

AP09260173 “Adaptive learning environment as prerequisite for developing soft skills in university students and providing for continuity of school education”

### **Relevance**

In today's ever changing world, the universities are no longer required to transfer the existing body of knowledge to the future specialists, but rather teach them how to think critically, make quick decisions and acquire ability to life-long learning. This task requires to harmonize the secondary and higher education, to stimulate adaptive learning of soft skills and to individualize the curriculum in the context of knowledge triangle of research, innovation and education.

In the project, we will thoroughly investigate and try to find the solution to the problem of soft skills development in university students using adaptive learning approach and considering both the specificity of previous secondary education and current university training. The developed methodology of adaptive learning will be evaluated from economical and educational points of view.

**Project goal:** The project aims to define the prerequisites, strategies and mechanisms to effective adaptive learning of soft skills and to create the efficient educational environment of higher education reckoning the role of secondary education and personal characteristics of learners and promoting soft skills predisposing to successful future career.

### **Expected Outcomes**

Creating the concept for adaptive learning and development of information system that supports it.

Developing of enrollees' profiles to medical and pedagogical higher education programs.

Creating guidelines to implement the methodology of adaptive learning into the university educational process.

Carrying out investment analysis to determine the rationale for implementing adaptive learning.

Expert evaluation of methodology to create the educational environment of higher education favoring the development of soft skills.

Preparing recommendations for higher educational institutions to stimulate adaptive learning and fostering soft skills development in their learners to allow them to gain competitive advantage on labor market.

### **Research team**

Riklefs Viktor - PhD, Vice-Rector for Academic Work, Karaganda Medical University, The Principal Investigator. <https://orcid.org/0000-0002-5127-1236>

Bukeyeva A.S. - PhD, Head of the Department of Strategic Development and Quality Management, Karaganda Medical University, <https://orcid.org/0000-0001-8842-9175>

Gazalieva M.A. - PhD, professor, dean of the school of medicine, Karaganda Medical University, <https://orcid.org/0000-0001-5679-0791>

Riklefs V.V. - specialist in the Department of Academic Work, Karaganda Medical University, <https://orcid.org/0000-0002-2401-8868>

Barikova A.R. – assistant professor, E.A. Buketov University of Karaganda. <https://orcid.org/0000-0002-5362-5560>

Umurkulova M.M. - PhD-student, E.A. Buketov University of Karaganda, specialty "Psychology of education". <https://orcid.org/0000-0001-8469-6989>

Kassatova A.M. - PhD-student, L.N. Gumilyov Eurasian National University. <https://orcid.org/0000-0002-4603-819X>

### **Achieved Results**

Online psychometric testing platform has been developed, which includes 6 blocks of questions from internationally recognized questionnaires aimed at diagnosing educational habits, motivation, personality traits, stress and emotional intelligence.

After conducting focus groups with school teachers, we determined the methods of soft skills development in schoolchildren and evaluated them from the point of view of modern literature.

Based on the results of the analytical review, we developed the theoretical framework of adaptive learning, which stimulates formation of soft skills in students. The framework includes active psychometric testing of level of developed soft skills, the identification of "risk groups" and the comparison of academic performance data with psychometric data to make decisions on the organization of the educational process in the "risk groups".

Based on the results of multivariate analysis of psychometric testing data, the main characteristics of students were determined, presumably responsible for the success of the formation of soft skills and allowing the formation of experimental and control groups of adaptive learning for further study.

According to the results of the study, the article "Psycho-pedagogical justification for importance of convergent learning skills development in students using the example of medical and multidisciplinary universities in Kazakhstan" was published in Khabarshi-Bulletin of the Abai National Pedagogical University, Series "Psychology" No. 3, 2021, recommended by CCSES (<https://bulletin-psychology.kaznpu.kz/index.php/ped/article/view/344/438>). The developed online platform for assessing soft skills was introduced to conduct a special exam for applicants to the NJSC "Medical University of Karaganda", a copyright certificate was obtained (computer program "Psychometric testing").

### **Information for potential users**

The primary project application area is the secondary and higher education. The projects results will benefit the school and university teachers, administration of schools and universities, as well as regional Departments of Education, Ministry of Education and Science, Ministry of Healthcare.