the method of projects is provided in full, if a teacher will be able to recreate the norms of behavior in experience of professional relations, connect organization

of classes with forming of experience of professional relations.

Will underline that introduction of the method of projects envisages an individual, group (pair and micro group) and collective activity of students, and thus, various co-operation (N. Volkova, N. Morse, T. Belt and others). Implementation of an individual task within the framework of a group work under the of project stimulates a student to the search of non-standard ways of decision of the put task, inducing him to the self-education, a success of the whole command and an attitude of the members of command depends to him. Group work assists forming in students of tolerance (tolerance to other people; understanding of the fact that there are people individual and unique, that everybody has a right on his own point of view), empathy (ability to see the "relationship" with each member of a group, that arises up during realization of the "identical" experiencing of human problems, ability to express himself and to person's attitude to another person, ability to pass to the partner an understanding of his experiencing or internal situation, reflection (foresees an active and removed observation after the person's activity, readiness to her revision, to many-sided nature of its reactions in co-operating with the members of a group).

Collective work under the project approaches the process of cognition to the real terms of future professional activity. Thus it is necessary structurally to use their orientation on general formulation of general aim of a collective professional activity and its realization; collaboration of future specialists (in particular of medical sisters, medical assistants, obstetrician, druggists, laboratory assistants) in the process of performance of concrete task; distribution of responsibility in a collective for end-point of joint activity that requires plugging of every student in joint intellectual activity, association of mental efforts for overcoming of difficulties and search of more rational method of decision of the put task. Such methods of cooperation serve as the mortgage of forming of morally-volitional internals of future specialist (responsibility, call of duty, iniciativeness, activity, persistence, decision and others like that), that form the bases of an individual personality.

Will mark that a practical realization of the method of projects in the process of preparation of junior medical staff in the institution of higher learning of I – II levels of accreditation envisages not only the decision of the professionally directed tasks but also independent choice of theme of a project in relation to the modern problems of medical activity (in particular, tasks of prognostication) through the possibility of application of all array of knowledge and experience.

The effective methods and receptions of forming of independence of students youth in the process of modeling the professionally-oriented tasks, on the persuasion of some researchers [1,3,9], there is a method of attempts and errors, a method of analysis and analogies and a method of contradictions. So, the essence of a method of attempts and errors consists in independent solving of concrete task by a choice among many variants the most optimal decision.

The method of analysis envisages decomposition of any task on a few constituents or descriptions and expression of suggestions in relation to each constituent;

establishment of ties between different objects, phenomena.

The method of analogies is connected with studies of student independently to search and use different analogies, distinguish identical or alike signs, properties.

The method of contradictions is based on the development of ability independently to find out contradiction, distinguish opposite signs, compare and unite them.

The method of analysis envisages decomposition of any task on a few the constituents or descriptions and expression of suggestions in relation to every constituent; establishment of intercommunications is between different objects, phenomena.

An effective, on the persuasion of researchers [1,2] is the method of construction of situations of moral choice, that requires from students explanation of conflict situation and choice of the behavior in this situation. D. Vilkeev worked out the typology of mental and ethical problem situations that require : to explain a moral situation; critically to estimate behavior of other people in the situation of moral choice; to define the behavior in a difficult moral situation; to give the critical estimation of a person's own decision, in a situation of moral choice [1].

### 3. Conclusions

Thus, the above-mentioned grounds for a conclusion, that the modelling of the professionally-oriented situations, tasks in the process of professional preparation of specialists (in particular, of a junior medical staff) in the institution of higher learning is able to provide an ability to determine the essence of a problem and reasons of its origin; an ability to form a few variants of decision of a problem, envisage consequences of each of a variant for yourself and other people and to estimate reality of each variant, taking into account individual possibilities and vital circumstances, to elect optimal decisions, that serves as a base for forming of such personal and professional quality, as an individuality.

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### Statement of Competing Interests

The author has no competing interests.

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