Activation of students ' activity in the conditions of training in cooperation technology

Активизация деятельности студентов в условиях реализации технологии обучения в сотрудничестве

Written by:
Georgi T. Klinkov [22]
Mikhail A. Rodionov [23]
Nikolay P. Bakharev [24]
Ekaterina V. Vezetiu [25]
Ekaterina V. Vovk [26]

Abstract

Competence-based approach, becoming dominant in the system of higher education, marked the transition from traditional methods and means of education to the use of innovative technologies. Modern higher schools under the influence of the requirements of Federal state educational standards seek to optimize their own activities in order to improve the quality of education and seek new ways to build competence. Today, within the framework of the competence-based approach having a practice-oriented focus, technologies of training in cooperation that meet the requirements for modern training of students are becoming more popular. The purpose of the article is to present the experience of using learning technologies in cooperation, activating the students' performance. A powerful argument in favor of training in cooperation technologies implementation is their wide functionality in the development of professional competence of a specialist. Since the development of student competence takes place within the framework of various activities, we consider the technology of training in cooperation, allowing students to maximize their potential in the process of interaction with classmates. The article identifies such important advantages of the technology under consideration as the development of

Аннотация

Компетентностный подход, став главенствующим в системе высшего образования, обозначил переход от традиционных методов и средств обучения к использованию инновационных технологий. Современные высшие школы под воздействием требований Федеральных государственных образовательных стандартов стремятся к оптимизации собственной деятельности с целью повышения качества обучения и изыскивают новые способы формирования компетентности. На сегодняшний день, в рамках компетентностного подхода, имеющего практикоориентированную направленность, большую популярность приобретают технологии обучения в сотрудничестве, отвечающие требованиям к современной подготовке студентов. Цель стати заключается в представлении опыта использования технологий обучения в сотрудничестве, активирующих деятельность студентов. Весомым аргументом в пользу реализации технологий обучения в сотрудничестве является их широкий функционал в формировании профессиональной компетентности специалиста. Поскольку формирование компетентности студента проходит в рамках

[22] Plovdiv University „Paisii Hilendarski" Bulgaria, Plovdiv region, Plovdiv, bld." Bulgaria"
[23] Penza State University, Krasnaya st., 40, Penza, Russia
[24] Federal State Budget Educational Institution of Higher Education «Togliatti State University», st. Belarusian, house 14, Samara region, Togliatti, Russia
[25] Federal State Autonomous Educational Institution of Higher Education "Crimean V.I. Vernadsky Federal University", Simferopol, Russia
[26] Federal State Autonomous Educational Institution of Higher Education "Crimean V.I. Vernadsky Federal University", Simferopol, Russia

independence, creative component, skills of effective interaction and the ability to conduct a constructive dialogue. We consider ideas of training in cooperation technology in detail as well as carry the analysis on the example of pedagogical courses. The presented research allowed establishing increase of students' activity in studying of pedagogical courses at the expense of identification of an average score in studied profiles.

Keywords: Educational technology, competencies, competency, students, problem-based learning, independence.

различных видов деятельности, мы рассматриваем технологию обучения в сотрудничестве, позволяющую студентам максимально раскрыть свой потенциал в процессе взаимодействия с одногруппниками. В статье обозначены такие важные достоинства технологии как формирование самостоятельности, творческой составляющей, умения результативного взаимодействия, способности ведения конструктивного диалога. Подробно рассматриваются идеи технологии обучения в сотрудничестве, проводится анализ на примере изучения педагогических дисциплин. Представленное исследование позволило установить повышение активности студентов в изучении педагогических дисциплин за счет выявления среднего балла по исследуемым дисциплинам.

Ключевые слова: образовательные технологии, компетенции, компетентность, студенты, проблемное обучение, самостоятельность.

Introduction

The search of ways for students' competence development is closely connected with competence approach in higher professional education (Vaskovskaya, et al 2018). This approach marked a change in the nature of teacher-student interaction turning it into collaboration that democratizes the position of the teacher and enables the inclusion of the student in an active creative activity (Vaganova, et al 2019a). The issue of student activity allocation is one of the most urgent in recent years in educational practice (Ivanova, et al 2019). Therefore, there is a continuous search for tools contributing to the development of joint cognitive activity. They employ various educational technologies in the field of higher education (Nikonova, et al 2019b). Their essence is to build a productive educational process excluding the use of activities and operations that do not have a positive impact on the achievement of goals. A characteristic feature of the professional activity of future teachers of vocational training is verbal activity for the presentation of new materials, explanation of development and interaction with students in general, so it is so important for them to use the technology of training in cooperation. These principles help students to form one of the most important competencies in their future professional activity: design and organization of communicative interactions and communication management. For competent implementation of interaction in professional conditions, the future teacher of vocational training must master the basics of interaction in the learning process at a high level. The development of this competence is carried out under conditions of studying pedagogical courses: "General and professional pedagogy", "Methods of vocational training", "Introduction to the specialty". When studying disciplines, students work in groups, independently develop emerging issues. Technologies of training in cooperation allow development as much as possible ability of students to effective interaction. Only in activity the personality of the future expert, his professional competence is formed.

Theoretical basis

The technology of learning in cooperation is based on the idea of interaction between students in groups, in which mutual learning is carried out and students take responsibility not only for their results, but also for the results of the team (Klinkov, 2018). There are special conditions created for successful cooperation between students and the teacher, as well as between

students (Kamenez, et al 2019). E. S. Polat, M. M. Eliseikin, V. I. Zagvyazinsky, V. L. Petrov, P. I. Obraztsov, D. V. Chernilevsky were engaged in the development of this technology. Training in cooperation allows achieving positive results in the development of the activity position of students (Prokhorova, et al 2018). In the process of this interaction, students learn independence, develop creativity, ability to work in a team, to carry out reflection, evaluation and mutual evaluation of the activities in order to eliminate errors and correct the work (Vaganova, et al 2019f). One of the main ideas of learning in cooperation is mutual learning, not just working together. Collaborative learning technology enables students to fulfill their personal goals as part of a person-centered learning experience, motivates them to act and creates a desire to learn, work in a team and take responsibility for their actions and the results of the whole team (Smirnova, et al 2019). Training in cooperation is arranged in such a way that in one subgroup of students were both "brilliant" and "satisfactory" students. This is done in order to involve all students in the educational process so that the "strong" students can help the" weak" in interaction (Denysenko, et al 2018).

Implementation of these technologies include the principle of joint activities (the principle disclosed with the involvement in the process of studying any problem of several participants); the principle of Dialogic communication (scientists achieved conductive through collective discussion, or the students are divided into groups and defend one opinion, then the two groups change); principle of problematic issues (the students have a problem that must be resolved on the basis of existing experience and analysis of large amounts of development on the topic studied) (Chirva et al 2018) and the interdependence of the group members (Markova, et al 2019). Teamwork involves taking into account the activities of each student (Vaganova, et al 2019d). In cooperation, conditions are created that allow for positive interaction between students in the process of achieving a common goal (Vaganova, et al 2019b). That is, each participant understands that he can achieve the goal only if all other members of the group can also achieve success (Pometun, et al 2018). Interdependence is created on the basis of a single goal, the distribution of intra-group functions (Nikonova, et al 2019a). As a rule, for the organization of training in cooperation, it is necessary that there are 4-5 people of different levels of preparedness in the group (Vaganova, et al 2019c). Case methods, discussion methods, project training, game methods are used to implement the training

technology in cooperation (Vaganova, et al 2019e). They bring students together and teach effective interaction to achieve common goals (Koshechko, et al 2018). In such circumstances, students form competencies that can be implemented in real professional conditions (Sedykh, et al 2019). The effectiveness of the use of learning technology in cooperation is achieved through the active inclusion of students in educational and cognitive search activities, organized by internal motivation; organization of joint activities, building partnerships between students and teachers; organization of dialogical communication in the process of studying disciplines (Makhometa, et al 2018). The specificity of learning in collaboration affects the individualization and differentiation of learning. In such conditions, students can work in a comfortable environment, studying a feasible amount of materials at a convenient pace for them. Due to this, mechanisms of thinking, the ability to negotiate, to be an active team member and to establish intra-group contacts are developed. The organization of cooperation involves taking into account the following requirements: taking into account the psychological characteristics of the group members; setting specific educational objectives; distribution of roles between the group members; stimulation of joint activities. The researchers identify several concepts: cultural (providing a holistic socialization of the individual in the process of interaction); axiological (the role of value thinking acts as a basis for understanding their future professional activity); positional-didactic (allows the student to build their opinion, take a certain position) and personal-active (contributes to the development of theoretical thinking, develops the skills of goal-setting, planning, reflection). When implementing learning technologies in cooperation, electronic means are actively used, with the help of which the interaction between the teacher and students, as well as between students is carried out at a remote distance. Thus, the construction of the cooperation process does not stop with the completion of the classroom time. Students go into independent content study. However, at the same time have the opportunity to ask the teacher a question of interest to them, to get additional advice. Technology training in cooperation allows students to learn a large amount of material within a short period of time through active work and constant self-discussion in subgroups.

Methodology

Students whose major is "Vocational training (by industry)" attended the study in the number of 98

people. We calculated the average score of students in the disciplines "General and professional pedagogy", "Introduction to the specialty", "Methods of vocational training" for three years of study (in 2017, 2018 and 2019). The results showed an increase in the average score. If in 2017 the average score on the discipline "General and professional pedagogy" was 3.8, by 2019 it is 4.5; on the discipline "Methods of vocational training": 2017-3.9, 2019-4.8; "Introduction to the specialty": 2017-4, 2, 2019 – 5 points. The active introduction of learning technologies into educational process in cooperation allowed achieving positive results and increasing the average score of students. Besides, we have established an increase in the level of competence development "design and organization of communicative interactions and communication management" within the period of three years. In 2017, 20% of respondents had a high level of competence development, in 2018 - 30%, in 2019 – 40 %.

Analysis

The main task of the teacher is the choice of methods and means of stimulating students' cognitive activity and allocationg their creative potential (Ihnatenko, et al 2018). The methods chosen by us for studying such disciplines as "General and professional pedagogy", "Introduction to the specialty", "Methods of professional training" within the framework of training technology in cooperation allow us to solve the following tasks: to create conditions for the development of communicative competencies; "immerse" students in the conditions of active activity; to create problem situations, the solution of which allows to develop independence and creative component of the personality; to develop independence; to reveal the professional potential of students (Bartkiv, et al 2018). (Ilyashenko, et al 2019b). (Bulaeva, et al 2018). (Abramova, et al 2018). Methods of training in cooperation are implemented through the implementation of various tasks by students. In this process, we use project methods, game methods, discussion methods, case methods. We have developed and implemented methodological support, which contributed to the effective study of the above mentioned pedagogical disciplines by students. During the training, students were engaged in the development of projects. To do this, they were divided into small subgroups, within which they independently distributed functions among themselves. Each of the students is aware of their responsibility to other participants, as the overall result depends on the individual contribution of each student. The project was carried out at several stages. Electronic technologies are involved. Students interact through the Moodle system. The General chat discusses emerging problems not only at the level of one subgroup, but also all participants. The advantages of project methods are that the development of competencies is carried out in the process of content independent development by students and its application in practice. The project implies the result in the form of a real educational product, the development of which becomes a new step for students to further scientific activities. Game methods are also used by us in the process of implementing learning technologies in cooperation. As part of the game method, the teacher asks students a certain situation. The game has several functions: communicative (it provides a wide field for the development of communication skills that lead to the achievement of a common goal); corrective (students use the game to identify gaps in their own knowledge and try to fill them).

The game encourages students to be active participants. Otherwise, achieving results will be difficult. Students, thanks to the "healthy" rivalry among subgroups, are highly motivated to perform the task better. The game has several elements, United by a common sense, which help to activate the activity position of the student. The game involves activities close to real professional conditions, which is an additional motivating factor to the activity. Students strive for a deeper study of the topic. The teacher organizes a discussion process for students, in which students learn to express their point of view, giving arguments and facts in favor of their opinion. Discussion methods contribute to the development of skills of critical assessment of different points of view, self-control and self-esteem. More often, three subgroups of students participate in the discussion. The teacher asks three opinions in favor of which each group must find arguments. The groups then exchange these views. So there is a comprehensive consideration of the topic. The purposes of case-methods also consist in activation of an activity position of students, increase of motivation to studying of disciplines, mastering of skills of the analysis of various situations and finding of optimum decisions, working out the ability to self-develop. Assimilation of knowledge and skills occurs as the result of active independent activity to resolve existing contradictions, which contribute to the creative mastery of professional competencies. Contradictions are the main condition of the case-method. On their basis, there is a development and the formulation of problem situations and tasks. The teacher puts a contradiction between known and new facts for

students, existing knowledge and knowledge that are necessary to solve the problem, between the knowledge of students and the new requirements imposed on students in solving problems. The case-method introduces the student into a state of mental stress, which causes the need for additional knowledge, interest in the studied materials, develops cognitive independence. Thus, the students are involved in the process of studying disciplines and the development of important for the teacher of professional training competence "design and organization of communicative interactions and communication management". We conducted a study (on the example of three disciplines) on the basis of which we identified the growth of this competence development for three years of study. The study was attended by students studying in the direction of training "Vocational training (by industry)" in the number of 98 people. We were carrying out the control over the competence development for three years. From the second to the fourth year, students used collaborative learning technologies within three courses contents.

The figure shows the average score of students in the courses "General and professional pedagogy", "Methods of vocational training", "Introduction to the specialty".
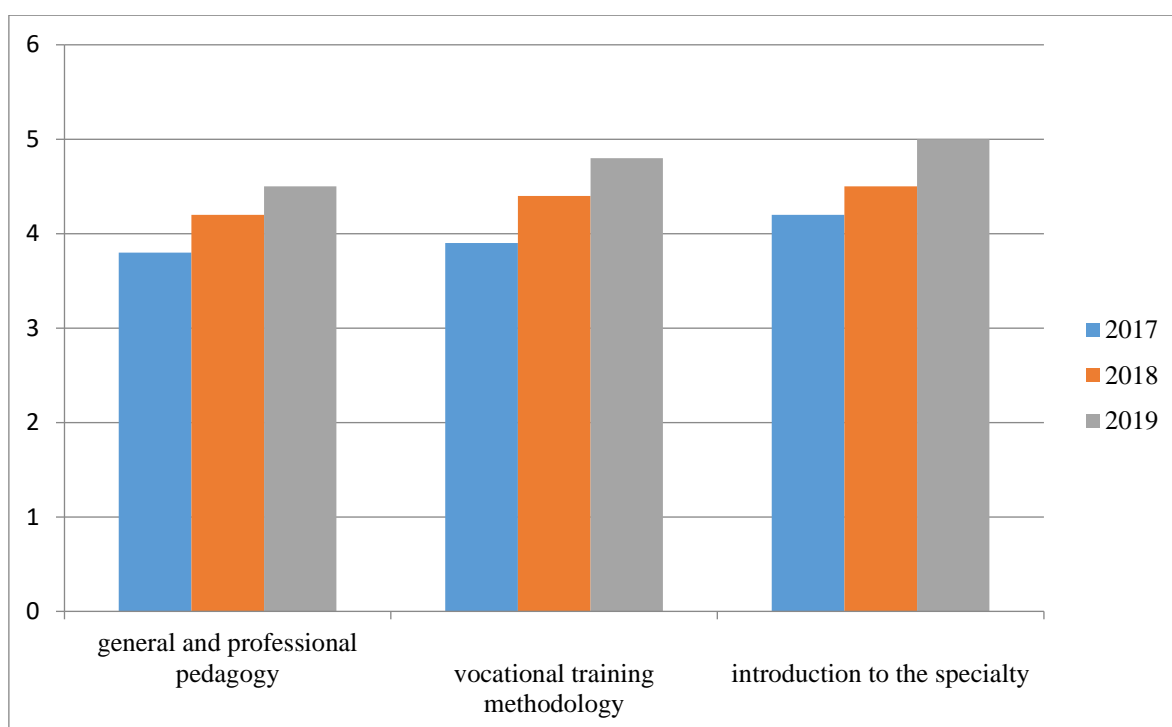
Fig. 1. The average score of students in pedagogical disciplines for three years of study

The results showed that since 2017, the average score of the studied groups of students has increased. The activity of students has become much more active, they began to take a more active part in the development of disciplines. The level of development of the competence studied by us "design and organization of communicative interactions and communication management" has also increased. We defined it according to the following criteria: the student proves his point of view, shows leadership qualities in the process of performing a group task and independently builds a plan of work on the task. Table 1 shows each criterion performance.

Table 1. Levels of students' competence development" design and organization of communicative interactions and communication management"

Level	Index
High	The student extensively argues his position in relation to any issue, easily operates with concepts, turns the situation in his favor, acts as a leader in any situation; knows how to jointly build an action plan, and monitors its implementation by all participants
Average	The student is able to argue in defense of their position on any issue, knows the professional terminology, actively communicates with his fellow students and together with them building up an action plan, which should itself and the whole team
Low	The student weakly defends his position, does not show leadership qualities, it is difficult for him to build interaction with his fellow students, so he tries to stay away from active participants in the interaction process

Figure 2. shows the levels of competency development according to the presented criteria
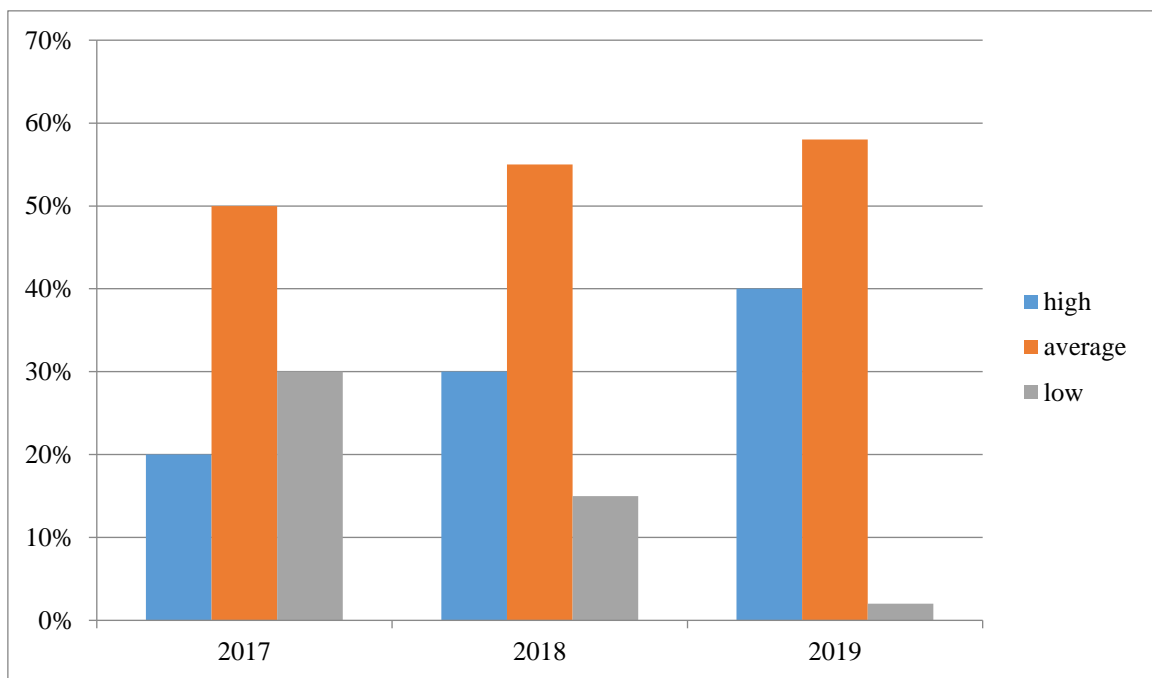
Fig. 2. Level of competence "design and organization of communicative interactions and communication management" (2017, 2018, 2019)

The results of checking the level of competence showed that by 2019 the situation had been improved as much as possible. In 2017, 20% of respondents had a high level of competence development, in 2018-30%, in 2019 – 40 %. From year to year, we observe the growth of a high level of competence development. The use of learning technologies in cooperation contributes to its development. The higher the level of student interaction, the better the results.

Conclusion

We conducted a study, which was based on the study of three pedagogical courses "General and professional pedagogy", "Methods of vocational training" and "Introduction to the specialty". We found out that with the introduction of learning technologies in cooperation in the study of these courses by students, it allowed increasing the level of competence development "design and organization of communicative interactions and communication management". The average score in the presented disciplines with the use of technology has become higher. The study, conducted within three years, allowed showing the need for learning technologies in cooperation to allocate the students activity. The obtained results can be regarded as the basis for the students' training in pedagogical universities.

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