



## СЕКЦІЯ 4 ТЕОРІЯ І МЕТОДИКА ПРОФЕСІЙНОЇ ОСВІТИ

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### APPLICATION OF CREATIVE EXERCISES AS THE METHOD OF IMPROVING STUDENTS' COGNITIVE MOTIVATION

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The article analyses works of domestic and foreign authors on issue of motivation and cognitive motivation in particular. On the basis of the conducted analysis authors offer to use the innovative methods of teaching in the educational process of higher educational establishments with the purpose of improving the cognitive motivation. As all innovative methods can not be considered in one article they consider in details the use only of creative exercises, which positively influence both on the increase of knowledge level and forming professional competences, and on the students' cognitive motivation. Authors give as an example a number of creative exercises which can be used during trainings with students of economic and psychological specialities and empirically define influence of similar exercises on students' cognitive motivation.

**Key words:** *motivation, cognitive motivation, students, innovative methods, creative tasks (exercises).*

У статті аналізуються роботи вітчизняних та закордонних авторів щодо мотивації та пізнавальної мотивації студентів зокрема. На основі проведеного аналізу автори пропонують із метою поліпшення пізнавальної мотивації використовувати у навчальному процесі вищих навчальних закладів (ВНЗ) інноваційні методи навчання. Оскільки усі інноваційні методи неможливо розглянути в одній статті, вони детально зупиняються на використанні лише творчих вправ, які сприятимуть як поліпшенню рівня знань та формування професійних компетенцій, так і позитивно вплинуть на пізнавальну мотивацію студентів. Автори наводять низку творчих вправ, які можна застосовувати під час проведення занять зі студентами економічних та психологічних спеціальностей, та емпірично визначають вплив подібних вправ на пізнавальну мотивацію студентів.

**Ключові слова:** *мотивація, пізнавальна мотивація, студенти, інноваційні методи, творчі вправи.*

В статье проводится анализ работ отечественных и зарубежных авторов по проблеме мотивации, и познавательной мотивации в частности. На основании проведенного анализа авторы предлагают с целью улучшения познавательной мотивации использовать в учебном процессе высших учебных заведений инновационные методы обучения. Поскольку все инновационные методы в одной статье рассмотреть невозможно, они детально останавливаются на использовании только творческих упражнений, которые позитивно влияют как на повышение уровня знаний и формирование профессиональных компетенций, так и на познавательную мотивацию студентов. Авторы приводят в пример ряд творческих упражнений, которые можно использовать во время проведения занятий со студентами экономических и психологических специальностей, а также с помощью эксперимента определяют влияние таких упражнений на познавательную мотивацию студентов.

**Ключевые слова:** *мотивация, познавательная мотивация, студенты, инновационные методы, творческие упражнения.*

**The problem definition.** Since recently the task of higher educational institutions teachers is not only to provide students with knowledge, teaching them but also helping them to master certain competences that are necessary for their future activity. In fact

competent specialists are appreciated in any profession as they are given advantage by employers.

At the same time mastering competences without students' desire is impossible. Therefore the teacher of higher education institu-



tion needs to interest students to improve their cognitive motivation. For this purpose it is necessary to find such methods of activity which would interest students and promote their desire to be active not only during the lectures and practical trainings but to master certain abilities by themselves.

All the above demonstrate that the problem of improving students' cognitive motivation is rather current and significant for the modern higher school.

**Analysis of the last researches and publications.** Such scientists as T.V. Dragunova, E.P. Ilyin, D.O. Leontyev, A.K. Markova, M.V. Matiukhina, O.Yu. Mikhaylova, R.C. Gardner, W.E. Lambert and others were engaged in learning motivation and cognitive motivation.

Despite the specifics of definitions in different theoretical contexts most often the motive is defined as initiation which explains the person's behavior its beginning, orientation and activity. The motive explains the purposefulness of action, good organization and firmness of the activity oriented on achieving definite purpose.

Motivation (from lat. movere) is an incentive to activity; the dynamic process of the psychophysiological plan which manages the person's behavior, defines its orientation, good organization, activity [5].

The carried out theoretical analysis has shown that there is a number of works where separate components of motivation to training are investigated, namely: cognitive interest (G. Schukina), cognitive need (G. Bokareva, V. Ilyin, G. Kirilova, Yu. Kul), the positive relation to training (V. Samokhvalova, M. Volokitin, L. Slavin and others).

These and other authors understand internal activity which doesn't depend on external factors as cognitive motivation. The cognitive motivation is connected with such concepts as cognitive activity, cognitive interest, cognitive need.

R.C. Gardner and W.E. Lambert argue that the motivation is one of the most important aspects of training [6].

V. S. Ilyin, depending on the leading motive, distinguishes three types of motivation to training [2]:

- training with the leading motive of understanding the need of training;
- with the leading motive of direct interest in knowledge, the need in training;
- with the leading motive compelled (circumstances, but not desires force to study).

As for higher educational institutions here the motivation is often defined as psychological quality which helps students to achieve the goal.

Forming the educational motivation is promoted by realization of a complex of means among them most scientists (V.S. Ilyin, A.K. Markova, M.V. Matiukhina, R. Berwick and others) distinguish such:

- content of a training material;
- organization of training activity;
- control and assessment of training activity.

So for example R. Berwick offers students for the best mastering of a foreign language the program of exchange with other universities, the program of "dwelling in a family" abroad.

The analysis of modern pedagogical process has shown that teachers use passive, active and interactive methods of training in their activity.

The passive method is a form of interaction between the teacher and students during which the teacher is the main person who directs training process. Students are only listeners at this style of training. The passive method is applied in the form of lectures in higher education institutions.

The active method is a form of interaction between the teacher and students during which they actively interact with each other namely students do not act any more as passive listeners but as active participants of the process.

Interactive methods are a little similar with active: all the participants of the process interact actively. But unlike active methods during interactive the interaction is carried out not only between the teacher and students but also between students. The teacher's leading role consists in directing students on achievement of the main goal [4].

Namely the last interactive methods promote improvement of students' cognitive motivation as they are directed on activation of the students' cognitive activity, to desire of learning something new independently and to master new competences.

To interactive methods are referred:

- creative tasks;
- work in small groups;
- business and role games;
- trainings;
- research projects;
- case study;
- brainstorm and others.

**The purpose** of article is to define the influence of creative exercises on formation and improvement of the students' cognitive motivation.

**Statement of the main material.** The theoretical analysis of psychology and pedagogical literature (D.B. Bogoyavlenska, E. de Bono, O.M. Luk, Ya.O. Ponomarev and



others) have shown that application of creative tasks during lessons influence competences development. According to Ya.O. Ponomarev namely creative tasks train the ability to analyze, to generalize and to draw conclusions [3].

But not any task applied during lessons is creative. Creative task is an exercise the solution of which can't be received by a logical conclusion from data that we have. Such task allows to create new ways of actions or to use the already existing ways specifically which leads to emergence of new knowledge [1].

Creative task (exercise) has the following signs:

- obligatory the new way of solution;
- absence of the necessary means in this theory for creation of this way;
- finding of these ways is carried out due to application of heuristic methods of search [1].

Application of creative tasks during lessons promotes not only students' interest, increase of their activity and improvement of training motivation besides creative tasks train students:

- 1) to apply the gained knowledge and abilities to a new situation on their own;
- 2) to see something new in a standard situation;
- 3) to combine the earlier known ways of solution of the problem situation and to find new original ways of its resolving.

Also business and person-centered games, brainstorming, analysis of the concrete situations (case study), etc. have creative character and influence improvement of cognitive motivation.

The business and person-centered games develop logic, ability to plan activity to formulate own offers and at the same time to listen to the others' point of view, to communicate effectively, to make non-standard decisions, etc. Thus they are an effective remedy to form the students' cognitive motivation.

Case study in other words is a method of the case studying, it provides use of a real story so it will be useful to students and will draw their attention and curiosity. Preparing a concrete situation it is desirable to adhere to a certain structure: introduction; description of the previous events; problem.

It is also possible to use video records with a certain situation which later students have to work out and prepare certain recommendations concerning its decision. At the same time students are offered only the problem video at first but a decision video – only after they offer their options. It will give an opportunity to compare own assumptions to those actions which are offered.

For consideration and the analysis of a situation the group is divided into subgroups of

5–6 people. During a certain period of time each subgroup trying not to disturb each other, discuss the provided situation and try to find ways of its decision. After that each subgroup's representatives offer own way of solving the problem reasoning and proving it. All the proposed options are discussed. At the end of discussion the teacher gives an assessment to all subgroups' and each student's work.

The analysis of concrete situations or case study is applied to improve the analytical and creative thinking, ability to solve problems, outlook expansions and development of professional competence. All these also directly and positively influence students' cognitive motivation.

Brainstorming is an operational method of solution on the basis of stimulating creative activity when the participants of discussion are suggested to express as many decision versions including fantastic ones as possible. Then the most successful versions which can be used in practice are chosen from total of the offered ideas [5].

The noted method allows to consider any problem in the sphere of the person's professional activity if it is formulated rather accurately and clearly: what is desirable to receive and what prevents receiving the desirable? Development of creativity, communicative abilities, ability to analyze other people's proposals take place during brainstorming. This method promotes increasing of the students' activity at the lessons and improves their cognitive motivation.

For the purpose to define the influence of creative exercises on students' cognitive motivation we have selected experimental and control group of students. Creative exercises were used only during trainings of an experimental group. At the beginning and at the end of the semester we have analyzed the students' products of activity (the analysis of studying progress) and "Technique for studying the students' motives of educational activity" (modified by A.A. Rean and V.A. Yakunin).

The comparative analysis of study progress has shown that the results of study progress in experimental groups of students-psychologists and students-economists where creative tasks were used have improved in comparison with students of control groups.

Results of carrying out a psychodiagnostic technique have shown:

- at the beginning of the experiment the external motives "to avoid condemnation and punishment for bad studying", "to get diploma", "to study successfully", to pass exams "well" and "perfectly" have prevailed in both experimental and control groups;



– at the end of carrying out the experiment the external motives of studying a subject prevailed in control groups as before;

– both external motives: “to study successfully, to pass exams “well” and “perfectly” and internal motives: “to acquire profound knowledge”, “to become the highly qualified specialist” have come out on top in experimental groups.

Thus, the research conducted by us has shown that the use of creative tasks positively influences cognitive motivation of students of different specialties.

We will give examples of creative tasks (exercises) for students-economists and students-psychologists. Our research has shown that they influence not only learning new knowledge, improvement of skills, formation of professional competences, but also improvement of students' cognitive motivation.

1. Incomplete sentences which correspond to a lesson topic but at the same time need creative approach. It allows not only to check the students' knowledge but also to interest them and allows to express own opinion and persuasion. This task also stimulates to cognitive activity and positively influences improvement of the students' cognitive motivation.

2. Discussion of the qualities necessary for effective mastering future profession. This task trains students to express and to prove own opinion, allows understanding better specifics of the chosen profession and competences that need to be mastered. All this will also promote improvement of students' cognitive motivation.

3. Analyzing examples of concrete people successful in this profession and defining their professional and personal qualities that have allowed them to achieve success. During discussion the students not only learn to analyze and prove own opinion but also come to a conclusion (with help of the teacher) that certain qualities can be developed also in themselves, the necessary competences can be mastered and this will promote improvement of cognitive motivation.

4. Holding an interview with the candidate for a certain job, identifying his/her business and personal qualities. The task (exercise) develops ability to analyze, notice insignificant details (at first sight) and communicative skills. It promotes improvement of the students' both achievement motivation and cognitive motivation.

5. Conducting an advertising campaign (to advertise any goods or own services). This task has not only educational contents but also develops self-confidence, belief in own forces and opportunities that undoubtedly influences positively achievement motivation

and cognitive motivation of students of any specialties.

6. Thinking over and offering the idea of own business, own business plan. This task will promote development of analytical and critical thinking, forecasting; it will reduce uneasiness level concerning the future and uncertainty in own opportunities; and this will affect positively their achievement motivation and will improve cognitive motivation.

7. Creative task “Exchange of opinions”. The teacher chooses a problem that is current for this group of students at the moment. The participants of group are invited to speak on this problem. At the same time everyone has two cards: green and red. During the one participant's performance the others signal the relation to what he tells: a green card – I share a thought, red – I have another point of view. The teacher having seen a signal of a red card, pledges the word to the opponent and so on. This task trains students to prove own opinion, to be able to convince others, to hear and understand the other person's opinion. It will also positively affect cognitive motivation.

8. Task “Auction”. The teacher offers a certain topic to the group of students. For example: “The psychologist (economist) – is a very useful profession”. The group is divided into four–five subgroups (depending on the number of students). Each subgroup has to prepare as much statements as possible on the offered theme. Then subgroups read one by one each of their statements in turns. The group that will submit the statement to the last becomes the winner. The competition spirit as a rule activates the students' activity, makes them think and use own knowledge. That also positively influences cognitive motivation.

9. Pro-contra arguments. The group of students is divided into two subgroups: Pro and Contra. Each group represents the arguments according to their name on a certain offered by the teacher topic. As well as in the previous tasks the students should think over, analyze and apply the earlier gained knowledge. That will lead to improvement of cognitive motivation.

**Conclusion.** Analyzing all the above we can draw a conclusion that the students' educational motivation is the main problem for teachers of a higher educational institution. No one training program prepared even at the highest methodical level will get success if students don't pay sufficient attention to training and their own progress. Therefore it is so important to involve the students' cognitive motivation, to adjust them to successful training activity to obtain the necessary professional competences. Not the last role is





played during the lessons by application of creative tasks which not only will improve the students' knowledge and ability but also will give them an opportunity to approve themselves, to feel successful. That will positively influence improvement of cognitive motivation.

The perspective direction of our subsequent researches is to work out a number of universal interactive creative tasks to improve the students' cognitive motivation of different specialties.

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## КРИТЕРІЇ ТА ПОКАЗНИКИ ФОРМУВАННЯ ЗДОРОВ'ЯЗБЕРЕЖУВАЛЬНОЇ КОМПЕТЕНТНОСТІ МАЙБУТНІХ ІНЖЕНЕРІВ-ТЕХНОЛОГІВ ХАРЧОВОЇ ГАЛУЗІ

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У статті визначено критерії, показники та етапи проведення експериментального дослідження методики формування здоров'язбережувальної компетентності майбутніх інженерів-технологів харчової галузі. Зроблено припущення, що розроблена інноваційна методична система навчання майбутніх фахівців зможе забезпечити більш високий рівень формування здоров'язбережувальної компетентності.

**Ключові слова:** здоров'язбережувальна компетентність, інженер-технолог, педагогічний експеримент, харчова галузь.

В статье определены критерии, показатели и этапы проведения экспериментального исследования методики формирования здоровьесберегающей компетентности будущих инженеров-технологов пищевой отрасли. Сделано предположение, что разработанная инновационная методическая система обучения будущих специалистов сможет обеспечить более высокий уровень формирования здоровьесберегающей компетентности.

**Ключевые слова:** здоровьесберегающая компетентность, инженер-технолог, педагогический эксперимент, пищевая отрасль.

Blahyi O.S. CRITERIA AND INDICATORS OF THE EXPERIMENTAL STUDY OF THE METHOD OF FORMING HEALTH-SAVING COMPETENCE FOR FUTURE ENGINEERS-TECHNOLOGISTS OF FOOD INDUSTRY

The article defines stages, criteria and indicators of experimental research of the method of formation of health-saving competence of future engineers-technologists of the food industry. It is assumed that the developed innovative methodical training system for future specialists will be able to provide a higher level of formation of health-saving competence.

**Key words:** health-saving competence, engineer-technologist, pedagogical experiment, food industry.

**Постановка проблеми.** Якісне формування здоров'язбережувальної компетентності майбутніх інженерів-технологів харчової галузі значним чином залежить від обраної методики навчання. Так, ефективна методика навчання передбачає формування у майбутніх фахівців знань, вмінь та

навичок із розроблення оздоровчої продукції на вищому рівні. На жаль, традиційна система навчання не відповідає таким вимогам сьогодення. Тому актуальною проблемою є використання інноваційної методики формування здоров'язбережувальної компетентності майбутніх інжене-