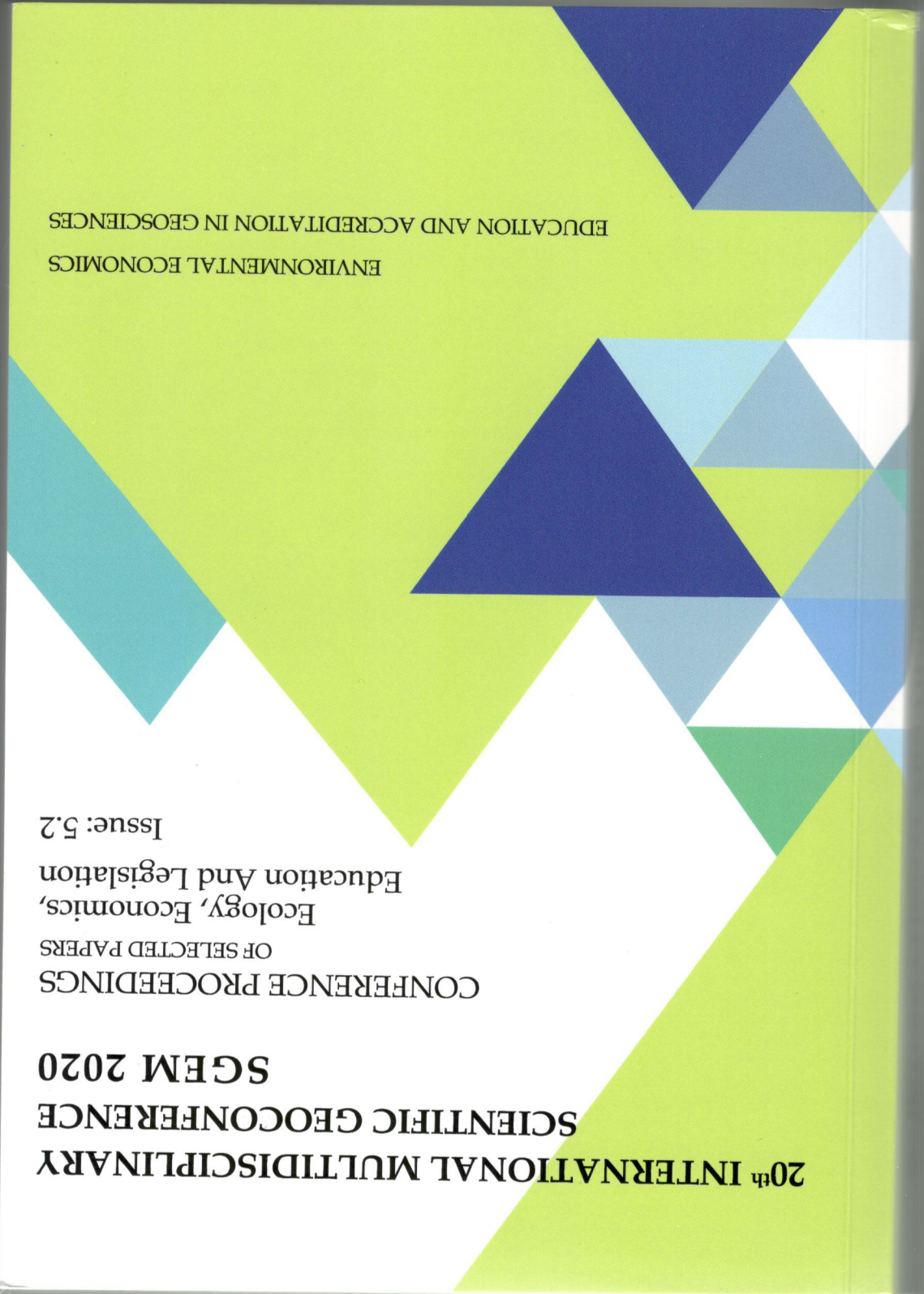


**20<sup>th</sup> INTERNATIONAL MULTIDISCIPLINARY  
SCIENTIFIC GEOCONFERENCE  
SGEM 2020**

**CONFERENCE PROCEEDINGS  
OF SELECTED PAPERS  
Ecology, Economics,  
Education And Legislation**

**Issue: 5.2**

**ENVIRONMENTAL ECONOMICS  
EDUCATION AND ACCREDITATION IN GEOSCIENCES**



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## PRACTICE-ORIENTED EDUCATION IN UNIVERSITIES: OPPORTUNITIES AND CHALLENGES

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Kamilla Adilzhan

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### ABSTRACT

Today, the developing countries face a situation where there is an abundance of specialists with higher education, while the economy lacks qualified practice-oriented personnel. In general, there is a disproportion between the ever-increasing demand of specialists and supply on the labor market, and between the way of professional education and modern business.

Society requires the commercialization of fundamental knowledge, the restructuring of the education system. Without losing its fundamental nature, education today acquires a new, practice-oriented content.

The integration of education, science, and production is the joint use of the potential of educational, scientific and industrial organizations in mutual interests [1]. Kazakhstan universities are becoming leading scientific organizations generating new knowledge and new technologies – national laboratories are being created on the bases of large universities; work is underway to strengthen the university's scientific potential; the integration of university science with production has begun, with some of the most successful universities being granted research status, and so on. Since the current global industry receives new technologies from universities' research centers there is a need to adjust educational activities of HEIs. Scientists must have real opportunities and incentives to engage in scientific research.

Since the competence is a multifunctional tool for measuring the quality of professional education, the competency-based approach, which is focused on the organization of educational and cognitive activity by modeling a variety of situations in various areas of the individual's life, could be an effective tool to increase the practical level of training in higher education.

The implementation of a practice-oriented system of training of an innovatively competent specialist focuses on the result of education, where the result is not the amount of learned information, but the person's ability to act in various situations. Such a system is aimed at improving interaction with the labor market, increasing the competitiveness of specialists, updating the content, methodology and related learning environment.

**Methodology:** case study.



**Study results:** the case study shows that the implementation of a practice-oriented system of training an innovatively competent specialist, focusing on the result of education improves interaction with the labor market and increases the competitiveness of specialists. Therefore, this approach can significantly increase the effectiveness of training.

**Keywords:** practice-oriented system, innovation-competent, competency-based approach, integration, education, business, science, new technologies.

## INTRODUCTION

The development of applied sciences and high technologies leads to the creation of a new economy – the “knowledge economy”. Society requires the commercialization of fundamental knowledge, the restructuring of the education system. Without losing its fundamental nature, education acquires a new, practice-oriented content.

The developing countries came to a situation where specialists with higher education were in abundance, and the economy lacked qualified practice-oriented personnel. Employers need competent specialists to conduct real business, innovative managers, without which the commercialization of high technology is impossible. In general, there is a disproportion between the ever-increasing demand of specialists and supply on the labor market, between the way of professional education and modern business.

The integration of education, science, and production is the joint use of the potential of educational, scientific and industrial organizations in mutual interests [2]. Kazakhstan and new technologies – national laboratories are being created on the bases of large universities; work is underway to strengthen the university's scientific potential; the integration of university science with production has begun, with some of the most successful universities being granted research status, and so on.

Today, the global industry receives new technologies from research centers – universities. Most of the leading universities in the world have been working with major corporations for many decades. Work aimed at solving a specific problem stimulates the emergence of an “innovative conveyor” that moves the leading economies of the world forward. Most universities with scientific traditions conduct world-class research in dozens of industries and in many different areas at the same time. Since nowadays higher education institutions are faced with the task of mastering new areas of specialist training in the field of innovation process management and the commercialization of technologies, it is necessary to train in the management of innovative projects, marketing of innovations and innovative products, technology transfer, patenting and other forms of intellectual property protection, the formation of innovative networks in the scientific and industrial communities [2].

We need to actively introduce the achievements of science into production. There was a need to make adjustments to the educational activities of universities. Scientists must have real opportunities and incentives to engage in scientific research. Education cannot be practice-oriented without gaining experience, the level of which is more accurately determined by the methods of the competency-based approach.

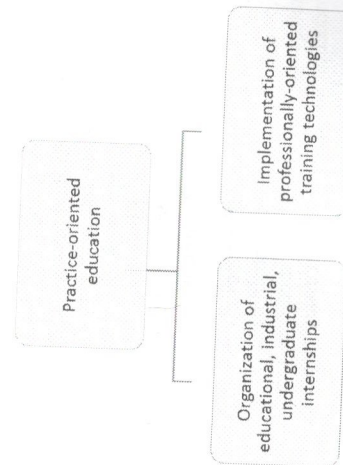
The introduction of the concept of competence as “the ability to mobilize knowledge and experience to solve specific problems” allows us to consider competence as a multifunctional tool for measuring the quality of professional education.

The competency-based approach is closer to the goals and objectives of a practice-oriented education, as it determines the turn to strengthen students' practical training, i.e. the formation of adapted skills, experience of active creative activity, emotional-volitional relations to the world, other people and oneself, and most importantly, practical experience through an increase in students' production and research practice [3-5]. The competency-based approach focuses on the activity content of education. The main content of the training is actions, operations related to the problem that needs to be solved. With this approach, educational activity acquires research and practice-transformative character. In the curriculum, the activity content of education is reflected in the emphasis on the methods of activity, abilities, and skills that need to be formed; on the experience of activities that should be accumulated and comprehended by students. The student should, if necessary, be able to quickly and accurately use the sources of information to resolve certain problems.

Active participation in the educational process of students is a product of the teacher's activities, therefore, the formation of key competencies is possible with their systematic inclusion in various types of educational and extracurricular activities. The competency-based approach is focused on the organization of educational and cognitive activity by modeling a variety of situations in various areas of the individual's life. With this approach, preference is given to creative activity, the main task of which, in contrast to the traditional one, is the organization of productive activity.

The competency model of a graduate is often presented as a set of expected (desired) educational results, the achievement of which a student can demonstrate at one stage or another in mastering the main program or as a package (set) of competencies that each graduate of this program must master [4].

In the higher education system, there are several approaches to practice-oriented learning (Figure 1).



**Figure 1.** Organization of practice-oriented education [1]