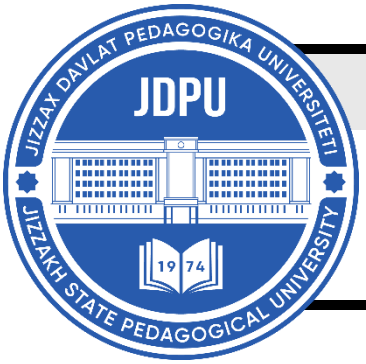
DOI: https://doi.org/10.37547/mesmj-V6-I4-03 Pages: 16-37

MENTAL ENLIGHTENMENT SCIENTIFIC – METHODOLOGICAL JOURNAL



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ANALYSIS OF INDICATORS FOR ASSESSING THE MANAGEMENT ACTIVITIES, CLASSICAL AND ECONOMIC FUNCTIONAL CAPABILITIES OF MODERN EDUCATIONAL INSTITUTIONS (ON THE EXAMPLE OF HIGHER EDUCATION INSTITUTIONS IN UZBEKISTAN)

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ABOUT ARTICLE

Key words: Key performance indicator; financial indicators of the assessment; research activity; educational and methodological activities; investment attractiveness; integral indicators; scientific research; scientific and methodological activities.

Received: 10.06.25
Accepted: 12.06.25
Published: 14.06.25

Abstract: This article, based on the study of international experience, develops proposals and recommendations for improving the indicators used to assess the activities and economic functionality of universities in Uzbekistan. Studies have been conducted to determine the role and tasks of departments, management departments, functional structures in the development of the classical and economic functionality of higher education institutions. Integral indicators of the direct dependence of the effectiveness of the activities and economic functionality of universities on the activities of professors and teachers have been calculated, and scientific hypotheses have been put forward on this basis.

Introduction

For many years, the management of the higher education system, the organization of scientific and innovative activities, investment processes, and the assurance and evaluation of quality indicators have been key elements of state policy.

In all countries, governments define, implement, and evaluate the priority directions for managing higher education and developing scientific and innovative activities. However, to this day, there is no globally unified, standardized system of indicators for evaluating the overall performance of higher education institutions. This system still varies by region. The main reason for this is the diversity of development levels and the different stages of progress among countries worldwide.

As a result, countries and regions strive to develop evaluation indicators for higher education institutions based on their national characteristics and levels of economic development. For example, a relatively comprehensive document in Europe guides university operations — the "Standards and Guidelines for Quality Assurance in the European Higher Education Area," approved by the Ministries of Education of 48 countries that adopted the Bologna Process in 2015. This document consists of three parts:

- Standards and guidelines for internal quality assurance,
- Standards and guidelines for external quality assurance,
- Policies and procedures for quality assurance that reflect the institutional vision and strategy of each university. [1]

In other leading countries such as the USA, South Korea, Japan, Singapore, and China, approaches and methods to evaluating educational quality are evolving in line with improvements in the functions of modern educational institutions and updates to their operational components. For instance, in the United States, the effectiveness of higher education institutions is evaluated using a four-stage KPI (Key Performance Indicator) system. These are: -related to goal identification; -related to strategic planning; -related to team formation; -related to process automation. [2]

At this point, it is necessary to clarify: what is KPI and what purpose does it serve in evaluating institutional performance? KPI (Key Performance Indicator) is a comprehensive system of indicators used to evaluate the efficiency and effectiveness of institutions, companies,

and organizations. American scholar Ted Jackson defines it as follows: “A key performance indicator (KPI) is a measurable value that helps organizations understand how effectively they are achieving key business objectives, allowing them to determine whether they are on the right path toward their goals and mission.” [3]

Materials and Methods. In recent years, with the transformation of university missions and the emergence of business-oriented characteristics in higher education institutions, international experience has shown the need to update KPIs. As a result, the following five expanded directions have been introduced: -financial indicators of the educational institution; -student activity and outcomes; -admissions and enrollment; -faculty and staff performance; -opportunities and resources. Let us now consider each of these evaluation areas in more detail.

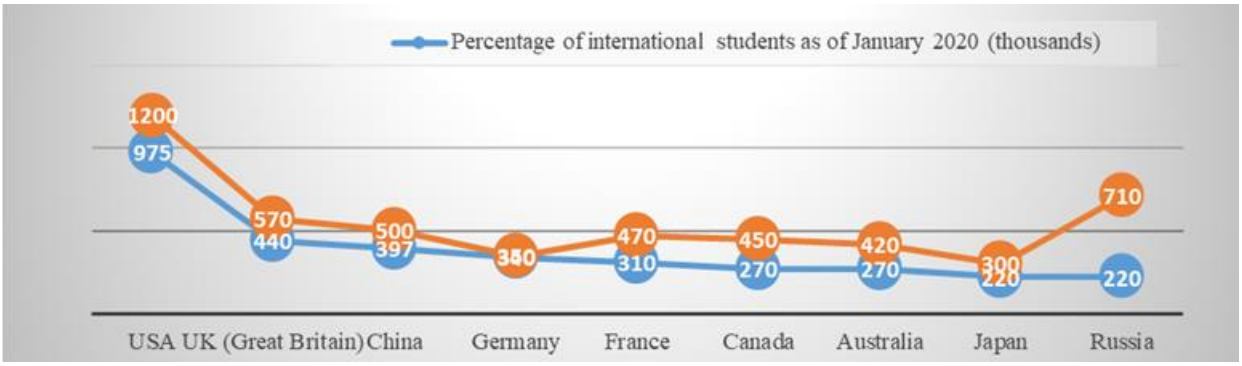
Financial performance indicators. This section includes: Personnel expenses related to organizing the educational process (salaries of full-time and part-time professors and lecturers, availability, functions, and mechanisms of incentive and performance support funds), administrative costs per student (expenditures for educational, administrative, and infrastructure services per student), budgets of programs and departments (sources of budget formation, frequency, and legal-organizational foundations), revenues, grants, and investments (endowments, charitable donations, research grants, fundraising efforts, support from local authorities and state funds, and other financial incentives), financial aid programs for students (number and proportion of students receiving scholarships or government aid), student tuition and expenses (annual or semester costs for students).

Student activity and outcome indicators. These indicators are based on: students’ academic performance and achievements, participation in scientific and methodological publications and conferences, involvement in research projects, engagement in innovative and grant-based projects and their outcomes.

Admissions and enrollment indicators. These include: transfer rates (the ratio and percentage of applicants admitted, the number of students transferring from other institutions), admission quotas and rates (percentage and ratio of applicants admitted, reflecting institutional competitiveness), enrollment by postal code (analyzing where students come from, supported by data that measure the effectiveness of marketing campaigns over time). For example, globally, the majority of international education service users —

educational migrants — are attracted to higher education institutions in advanced countries such as the United States, United Kingdom, China, Germany, France, Canada, Australia, and Japan. Within the CIS region, Russia and Kazakhstan are among the top destinations for attracting students to their higher education institutions (See Figure 1.).

Figure 1. Current and projected numbers of international students in universities in developed countries. [4]



Evaluating the performance of faculties and staff. This dimension encompasses the workload and productivity of the faculty: (measured either through individual performance indicators of teaching staff or the overall outcomes achieved by departments), Student-to-faculty ratios: (are assessed based on the number of students per faculty member—either across the entire campus or within specific departments). Other key performance indicators include the work experience and tenure of academic and support staff, analyzing their daily, weekly, and annual workloads alongside their effectiveness and the level of institutional support and social protection they receive. Additional evaluation criteria focus on weekly extracurricular academic programs conducted with students, such as the effectiveness of special courses, academic circles, and research centers.

Evaluating resources and capabilities. This aspect involves the identification and comparative analysis of material and technical resources, evaluation of securities issuance and financial operations, analysis of taxes and mandatory payments, and monitoring and comparing utility expenses.

Research findings reveal that in the U.S., higher education institutions use a set of 30 key performance indicators (KPIs) to assess operational efficiency. These indicators include: -graduation rates: the number of graduates relative to regional or national totals: -incentives and rewards: the extent of financial encouragement and awards granted annually to students, faculty, and technical staff: research grants: the participation of students, faculty, and research staff in grant projects and the total value of secured funding: student attendance: the number of students achieving at least 90% attendance in a semester or academic year: graduate employment rate: the percentage of graduates employed within a specified period post-graduation—an indicator of how well an institution meets labor market demands with highly qualified graduates: financial outcomes: the number of students receiving scholarships or financial aid, the amount of charitable or partnership-based funding acquired, and average tuition costs per student: student-to-faculty ratio: a lower ratio is generally regarded as more favorable: average educational expenditure per student: includes costs associated with campus maintenance, faculty and staff salaries, books, meals, etc: faculty-to-administration ratio: a very low ratio (e.g., only two administrators for 50–70 professors) may indicate potential inefficiencies and financial management challenges: number of applicants registered: a vital metric for institutions striving to remain competitive, allowing them to track applicant preferences and trends: share of students from targeted regions: enables analysis of students enrolled in specialized language, STEM, or AP courses: qualification rates per subject: reflects curriculum structure and the effectiveness of academic programs across fields: percentage of faculty with special certifications, skills, or degrees: an important indicator of the institution's prestige and competitiveness: annual training sessions conducted: faculty and staff attendance rates: faculty and staff retention rates: influenced by working conditions, workload, compensation, and benefits: condition of buildings, facilities, and infrastructure: usage rate of classrooms, laboratories, libraries, and similar facilities: share of technologically advanced lecture halls: proportion of faculty skilled in using modern technologies: social media engagement (PR management): performance of departments responsible for correspondence, inquiries, and partnerships: transportation and transit cost analysis: percentage of students living in campus housing: analysis of campus living conditions, expenses, and service fees

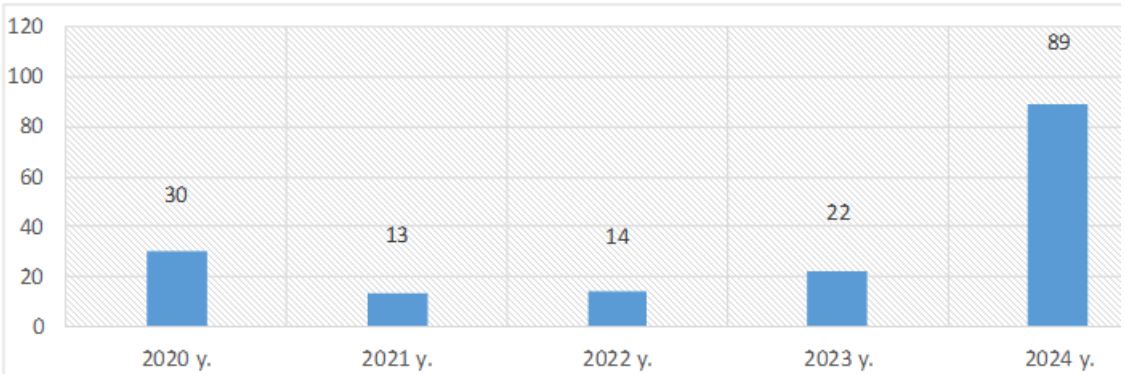
Within the Commonwealth of Independent States (CIS), scholars have also contributed to improving the system of performance indicators used to evaluate the efficiency and economic functionality of higher education institutions. Researchers such as N.V. Yandibaeva, E.R. Kozhanova, and V.A. Kuzhnikov, and from Uzbekistan, scholars including S.S. G‘ulomov, R.Kh. Ayupov, N.R. Rakhmonov, O.S. Qahhorov, M.D. Zaripova, and R.Sh. Shamuratov have made significant contributions.

For instance, M.D. Zaripova has focused her research on the activities of university faculty and on increasing their academic capacity. She has effectively applied mathematical methods to explore the interrelationships between various factors influencing academic capacity.

Result and Discussion. The rankings of universities based on performance indicators are largely proportional to the potential and academic productivity of faculty members.

Turning to empirical data, we observe a significant year-over-year increase in the number of scientific publications by faculty members of higher education institutions in Uzbekistan in prestigious international journals indexed by Web of Science and Scopus. As an example, let us consider Jizzakh State Pedagogical University (see Figure 2.).

Figure 2. Growth Dynamics of Research Publications by Faculty of Jizzakh State Pedagogical University (JSPU) in International Journals Indexed in Scopus and Web of Science, 2020–2024



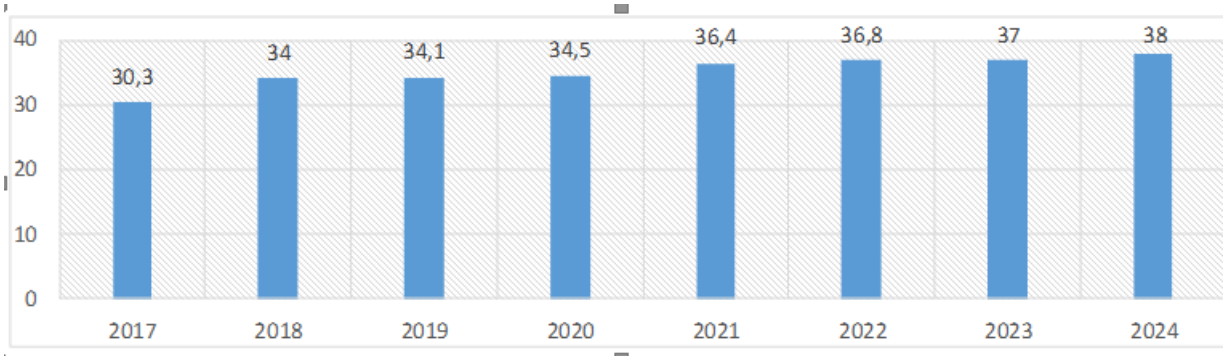
In recent years, Uzbekistan has implemented systematic measures aimed at enhancing the academic capacity of teaching staff at higher education institutions. As a result of these

initiatives, we can observe positive trends in the growth of scientific and academic capacity among university faculty. (See Figure 3 for reference.)

For example, the Tashkent Institute of Irrigation and Agricultural Mechanization Engineers – National Research University – has been ranked among the top 300 universities in the world in terms of "Academic Reputation" and is listed among the top three universities in Central Asia.

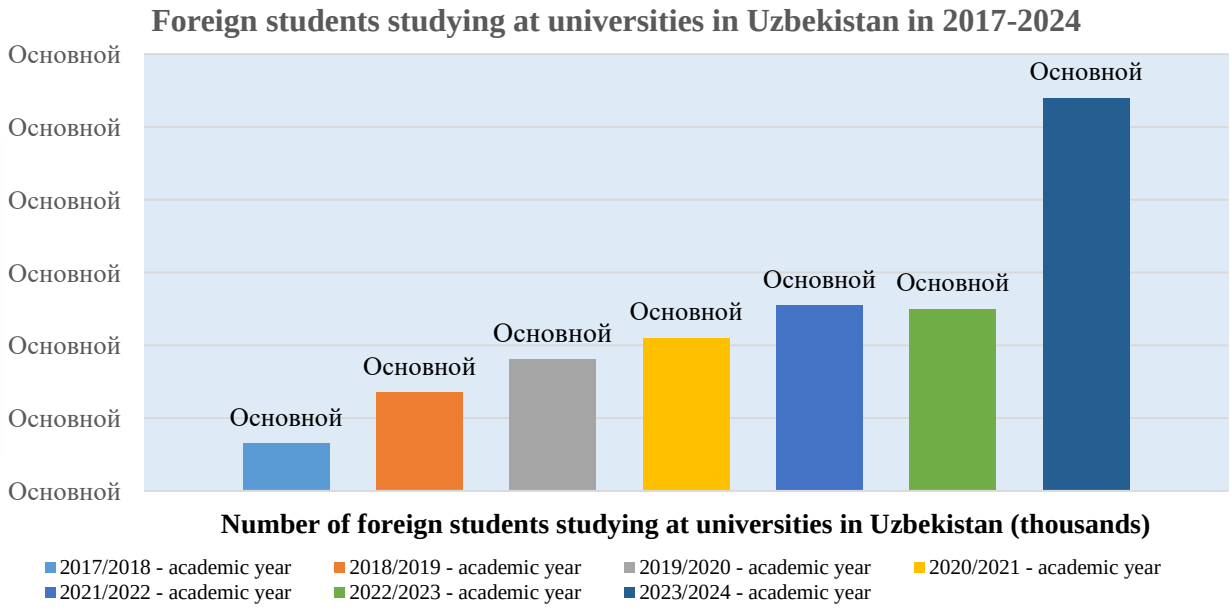
Meanwhile, the National University of Uzbekistan ranks among the top 200 global universities under the "Foreign Faculty" indicator, securing second place among higher education institutions in Central Asia.

Figure 3. Scientific Capacity of Faculty Members as a Key Performance Indicator in Higher Education Institutions of Uzbekistan (Expressed as a percentage relative to the total number of faculty members) [5]



Another important indicator in assessing the performance of higher education institutions (HEIs) is the share of international students. As we observe, in recent years, there has been a steady increase in the interest of foreign students in Uzbekistan's HEIs. This trend is reflected in the graph below.

Figure 4. Number of international students studying at higher education institutions in Uzbekistan (2017–2024) [5]

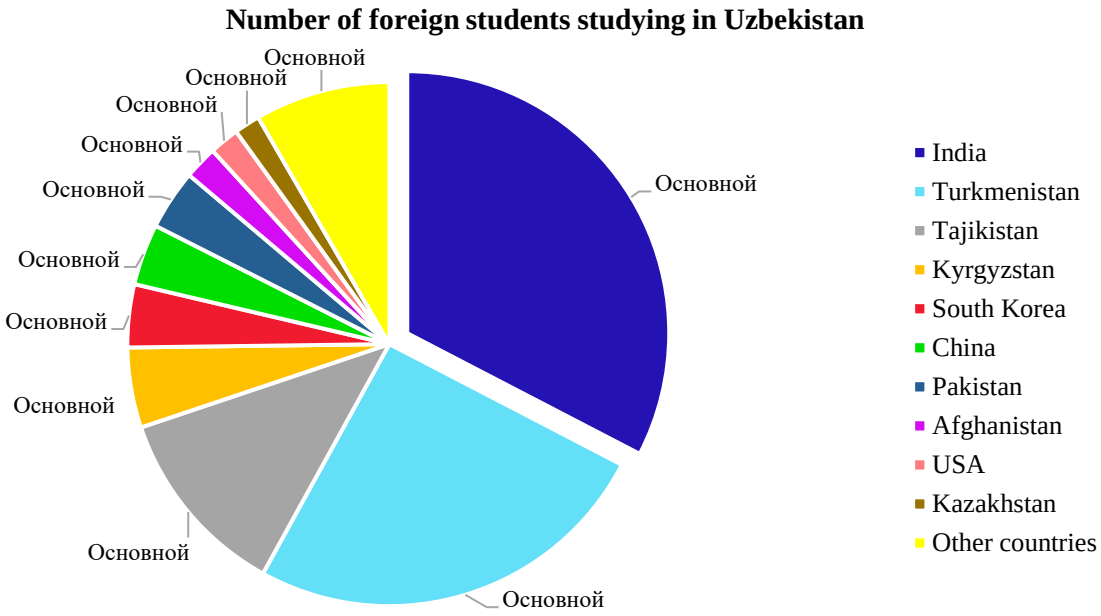


In the 2017–2018 academic year, the number of international students enrolled in Uzbek HEIs was 1,300. This number grew to 2,700 in 2018–2019, 3,600 in 2019–2020, 4,200 in 2020–2021, 5,100 in 2021–2022, 5,000 in 2022–2023, and finally 6,400 in the 2023–2024 academic year.

As a result, the number of international students in 2023–2024 increased by 492% compared to 2017–2018 and by 128% compared to the previous academic year (2022–2023).

If we analyze the origin countries of these international students enrolled in Uzbek HEIs in 2024, the distribution is as follows:

Figure 5. Distribution of foreign students in higher education institutions in Uzbekistan by country (2024) [5]



According to the data, in the 2023–2024 academic year, more than 32% of international students in Uzbekistan came from India, 25% from Turkmenistan, and 12% from Tajikistan.

Taking into account that many of Uzbekistan's neighboring countries have developing economies and a young population, there is potential to increase the flow of international students by several times the current numbers.

Improving the economic functionality of HEIs plays a crucial role in enhancing their position in global rankings and indexes. This can be achieved through expanding economic opportunities, creating business- and innovation-friendly environments within universities.

In line with these goals, we are witnessing systematic efforts in Uzbekistan aimed at improving the international rankings of HEIs, as well as developing scientific research and innovation activities.

Some notable examples include:

Uzbekistan’s position in the Global Innovation Index (GII) improved by 40 places compared to 2015.

Between 2018 and 2023, nearly 90 legal and regulatory documents related to science and innovation were adopted: 3 Laws, 6 Presidential Decrees, 28 Presidential Resolutions, Over 40 Cabinet of Ministers Resolutions, and More than 10 directives.

These reforms have contributed to the emergence of a competitive, incentivized, and accountable environment in the higher education sector.

Among the key policy documents aimed at enhancing Uzbekistan's position in international rankings and indexes are: Presidential Decree PD-4210 (Feb 25, 2019): "On measures to improve Uzbekistan's position in international rankings and indexes" Presidential Decree PD-5687 (March 7, 2019): "On systematizing efforts to improve Uzbekistan's position in international rankings and indexes" Presidential Decree PD-5847 (Oct 8, 2019): "On approval of the concept for the development of the higher education system of the Republic of Uzbekistan until 2030" Presidential Decree PD-6003 (June 2, 2020): "On introducing a new mechanism for systematically working with international rankings and indexes" Cabinet Resolution CR-246 (May 15, 2022): "On ensuring the harmony of scientific capacity and practical activity in working with international rankings and indexes" Cabinet Resolution (Feb 21, 2022): "On additional measures to accelerate the implementation of national goals and objectives in the field of sustainable development for the period up to 2030" As a positive outcome of these comprehensive reforms, for the first time in 2024, two Uzbek universities entered the TOP-1000 global university rankings: Tashkent Institute of Irrigation and Agricultural Mechanization Engineers ranked 547th, National University of Uzbekistan ranked 781st

These rankings were published by the QS Quacquarelli Symonds international ranking agency in the "QS World University Rankings 2025".

Even when examining universities located in remote regions of Uzbekistan, we see broad transformations and developments.

For instance, at the Jizzakh State Pedagogical University (JSPU), efforts have been made to improve the university's economic functionality and to create an environment resembling that of a business university. These include: Establishing modern scientific research laboratories, Building new academic facilities, Creating digital classrooms based on educational technology, Developing departments for commercializing scientific and innovation activities, Forming international cooperation units. Additionally, research centers have been established under specialized departments that integrate education, science, and industry.

These research centers bring together: Advanced teaching staff, Researchers and scholars, Graduate students and talented undergraduates, Partner institutions, firms, and companies engaged in joint research and innovation.

The main objectives of these centers are to: Create necessary conditions for scientific activity, Implement business and innovation projects, Expand non-budgetary funding sources for HEIs. (See Table 2.)

(See Table 1. for more details on Jizzakh State Pedagogical University's (JSPU) research centers.)

Table 1. Jizzakh State Pedagogical University: Departments & Scientific Research Centers [6]

№	Department	Scientific Research Center
1	Mathematics and its Teaching Methodology	Mathematics and Existence
2	General Mathematics	Mathematical Modeling and Its Application
3	Computer Science and its Teaching Methodology	Software Development and Implementation
4	Theory and Methodology of English Language Teaching	Enhancing English Language Learning and Teaching
5	Practical Course of English	Innovations in English Language Teaching and Learning
6	Theory of Pedagogical Education	Pedagogical and Psychological Services
7	Special Pedagogy	Inclusive and Corrective Education
8	School Management	Research on Management Issues in Educational Institutions
9	Preschool Education	Research on Preschool Education Issues in Jizzakh Region
10	Physical Education in Preschool and Primary Education	Research on Issues of Physical Education and English Language in Preschool and Primary Education in Jizzakh Region
11	Technological Education	Modern Technological Education
12	Physics and its Teaching Methodology	Physics and Electronics
13	History and its Teaching Methodology	History
14	Philosophy, Education and Law	Paradigm
15	Biology and its Teaching Methodology	Cultivation of House Plants
16	Chemistry and its Teaching Methodology	Chemistry and Chemical Technologies

17	Geography and Basics of Economic Knowledge	Research on Natural Resources and Geo-Environmental Issues in Jizzakh Region
18	Methodology of Teaching Uzbek Language	Linguistics
19	Methodology of Teaching Uzbek Literature	Uzbek Literature and Teaching Methodology
20	Theory and Practice of Primary Education	Integration of Science and Education
21	Methodology of Primary Education	Mental Arithmetic and Creativity
22	Music Education	Music Theory and Methodology
23	Fine Arts and Engineering Graphics	Methodology of Teaching Fine Arts and Engineering Graphics
24	Russian Language and its Teaching Methodology	Enhancing Russian Language Teaching Technologies
25	Russian Literature and its Teaching Methodology	Enhancing Teaching Technologies of Russian Literature
26	Theory and Methodology of Physical Education	Research on Physical Education and Sports Issues in the Jizzakh Region Education System
27	Methodology of Teaching Sports	Research on Scientific Issues in Sports in the Jizzakh Region Education System

The Role of Research Centers in University Development

The establishment of scientific research centers has led to the manifestation of the university's economic functionality, the development of research activities, the expansion of self-financing sources, and the formation of actions characteristic of the mission of modern business universities within the strategic activities of higher education institutions. This is evident in the recent years through the research outcomes and the implementation of innovative projects across JSPU's departments, the provision of educational services based on additional intensive programs, as well as the commercialization of non-educational services. (See Table 2.)

Table 2. Jizzakh State Pedagogical University (JSPU) Revenue from Commercialization and Development of Scientific-Innovative Projects information (by faculties and departments) (Figures in thousand UZS) [7]

Department/Faculty	2022	2023	As of June 30, 2024

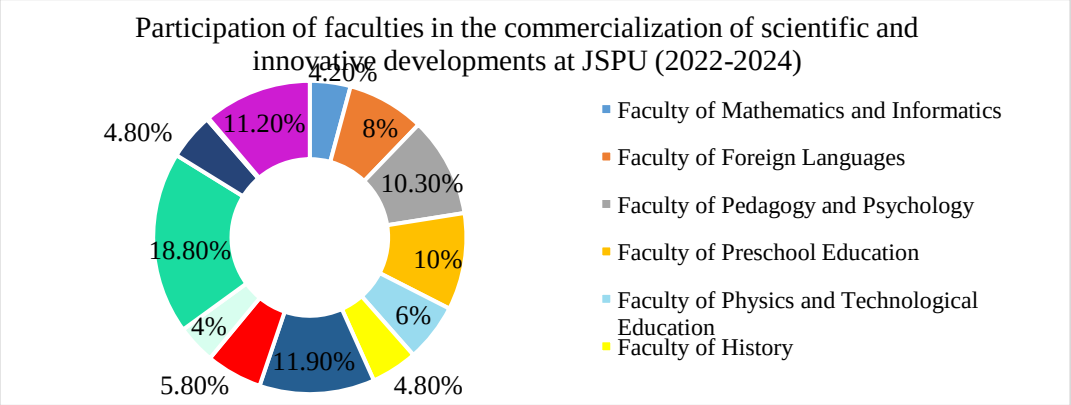
Mathematics Teaching Methodology	10,500	13,700	4,785
Computer Science and Digital Technologies	18,908	26,410	8,300
Faculty of Mathematics and Computer Science	**29,408**	**40,110**	**13,085**
English Language Teaching Methodology	10,258	10,555	14,000
Practical English Course	23,879	9,017	8,900
English Language Theory and Practice	19,250	27,000	15,000
Interfaculty Foreign Languages	13,283.5	4,806.5	2,945
Faculty of Foreign Languages	**66,670.5**	**51,378.5**	**40,845**
Pedagogical Education Theory	27,254	32,132	6,600
General Psychology	17,980	24,235	18,700
Special Pedagogy	16,566.5	16,757	19,500
School Management	8,900	15,375	1,000
Faculty of Pedagogy and Psychology	**70,700.5**	**88,499**	**45,800**
Preschool Education Methodology	53,276.6	41,702	9,050
Foreign Languages in Preschool and Primary Education	7,504.5	20,140	10,600
Music Education	7,254	28,400	23,750
Faculty of Preschool Education	**68,035.1**	**90,242**	**43,400**
Technological Education and Fine Arts	14,635	16,375	4,650
Physics and Teaching Methodology	26,235	40,080	15,800
Faculty of Physics and Technological Education	**40,870**	**56,455**	**20,450**
History of Uzbekistan	26,192	11,700	1,700
General History	22,000	22,000	4,000
Philosophy, Education and Law	2,440	3,015	2,200
Faculty of History	**50,632**	**36,715**	**7,900**
Biology and Teaching Methodology	24,543	13,362	33,000
Chemistry and Teaching Methodology	10,250	26,265	18,000
Zoology and Anatomy	10,170	29,105	15,800
Geography and Economic Knowledge	12,000	27,550	13,900
Faculty of Natural Sciences	**58,963**	**96,282**	**80,700**
Uzbek Language Teaching Methodology	19,005	24,600	7,900
Uzbek Language and Literature	24,470	27,300	12,000
Faculty of Uzbek Language and Literature	**43,475**	**51,900**	**19,900**
Primary Education Methodology	22,782	11,415	9,500
Primary Education Theory and Practice	20,500	8,300	6,000
Faculty of Primary Education	**43,282**	**19,715**	**15,500**
Russian Language and Teaching Methodology	191,169	22,500	6,600
Russian Literature and Teaching Methodology	131,392	9,685	12,500
Faculty of Russian Language and Literature	**322,561**	**32,185**	**19,100**
Physical Culture Theory and Methodology	19,748	17,340.8	8,035
Sports Teaching Methodology	16,790	30,931.4	2,340
Faculty of Physical Culture	**36,538**	**48,272.2**	**10,375**

General Professional Sciences	2,997.24	1,300	–
Faculty of Medicine	**2,997.24**	**1,300**	–
Distance Learning in Social-Humanitarian Sciences	20,920	11,755	6,000
Distance Learning in Pedagogy-Psychology and Music	9,050	28,000	18,000
Distance Learning in Natural and Exact Sciences	11,500	17,110	24,080
Distance Learning in Preschool and Primary Education	15,300	18,834	41,940
Part-Time Education Division	**56,770**	**75,699**	**90,020**
Total for JSPU	**890,902.34**	**688,752.7**	**407,075**

From the table, we can see that the efficiency of faculties by period is unstable and differs sharply from each other. For example, in the Faculty of Mathematics and Informatics, Faculty of Pedagogy and Psychology, Faculty of Preschool Education, Faculty of Physics and Technological Education, Faculty of Natural Sciences, Faculty of Uzbek Language and Literature, Faculty of Physical Culture and Correspondence Departments, a positive trend in terms of overall efficiency growth in 2023 compared to 2022 is observed, while in the Faculty of Foreign Languages, Faculty of History, Faculty of Primary Education, Faculty of Russian Language and Literature and Faculty of Medicine, we witness a trend in terms of overall efficiency decline compared to the previous period.

The share of faculties in the total income for the commercialization and development of scientific and innovative developments for two years is presented in the figure below.

Figure 6. Participation of faculties in the commercialization of scientific and innovative developments at JSPU (2022-2024) [9]



The results of the analysis show that it is necessary to develop indicators and indicators for assessing the quality of activities that are considered important structural areas of the economic functionality of higher education institutions and to improve calculation methods.

The impact of factors on the quality of activities that reflect the economic functionality of higher education institutions and the effectiveness of general indicators is not always the same. Therefore, it is necessary to identify important factors that affect the improvement of the economic functionality of higher education institutions. As a result of the research conducted, it becomes clear that the potential and effectiveness of the work of professors, teachers, researchers and management personnel are of great importance in improving the economic functionality of higher education institutions. Therefore, it is necessary to obtain generalized results of the assessment, and to obtain generalized results, it is appropriate to calculate an integral indicator for assessing the potential and effectiveness of the work of professors, teachers, researchers and management personnel.

Among the key factors influencing the improvement of the economic functionality of higher education institutions (HEIs) are the quality and effectiveness of professors, researchers, and administrative staff. To evaluate their overall performance, the weighted arithmetic mean method based on the aggregation of group indicators is employed.

Within this framework, an Integral Indicator (IK) is calculated to assess the quality of the academic and administrative personnel, including professors, researchers, department heads, and functional structure managers. This indicator is based on multiple criteria, each assigned a specific weight coefficient reflecting its importance. The general formula for calculating the Integral Indicator is as follows:

$$IK = \sum_{i=1}^{n} K_i \cdot M_i$$

where: IK – Integral Indicator; Mi – Score based on the i-th criterion (for example: the proportion of professors holding academic degrees; the number of scientific publications; the share of articles and monographs published in prestigious international journals; the number of textbooks, manuals, and teaching aids developed by university staff, etc.); Ki – Weight coefficient assigned to the i-th criterion (indicating the importance of the given criterion).

In order to determine the Integral Indicator, it is necessary to assign a weight to each assessment criterion. This process is typically carried out through the expert evaluation method.

In 2024, the performance evaluation of the academic staff at Jizzakh State Pedagogical University was based on the following indicators: [10]

1. The scientific potential of the academic staff.
2. The number of publications in highly reputable international journals included in the "Scopus" and "Web of Science" databases.
3. The annual growth rate of financial results from self-financing, research, and innovation activities.
4. The number of published textbooks and teaching aids by university professors.
5. The proportion of university professors who completed internships abroad.
6. The students' academic achievement quality indicator across university disciplines.

Table 3. Performance Results Reflecting the Participation of Staff and Professors in Enhancing the Economic Functionality of Jizzakh State Pedagogical University. [11]

No.	Indicators	Jizzakh State Pedagogical University
1	Scientific potential of the faculty (percentage of total academic staff)	33%
2	Annual number of publications in top-tier journals ("Scopus", "Web of Science")	94
3	Annual growth rate of financial outcomes from research and innovation activities	17%
4	Annual growth rate in the publication of textbooks and methodological manuals	22%
5	Proportion of professors completing internships abroad	25%
6	Quality indicator of students' academic achievement	60%

For the purpose of identifying the participation of staff and professors in the development of the economic functionality of higher education institutions, two departments were selected as research objects at Jizzakh State Pedagogical University: the Department of Geography and Fundamentals of Economic Knowledge under the Faculty of Natural Sciences,

and the Department of School Management under the Faculty of Pedagogy and Psychology. The aim was to determine the integral indicators reflecting the contribution of these departments' academic staff to the university's economic functionality.

Table 4. Participation of Professors and Academic Staff from the "Geography and Fundamentals of Economic Knowledge" and "School Management" Departments in the Economic Functionality of Jizzakh State Pedagogical University. [12]

No.	Indicators	University-Wide Benchmark	2024 Results	
			Geography and Fundamentals of Economic Knowledge Department	School Management Department
1	Scientific potential relative to the total number of faculty members (percentage)	33	70	33
2	Annual number of publications in high-impact international journals ("Scopus", "Web of Science")	94	8	8
3	Annual growth rate of financial results from self-financing, research, and innovation activities (percentage)	17	8	5
4	Annual growth rate of publications of textbooks and methodological manuals by faculty members (percentage)	22	12	20
5	International collaboration: share of professors who have completed internships abroad (percentage)	25	15	22
6	Quality indicator of students' academic achievement relative to total enrollment (percentage)	60	85	90

The following indicators were utilized in the analysis. The scientific potential of the academic staff across the university was 33%. At the departmental level, this indicator was 70% for the Department of Geography and Fundamentals of Economic Knowledge and 33% for the Department of School Management.

The annual number of publications in high-impact international journals indexed in "Scopus" and "Web of Science" totaled 94 for the university, corresponding to a share of 0.1 per

faculty member. Within the departments, this indicator was 8 publications for each department. Relative to the number of faculty members, the publication share was 0.6 in the Department of Geography and Fundamentals of Economic Knowledge and 0.9 in the Department of School Management.

The annual growth rate of self-financing and the financial results of research and innovation activities was 17% university-wide. In comparison, the Department of Geography and Fundamentals of Economic Knowledge recorded a 12% growth rate, while the Department of School Management recorded a 5% growth rate.

Regarding the publication of textbooks and methodological manuals, the university achieved a 22% growth compared to the previous year. This growth rate was 15% in the Department of Geography and Fundamentals of Economic Knowledge and 20% in the Department of School Management.

The share of faculty members who completed internships abroad was 15% university-wide, while it was 24% in the Department of Geography and Fundamentals of Economic Knowledge and 22% in the Department of School Management.

The quality indicator of students' academic achievements was 60% across the university. In contrast, it was 85% in the subjects taught by the Department of Geography and Fundamentals of Economic Knowledge and 90% in the subjects taught by the Department of School Management.

Based on these indicators, the integral participation indicators of the academic staff from the two selected departments in enhancing the economic functionality of Jizzakh State Pedagogical University are determined. The following formula is used for the calculation:

$$IK = \sum_{i=1}^{n} w_i \cdot \frac{K_{i,\ department}}{K_{i,\ max}}$$

Where: Ki – Indicator value for the department; Ki, max – Maximum indicator value across the university; Wi – Weight coefficient for each criterion (the sum of weights equals 1.0).

Table 5. Comparative Weighting of Statistical Data

No.	Indicators	University-Wide (for comparison)	Department of Geography and	Departme nt of School	Comparat ive

			Fundamentals of Economic Knowledge	Management	Weight (wiw_iwi)
1	Scientific Potential (percentage)	33	70	33	0.2
2	Share of International Publications	0.1	0.6	0.9	0.2
3	Financial Growth Rate (percentage)	17	12	5	0.15
4	Annual Growth in Publication of Textbooks and Manuals	22	15	20	0.15
5	Share of Faculty Completing Internships Abroad (percentage)	15	24	22	0.15
6	Quality Indicator of Student Academic Achievements (percentage)	60	85	90	0.15

Results for the Department of Geography and Fundamentals of Economic Knowledge:

Sum: 0,4242 + 1,2 + 0,1059 + 0,1023 +0,24 + 0,2125 = 2,285

Thus, the Integral Coefficient for the Department of Geography and Fundamentals of Economic Knowledge (IKG) is calculated as:

IKG=100×2.285=228.5

Results for the Department of School Management:

Sum: 0.20 + 1.8 + 0.04 + 0.136 + 0.219 + 0.225 = 2.62

Thus, the Integral Coefficient for the Department of School Management (IKM) is calculated as:

IKM=100×2.62=262

According to the calculation results, the integral indicators reflecting the participation of academic staff in university activities and economic functionality, relative to the comparative indicators, amounted to 2.285 times for the Department of Geography and Fundamentals of Economic Knowledge and 2.62 times for the Department of School Management.

These results demonstrate the overall complex potential and the active level of participation of the faculty members in enhancing the university's activities and improving its economic functionality.

Conclusion. The results of the study show that new trends in international and national development significantly affect the formation of a system of criteria and indicators for assessing the integrated activities of higher education institutions in an economy based on knowledge and innovation. And these changes are characterized by the following factors related to the economic functionality of higher education institutions;

- Increasing functions of intellectual capital formation in higher education institutions;
- Growing need for the formation of innovative ideas within the framework of the national economy;
- Increasing efforts to form motivational functions aimed at stimulating innovative activity in each higher educational institution;
- Expanding sources of self-financing in higher educational institutions;
- Transfer of knowledge and technologies;
- Inextricably linked with such aspects as the business and entrepreneurship-oriented activities of higher educational institutions.

To summarize, the following can be cited as the main characteristics of the promotion of our country's higher education institutions in the world's regions: the education system and learning environment (the main parameters of which are determined by the results of a questionnaire on determining the activity of teachers, the ratio of the number of professors and teachers to undergraduate students, the ratio of the number of doctors of science to the total number of teachers, the average value of the total income of an educational institution in a certain period relative to the number of active professors and teachers and research staff); the level of research and commercialization in an educational institution (this takes into account the average value of income from research and innovation activities relative to the number of active professors and teachers, the proportion of the number of scientific and educational-methodical publications in a certain period relative to the number of professors and teachers and research staff); the practical significance of published scientific and methodological works

and the level of their international citation (this takes into account the number of citations worldwide to the scientific results of professors and teachers of a higher education institution); the number of international teachers, students and researchers (this is determined by the share of foreign students studying at a higher education institution, the number of foreign teachers working at the institution, the number of international general publications, co-authorships); income from industry (this is determined as the ratio of research income from industry and commercial sectors to the total number of teachers).

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