

METHODS FOR IMPROVING THE PREPARATION OF STUDENTS FOR PROFESSIONAL ACTIVITIES BASED ON THE CLUSTER APPROACH

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Abstract. *The purpose of the article is to create a methodology for improving the professional training of students of vocational education in higher educational institutions based on the cluster approach and the development of scientific and practical recommendations for its implementation, as well as the definition of organizational and pedagogical conditions and test its effectiveness based on experience and testing.*

Keywords: *professional education, cluster approach, efficiency, professional activity, improvement methodology, level of formation, mathematical and statistical analysis, students, methods and means.*

INTRODUCTION

Purposeful work is underway to prepare vocational education students for professional activities based on the modernization of specific knowledge, skills, competencies, as well as the content of education. The study and analysis of the DTS of higher educational institutions shows that professional activity, vocational training, including the ability to perform technical tasks and solve problems, is of great importance in the development of their cognitive, creative and matrix competence.

MATERIALS AND METHODS

The practice of theoretical classes and pedagogical classes shows that the improvement of vocational training of students of vocational education in higher educational institutions is one of the most important issues.

Within the framework of this study, we will try to list the basic competencies necessary for the effective organization of the professional activities of students of vocational education based on the cluster approach.

The relevance of the problem of our study, its insufficient development, as well as the need to eliminate the above conflict situations became the basis for defining the research topic as follows: improving the professional training of students of vocational education as a pedagogical phenomenon based on a cluster approach.

The level of development of scientific and technical thinking in modern conditions is expressed through the following points of view. At the end of the 20th century, technological processes based on automation and informatization of industrial production increased significantly. This is one of the most important directions in the formation of professional training of students of secondary vocational education in higher educational institutions based on the cluster approach and, first of all, the development of their technical and creative thinking [1].

The aim of the study is to create a methodology for improving the professional activities of students based on the cluster approach and develop scientific and practical recommendations for its implementation, as well as to determine the organizational and pedagogical conditions and determine its effectiveness through experience and testing.

The objectives of the study are:

- to determine the pedagogical conditions for increasing the readiness of students of vocational education for professional activities based on the cluster approach;
- determination of the content of preparation for professional activity of the future teacher of vocational education (engineers) in the direction of “Vocational education (automotive industry)” and the requirements for its formation;
- develop a methodology for improving the professional training of vocational education teachers based on a cluster approach based on the integrative training of general education and specialized subjects;
- development of its organizational and pedagogical structure (model) based on the cluster approach of preparing students for professional activities;
- development of criteria and indicators for assessing the degree of formation of professional readiness of students based on the cluster approach, mathematical and statistical analysis of the results of the study [2].

Expected scientific innovations:

- the requirements for the professional training of future engineers-teachers in the direction of “Vocational education (automotive industry)” will be determined;
- based on the integrative training of general professional and special sciences, the methodology for the formation of professional training of future engineers-teachers in the direction of "Vocational education (automotive industry)" will be improved;
- the didactic model of increasing the readiness of vocational education students for professional activities is being improved on the basis of a cluster approach based on the creation of pedagogical conditions;
- the degree of formation of professional training of students of vocational education based on the cluster approach, the stages of their integrated application in accordance with the activities of the subjects of the educational process, organizational and pedagogical conditions, as well as levels, criteria, the levels of formation of the professional activity of engineer-teachers are presented, evaluation and diagnostic tools for determining indicators.

Achievements of cluster development, in our opinion, can be seen in the following:

- organizational control is provided at all stages of cluster development;
- the timing of the implementation of investment projects is ensured and the initial costs of the cluster participants are saved;
- the risk of loss of investments (investments) of cluster members is reduced;
- the efficiency of promoting a complex design at the expense of the budget will increase;
- the rotation (exchange) of highly qualified personnel, the system of training and retraining of specialists will be improved;
- scientifically substantiate the activities of industrial enterprises and organizations and expand the scope of their application;
- the investment attractiveness of the region and the volume of local incomes will increase.

In modern literature, there is also the concept of a pedagogical cluster. **This concept means the following:**

- a form of association of actions of interested persons in order to increase the effectiveness of education;
- method of psychological study of the team;
- method of optimization of pedagogical management;
- method of designing educational programs;
- teaching method;
- method for assessing the quality of education;
- pedagogical method, i.e. develops a variety of thinking, such as the ability to establish versatile communication on the topic being studied (concept, event, phenomenon).

The use of cluster management in the management of vocational education provides the following advantages:

- firstly, mechanisms for the interaction of educational institutions with the labor market are formed, its dependence on individual business groups is prevented;
- secondly, the personnel infrastructure will improve;
- thirdly, the infrastructure of innovation activity will be developed, a favorable innovation environment will be created, existing opportunities will be expanded, an effective, flexible, manageable system will be formed;
- fourthly, an application base of a modular learning system based on mobile principles will be formed, in which subject education will be denied, interdisciplinary communications will expand;
- fifthly, the student as a subject of market relations is given the opportunity to independently form his own educational route;
- sixthly, a high level of intellectuality and openness of the educational process, as well as a variety of educational

Forms and tools have been introduced: daytime, part-time, virtual, remote, etc. [3].

The cluster of innovative education influences all aspects of regional development. Based on the study of the literature today, two different approaches to the educational cluster can be noted.

The first approach is based on the vertical integration of educational institutions, its supporters emphasize that the educational cluster begins with preschool educational institutions [4]. The novelty of this direction: continuous education is considered as a single system; training as a subject of the pedagogical process is designed for continuous education; the integration and internationalization of knowledge is ensured, the scope of communication is expanding, information technologies are being introduced; a multi-level system of education is being formed. To date, there is only one model of continuous education: "kindergarten-school", "school-university" [5].

The second approach to the formation of an educational cluster is based on the idea of non-commercial, social cooperation between educational institutions and business [6]. The subject of cluster thinking is local higher education institutions that manage educational clusters according to the territorial principle.

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CONCLUSION

The need to turn to cluster partnerships is a priority as a form of organization with a characteristic of increasing the efficiency of the cluster's vocational education system and combining the actions of stakeholders.

The educational development of cluster relations means the mutual and self-development of the subjects of the cluster, that is, the stable development of partners (individual participants and full participants of the cluster) [7] in the process of “working on the problem” (according to T. I. Shamova). Therefore, the cluster is the role of the participants in certain contractual relations and the management of their activities, united by a common goal.

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