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DEVELOPMENT OF UNIVERSITY STUDENT'S READINESS FOR ACADEMIC MOBILITY

Abstract

Readiness for academic mobility becomes an essential success factor in the context of globalization and greater international cooperation in the sphere of education. The development of readiness of students for academic mobility is one of the crucial elements for preparing them for new opportunities. This article presents the findings of the study focused on improving students' readiness for academic mobility, as a critical aspect of successful international academic experiences. This research aims to investigate the impact of enhancing cognitive capacities on students' readiness for academic mobility. A pedagogical experiment was conducted as an empirical research method. The findings of the research indicate that enhancing students' cognitive abilities positively influences students' ability to plan their studies and design their mobility trajectories. The authors of the article believe that developing students' readiness, particularly cognitive abilities, contributes positively to their success during academic mobility. Moreover, enhancing the academic mobility readiness of students is significant in students' personal growth; they become more independent, confident, and adaptive.

Keywords: university students, academic mobility, designing mobility, readiness, cognitive ability.

Basic provisions. Academic mobility offers students a unique opportunity to immerse themselves in another culture, broadening their vision and improving intercultural competency. Living in another country and interacting with people from various cultures helps to foster tolerance, understanding, and appreciation for variety. Academic mobility initiatives promote the exchange of knowledge and best practices between educational institutions. Students enrolled in such programs have access to a wide range of educational methods, novel approaches, and specialized resources that assist them improve their education and professional development.

However, students will not benefit from the academic mobility if they are not sufficiently prepared for the program. Thus, universities should provide the conditions for students to develop their readiness for academic mobility. When university students are ready for academic mobility they will have fewer problems in the organization of academic mobility, choosing their learning trajectory, adjustments to new

methods and styles of teaching, criteria of evaluation, and many other issues.

Introduction. The Bologna process recognizes academic mobility as integral to the establishment of a unified higher education area. Increasing academic mobility, which involves the exchange of students, instructors, researchers, and administrators, is a central objective of this process.

Academic mobility has emerged as a pivotal strategy for enhancing human capital in recent years. Globalization has accelerated scientific and educational exchanges between countries, fostering the competitiveness of national education systems and promoting interethnic cooperation. This growth in international university collaboration presents new opportunities for Kazakhstani universities, including collaborative research projects, exchange programs, and tailored initiatives for international students.

The topic of academic mobility has been indicated in the research studies (Bayjwmanova, 2021). In the context of higher education

globalization, academic mobility is a crucial subject that is covered in a wide range of scholarly publications and studies. It includes a wide range of topics, such as teachers (Abramo et.al., 2022) and students (Valeeva, 2020), and the significance of academic mobility (Aykaç, 2021).

Academic mobility significantly shapes the global educational landscape and the flow of human capital, thereby improving the quality, efficiency, and accessibility of higher education. The relevance of this study is underscored by the necessity for students participating in mobility programs to be adequately prepared. Despite the efforts of university international departments, students often encounter challenges while studying abroad, including language barriers, culture shock, accommodation issues, adaptation to new learning environments, and academic-related challenges.

While it is not always possible to avoid these issues, students can deal with them more skilfully if they plan and prepare properly. Universities should set up the necessary frameworks so that students can effectively complete the program's academic requirements and adjust to a new culture through intercultural learning and growth. In other words, universities should create ways for the development of students' readiness for academic mobility.

One of the most important components of preparing students for academic mobility is raising their level of knowledge about it. Understanding academic mobility makes it easier for students to prepare for it, adjust to, and benefit from this experience making them more equipped to spend time studying abroad. Thus, developing the cognitive abilities of students plays a crucial role in readiness for academic mobility. In addition to this, it is significant not only to increase students' awareness of academic mobility, but also their educational direction; orientation toward education, mobility, flexibility, and dynamic qualities in setting educational goals and solving educational tasks. This article aims to define how increasing cognitive abilities impact on enhancing students' readiness for academic mobility.

Materials and Methods. In the current world, academic mobility has undoubtedly become an integral part of university education in the modern world. Because of its significance in many facets of research, education, and social development, it is frequently addressed in the scientific community. Kazakhstani scholars such as Yessimova et al., (2022) considered the current state and perspectives for the development of academic mobility in universities in their research and stressed the importance of academic mobility in the preparation of competitive graduates for the development of the economy.

Seidahmetova et al., (2014) examined the challenges that academic mobility students encounter. Their research revealed a lot of obstacles in the organization of academic mobility programs in Kazakhstan such as the lack of funding and material support, the scarcity of experts in the field, the lack of structures and methods specifically designed for academic exchanges, the amount and calibre of collaborative programs being offered insufficiently, and the lack of infrastructure necessary for efficient collaboration.

Another research conducted by Rustemova et al., (2020) is a continuation of the previous study where they discussed the problems of the academic mobility of students from Kazakhstan to Japan. The study discovered that among the difficulties they listed the low degree of pull factors for students, such as a country's portability, recommendations, lack of knowledge about the country and the program itself, planning his/her studies trajectory, and others.

Shelkunova & Artyuhova, (2019) researched the problems of academic mobility students and created guidelines for management staff to enhance the circumstances around the execution of the academic exchange program and the approaches used when interacting with students or those who are aware of this type of activity.

In another study conducted by Martynenko & Zhukova (2008) explanations of the academic mobility of students were given. They explain that academic mobility is the opportunity for students to transfer between institutions to gain experience and seize chances that, for whatever

reason, aren't offered on their own, to get over national isolation.

Brinyov & Chuyanov (2015) emphasize the fact that academic mobility is defined as a student's studying for a length of time in a foreign country. The time is restricted, and it is also assumed that students will return home after completing their studies overseas.

The benefits of academic mobility were underlined in researchers' studies widely. Woldegiorgis & Doevenspeck (2015) stated that students who travel across borders and remain in another nation to pursue either short- or long-term training in higher education within a region, between countries in different regions, or between regions might be categorized as international students. Kraisman (2022) emphasized the significance of student academic mobility, outlined its primary requirements, and demonstrated the execution of initiatives aimed at getting students ready for academic mobility.

In addition to problems around academic mobility, researchers are interested in the impact of academic mobility on students' academic performance and educational processes as well (Bojica et al., 2023; Annala et al., 2022). Scholars of Ukrainian University investigated the enhancement of academic mobility among university students and concluded that most students view and consider academic mobility as a good thing, one that is necessary to develop high-calibre science and a strong, competitive economy (Slipchuk et al., 2021). They highlight and recommend that improving knowledge about international programs and the numerous aspects of studying abroad should be the main priority (Slipchuk et al., 2021; Mizrachi et al., 2022). In many academic subjects nowadays, academic mobility is a crucial component of a successful academic career.

Numerous studies have been conducted on the influence of academic mobility at universities. Pessoni & Pessoni (2021) considered the positive and negative aspects of academic mobility and its implications for universities. Santiago Ruiz et al., (2019) researched the perspectives and educational significance of students who took part in a mobility program. Their study

identified that students chose the universities for academic mobility according to the prestige of the teachers, and the native students' academic level. Moreover, students believe that being mobile as a student enables them to evaluate the knowledge they have learned and identify the advantages and disadvantages of their instruction.

Borisenkov et al., (2020) devoted their research to the readiness of students for academic mobility and discovered a defense of the need for methodical approaches to be developed to remove administrative, organizational, competence-activity, and psychological obstacles to the mobility of international students.

Juskeviciene et al., (2022) evaluated the possibilities of enhancing academic mobility in universities. They concluded that the highest average scores indicate that increased financial aid and paid internships, along with chances for groups of students to attend the same university or business abroad, as well as the variety of locations available for academic exchanges and the excellent calibre of professional training provided by studies, internships, and education, would all motivate students to get more involved in international academic mobility programs.

Creating a common educational environment for candidates is the overall goal of the internationalization process, which ensures that they will have access to the professional education of the highest calibre regardless of the economic and social development of their native country. One of the main requirements for putting the educational internationalization principle into practice is the academic mobility of applicants. Within the framework of educational internationalization, the development of academic mobility guarantees that professional education at the graduate level is elevated to a level that will draw in students from other nations and support economic growth and national development (Vovchasta et al., 2022).

The review of literature on the topic of research allowed us to conclude, that academic mobility attracts researchers' attention all over

the world. Many studies are devoted to the importance of academic mobility in gaining higher education, an increase of cultural understanding, obstacles that academic mobility students encounter, and the problems of readiness for academic mobility. However, there is a lack of research studies that offer some solutions to develop readiness for academic mobility. We think that increasing the cognitive abilities of students to readiness for academic mobility would contribute to developing academic mobility.

Two research questions could be set to study in this research:

1) What is the level of students' cognitive abilities related to readiness for academic mobility?

2) What should be done to increase students' cognitive abilities related to academic mobility?

Results. The data for the research were collected through a pedagogical experiment. 72 students of Semey Medical University participated in the experiment. Students were divided into two groups (experimental and control groups). In the experimental group, there were 36 students and in the control group, there were 33 students. They were the 3rd year students majoring in Nursing Affairs and Public Healthcare. The students of both groups were interested in academic mobility programs. None of the pupils have had prior experience with academic mobility. The test was used to determine each student's degree of cognitive ability for academic mobility. It covered the following: the students' drive for an international education; language proficiency; adaptation to a new setting and culture; intercultural communication skills; and work preparation. Twenty-five questions made up the test. Students received 100 points total, with four points awarded for each right response. The following levels were used to gauge the students' responses: 0-50 - low level, 51-75- average level, 76-100- high level. Both before and after the experiment, the same test was carried out. The experimental group was exposed to the selected method to improve cognitive ability for academic mobility preparation, while the

control group maintained their studies by the standard curriculum.

Discussion. The research results demonstrate that students' cognitive abilities in academic mobility were lower before the experiment. Participants have had a limited understanding of academic mobility opportunities. Although most students are very interested in academic mobility, ignorance, communication difficulties, and worries about cultural fit limit their willingness to participate. The pre-experiment test revealed the following data.

The cognitive ability level of students in the development of academic mobility readiness is seen in Figure 1. The figure demonstrates the information that 25% of students' cognitive level was low, 61% was average and 14 % was high in the control group. And in the experimental 23 % was low, 63 % was average and 14 % was high. These data show that, in general, the level of competitiveness development of students is in the middle level. However, it was found that their knowledge about academic mobility, adaptation to a new setting and culture, intercultural communication skills, preparation, and ways to develop mobility are still insufficient.

During the forming experiment, the students of the experimental group worked on the course materials "Designing Mobility in University Studies".

After completion of the experiment, a re-assessment of the cognitive abilities of readiness for academic mobility of students was carried out in both groups. The following figure demonstrates its results. Figure 2 displays the cognitive ability level of students in the development of academic mobility readiness after the experiment.

The data show that after the experiment the level of experimental group students increased. The low level decreased from 23% to 17 %, the average level increased from 63 % to 68%, and the high level increased by 1 %. While the low level in the control group decreased from 25 % to 22 %, accordingly the average level went up from 61 % to 64% and the high level remained the same.

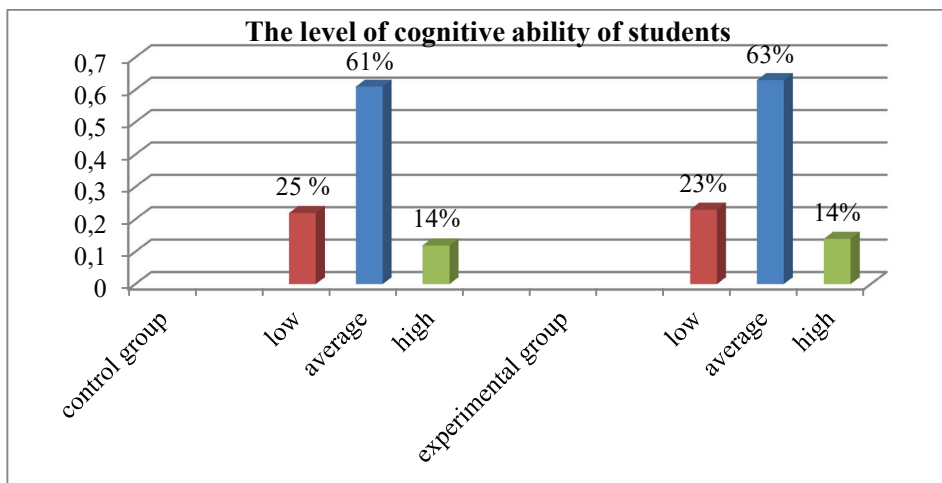


Figure 1: The results of pre-experiment

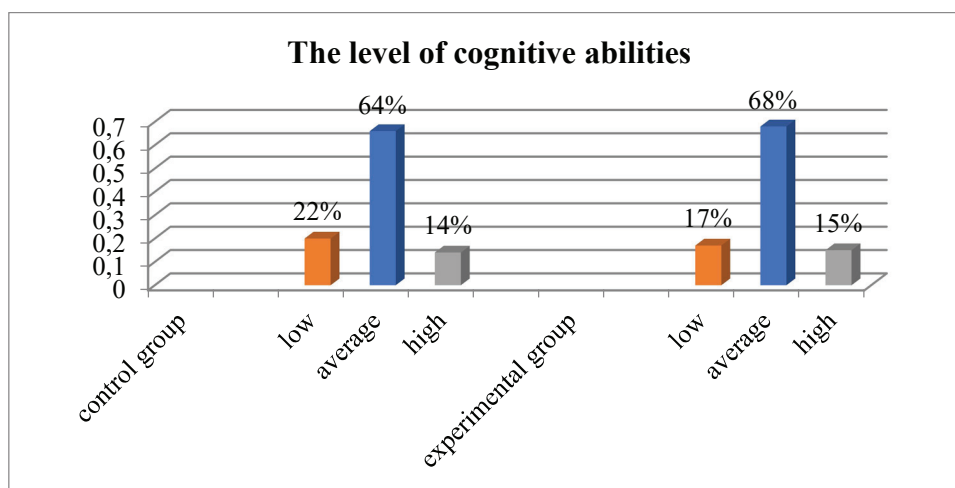


Figure 2: Results of post-experiment

Then the results of both groups were compared. The figure below depicts that in the experimental group, low-level students decreased and average-level students increased more than that in the control group. In addition, high-level students' numbers increased in the experimental group.

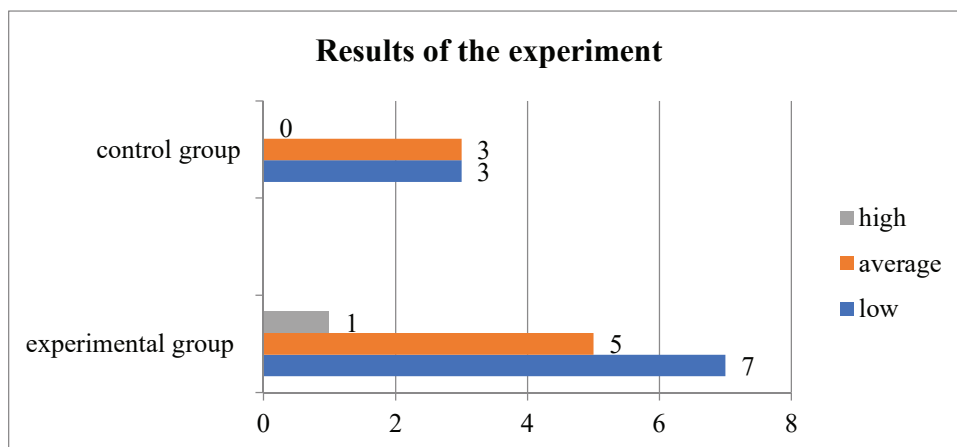


Figure 3: The comparison of results

Figure 3 displays the comparison of the results of both groups. Comparing the results between the experimental and control groups allows us to evaluate the effectiveness of the technique for improving cognitive abilities on readiness for academic mobility.

The experiment’s findings demonstrate the necessity of creating extensive programs with informational sessions, language instruction, intercultural communication classes, and administrative support and planning of the mobility program. The conducted experiment on improving students’ cognitive abilities could bring valuable knowledge and assist them in enhancing the quality of preparing for academic mobility. Activities carried out during the experiment not only directed education but also enhanced their capacity to create their educational direction, their orientation toward education, and mobility and expanded their flexibility and dynamism. During the formation period of the experiment the materials of the course “Academic Mobility Designing” were

introduced to the students of the treatment group.

The main aim of the course was to direct students to plan their career mobility and provide them with the knowledge needed for independent mobility planning.

The objectives of the course were:

1. Analysis of several approaches to planning a teacher’s professional activity by the Bologna process’s tenets using the example of European nations.

2. Creating suggestions for how to structure students’ professional activities within the framework of the national education system (in a group).

3. Creating the prospective student’s educational path (in small groups).

4. Applying the competence experience that has been developed through the student’s work activities.

The course consisted of 5 modules where students get acquainted with theoretical materials and did some independent activities. The content of the course is given in Table 1.

Table 1. The content of the course materials

Themes	Key issues	Independent work
Designing academic mobility in own studies	Academic mobility, Bologna process, its aims, objectives, principles, ways	Analyze the proposed course structure to determine your educational path.
Designing mobility in professional activities	Professional competence, strategies for designing, recommendations	Analyze the different ways of designing professional activities in the examples of Europe and Kazakhstan and develop recommendations for professional activities’ mobility
Designing student’s study directions	Modelling of a student’s course of study (in micro groups), course of study of students of domestic higher educational institutions and higher educational institutions of other countries.	Create a small project for the implementation of the selected study area.
Use of academic mobility competence in professional activities	Sectors of professional activities, professional competence.	Create a project on how academic mobility competence could be used in professional activities
A representation of the model and actual practice	Correction of the trajectory of self-education and professional education based on accumulated experience	Design your academic mobility program.

The conclusion that students do not have sufficient knowledge made in the diagnostic

part of the experiment was changed after the experiment. Students were equipped with

the necessary knowledge and showed their potential in post-experiment tests. Certainly, we reject the opinion that students formed their academic mobility fully, however, they became more knowledgeable and skilful in academic mobility issues.

This study's conclusions, which highlight the necessity of preliminary preparation for academic mobility are consistent with earlier research studies in which factors influencing academic mobility readiness (Slipchuk et al., 2021), students' intercultural readiness for academic mobility (Aba, 2019), the significance of tackling obstacles and improving support systems to encourage future educators to participate in academic mobility initiatives (Borisenkov, 2020) were discovered. The main peculiarity of our research is that the home university has to offer courses on developing students' academic mobility readiness.

Students' readiness for academic mobility improved as a result of the training. This shows that the content, methods, or other elements of the course helped students acquire the knowledge and abilities needed to successfully adjust to new learning settings.

Following the experiment, students improved their ability to work independently and to analyze and make decisions in novel situations. Their critical thinking, adaptability, self-confidence, and communication abilities all improved as a result of the course. This research differs from the research studies conducted before in that it contributes to filling the research gap in the

development of readiness for academic mobility in terms of improving the cognitive abilities of students.

The focused informational and instructional activities are valuable in developing academic mobility readiness. Facilitating the successful participation of teachers and students in foreign programs can be achieved through streamlining administrative procedures, lowering cultural barriers, raising awareness, and enhancing language proficiency. These kinds of activities make academic mobility more appealing and accessible to all those involved in the educational process.

Conclusion. This research contributed to the enhancement of the experience of self-activation of students in academic mobility, the ability to realize their needs, and designing mobility in the direction of personal education. Improvement of students' cognitive abilities in terms of academic ability during university studies can significantly influence their development and success. When taking part in academic mobility, students frequently experience novel circumstances, difficulties, and cultural settings due to inadequate readiness for academic mobility. This calls for their capacity for situational adaptation, quick response to changes, and well-informed decision-making. Thus, strengthening cognitive abilities and having preliminary preparedness for academic mobility will impact ultimately students' success in academic mobility to gain new experience and knowledge.

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CONCEPTUAL APPROACHES TO MANAGING AN ANALYTICAL SYSTEM IN THE FIELD OF EXTERNAL ASSESSMENT OF EDUCATION QUALITY

Abstract

This article proposes an innovative idea for the development of a new information-analytical system in the field of external assessment of education quality (competencies) using Artificial Intelligence (AI) and Big Data (BD). This system represents an innovative approach to the external evaluation of education quality, covering various levels of assessment from individual learners to the national level. The system aims to use AI and BD technologies to enhance the objectivity, and reliability of assessments, and provide a broader coverage of students and educators. The system's architecture includes various modules, each designed to address specific aspects of external evaluation, such as education quality, teacher competence, psychodiagnostics, and career guidance, with the innovation of this system lying in the comprehensive interaction of these modules. The implementation of this system is aimed at improving education management and building individual learning trajectories by tracking the dynamics and history of educational achievements. This will also ensure transparency in decision-making, reduce the level of corruption, and create equal educational opportunities for different regions and population groups.

Keywords: external assessment, artificial intelligence, management in education, teacher certification, psychodiagnostic, career guidance.

Basic provisions. The current research addresses conceptual approaches to the development of an analytical system in the field of external education assessment, as a mechanism of management in education. The study acknowledges the existence of insufficient student assessment methods. The existing assessment methods (EVEA and MEDA) are analysed and this research makes recommendations on how to improve the assessment method using Artificial intelligence tools (AI). These are External assessment of the quality of education and monitoring of the individual educational trajectory from primary school to obtaining a specialty/qualification; Generation of test questions for students using AI technologies; External Assessment of Teacher Competence Using AI and Database Technologies; Data Analysis and Recommendation Generation for Students, Teachers, School Administrators, and Education Authorities Using AI and Database Technologies; Psychodiagnostics of Students and Teachers Using AI and Database