Management of Innovations

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METHODS FOR ASSESSING THE LEVEL OF INNOVATION OF HIGHER EDUCATION INSTITUTIONS USING INTEGRATED CRITERIA

Introduction. Higher education plays an important role in the sustainable development of Ukraine, as it contributes to the training of highly qualified personnel, forms environmental awareness and stimulates the development of scientific and research activities. With the independence of Ukraine and its accession to the Bologna Process, higher education requires not only constant modernization, but also "orientation to innovative the path of development of the Ukrainian economy" [1].

Innovation in higher education is a key condition for its development and adaptation to the modern challenges of globalization, digitalization and rapid socio-economic changes. Higher education plays a fundamental role in the formation of highly qualified specialists who are able to generate new ideas, implement technological innovations and contribute to the sustainable development of society. In the context of dynamic changes taking place in the world, educational institutions must constantly improve teaching methods, introduce modern technologies and integrate new approaches to managing the educational process, which includes not only the modernization of educational programs, but also the development of research activities, active interaction with business, the use of innovative infrastructure and ensuring the professional development of teachers and students.

Statement of the problem. The modern development of society is characterized by the dynamic spread of innovations in all spheres of activity, including education. Higher education institutions (HEIs) play a key role in the formation of competitive human capital capable of meeting the challenges of globalization, digitalization and sustainable development. The innovativeness of HEIs is a determining factor in ensuring their adaptability to rapid changes, improving the quality of educational services and creating conditions for scientific research.

However, in the context of increasing competition among educational institutions, there is a need to develop effective approaches to assessing the level of their innovativeness. Existing assessment methods are often fragmentary and do not take into account the specifics of the educational environment and do not provide a comprehensive analysis of the impact of innovations on the activities of higher education institutions. The lack of unified approaches to assessing innovativeness complicates the comparison of higher education institutions with each other, and also hinders the development of an innovative culture in the field of higher education.

This problem is becoming particularly relevant in the context of Ukraine's integration into the European Educational Space, where innovation is one of the key criteria for assessing the effectiveness of higher education institutions. This requires the creation of a toolkit that will not only adequately assess the level of innovation in HEIs, but will also contribute to the strategic planning of their development.

Thus, there is an urgent need to develop a methodology for assessing the level of innovation of higher education institutions using an integral criterion, which will take into account the multidimensionality of this phenomenon and ensure the possibility of using the results of the assessment for making management decisions.

Analysis of recent research and publications. In modern research and scientific publications, considerable attention is paid to the nature of the phenomenon of "innovation" [7-10]. Scientists emphasize that one of the key aspects of assessing innovation is the ability of higher education institutions (HEIs) to adapt to changes in the external environment and actively implement the latest technologies [2; 11]. This, in turn, contributes to increasing the efficiency of the educational process, integrating modern digital solutions, and expanding opportunities for students.

Researchers also note the importance of using innovative teaching methods [14], which contribute to improving the quality of learning, developing critical thinking and actively involving students in the educational process. In addition, considerable attention



© Publisher Institute of Industrial Economy of National Academy of Sciences of Ukraine, 2024 © Publisher State Higher Education Institution "Luhansk Taras Shevchenko National University", 2024 is paid to the development of methods for innovative development of HEIs [3-6; 12], which involve partnerships with business and scientific institutions, as well as active support for research activities.

Highlighting unresolved parts of the overall problem. Despite the significant amount of research devoted to the innovation activity of higher education institutions, a number of unresolved issues remain. First of all, this concerns the insufficient consideration of an integrated approach that covers all aspects of innovation, including educational, scientific, organizational and digital components. Existing approaches are often focused on individual indicators, which limits the possibility of a holistic analysis.

It is also noted that there is no unified approach to the formation of assessment criteria that would take into account the specifics of national and international standards. This complicates the process of comparing HEIs in a global context. In addition, an important challenge is the need to develop a methodology that would allow for adaptation to changing conditions and take into account the rapid development of technologies and new forms of learning.

Another important unresolved part is the integration of the obtained evaluation results into the management processes of HEIs. The lack of appropriate tools for interpreting the results and using them in strategic planning limits the effectiveness of innovation activities. Therefore, there is a need to create such a toolkit that would be both easy to use and accurate enough for decision-making.

All of these aspects require further research and development of a comprehensive methodology that will enable the assessment of the level of innovation of higher education institutions using an integral criterion.

Presentation of the main research material. In order to determine the level of innovation of HEIs, it is advisable to apply special indices that characterize various aspects of the internal potential of the institution and its use. Such an approach will ensure the validity of the methodological approach and scientific support for systematic calculations of these indices in the context of individual HEIs on a universal scale, performing methodologically correct comparisons both by the generalized integral index of innovation and by group and partial integral indices that characterize its innovative aspects [13].

The main point of the above assessment methodology is its orientation to the information base of the Ukrainian National Office of Intellectual Property and Innovations (UKRNOIPI), the center of international projects "Euroeducation", websites of HEIs, reports of HEIs rectors and other open sources of information. Based on the analysis of the assessment of the innovativeness of HEIs of Ukraine, the hierarchical scheme seems to be the most justified (see Fig. 1):

a) upper level: generalizing integral index of innovation of HEIs;

b) average level: group integral indices of ten blocks of the internal potential of the HEI and the efficiency of its use, namely: innovation infrastructure, scientific and scientific-pedagogical employees, education seekers, patent activity, international activity, grant activity, the level of attractiveness of the HEI for applicants, participation in competitions and research works, foreign students and other indicators of the HEI's innovation activity.

c) lower level: partial integral indices characterizing the *i* block.

The methodology for calculating the aforementioned index includes 13 sequential steps:

1. Systematic analysis of the problem, its structuring and display in the form of a hierarchy;

2. We select indicators of the performance of HEIs in a certain region that will characterize the main aspects of its innovativeness;

3. We determine the characteristics or indicators that do not affect the level of innovation of a higher education institution using the coefficient of variation (V):

$$V_j = \frac{s_j}{\overline{x}_j},\tag{1}$$

where S_j – standard deviation of the *j* characteristic or indicator;

 \overline{X}_j – the root mean square value of the *j* characteristic or indicator.

After determining the coefficient of variation for each *j* sign, the inequality is checked $V_j < e$. If the value of V_j is less than *e*, that equal to 0.1, the features will be quasi-permanent and will be excluded from the list of further research;

4. We determine the indicators of stimulants (+) and de-stimulants (-);

5. We form an information database, namely a matrix of source data [X]:

$$\mathbf{X} = \begin{bmatrix} X_{11} & X_{1j} & X_{1m} \\ X_{21} & X_{2j} & X_{1m} \\ X_{j1} & X_{ij} & X_{nm} \end{bmatrix}$$
(2)

6. We rank the indicators in ascending order to determine their maximum and minimum values.

7. We choose the best value for each indicator that characterizes the *i* block in constructing the generalizing integral index of innovation of HEIs (max for indicators-stimulators and min for indicators-destimulators);

8. We calculate partial indexes for each block by the ratio of the actual value of the j indicator for each HEI to the best one in the list, that is, we normalize the indicators:

for indicators of stimulators

$$\kappa_{\text{part}j} = \frac{X_{ij}}{X_{ijmax}};$$
(3)

for indicators of destimulators

$$K_{\text{part}j} = \frac{X_{ijmin}}{X_{ij}}$$
(4)



Fig. 1. Hierarchical scheme for calculating the aggregated integral index of innovation of HEIs

9. We calculate the product of partial integral indices characterizing i sub-block of indicators of j block of innovativeness of HEI.

10. We calculate the aggregate partial integral indexes that characterize certain aspects of the innovative activity of HEIs using the formula of the geometric mean of the partial integral indexes that are included in j subblock of i block:

$$\mathbf{K}_{ij} = \sqrt[m]{\mathbf{K}_{\text{part.integr.1}} \times \dots \times \mathbf{K}_{\text{part.integr.m}}}.$$
 (5)

11. We calculate the group integral indexes of the i block, which characterize certain aspects of the innovativeness of the HEI, using the formula of the geometric mean of the combined partial integral indexes included in the i block:

$$K_j = \sqrt[n]{K_{\text{comb.part.integr.1}} \times ... \times K_{\text{comb.part.integr.n}}}.$$
 (6)

12. We calculate the combined integral index of HEI innovation according to the formula of the geometric mean of six group integral indices that characterize certain aspects of the components of HEI innovation:

$$\mathbf{K} = \sqrt[13]{\mathbf{K}_1 \times \dots \times \mathbf{K}_{13}} \,. \tag{7}$$

13. We determine the class of the level of innovation of a higher education institution using a generalizing integral index in accordance with the assessment scale.

It is proposed to use the best (maximum) indicators achieved in HEIs as a basis for comparison for stimulating indicators, and the minimum indicators for discouraging indicators.

This allows us to calculate indicators that characterize various aspects of the innovativeness of higher education institutions and for which there are no scientifically based standards.

The integral index ranges from 0 to 1.0 and the higher the value, the higher the level of innovation of the HEI. The identification of the obtained results regarding the level of innovation is proposed to be considered in terms of the class of the level of innovation depending on the value of the generalizing integral index of innovation, which has four classes (see Table 1).

of higher education institutions				
Class number	Level	Index value		
Ι	critical	$K \le 0.250$		
II	low	$0.251 \le K \le 0.500$		
III	medium	$0.501 \le K \le 0.750$		
IV	high	$0.751 \le K \le 1$		

Classes of the level of innovation

The resulting value of the integral assessment of innovativeness can be classified according to certain levels:

 $-high\ level$: The higher education institution demonstrates significant innovative activity in all areas, actively implements modern methods and technologies, and ensures the development of research and improvement of the educational process;

– intermediate level: The institution is implementing some innovative changes, but there are some areas that need improvement. Innovative activities exists, but do not fully meet advanced standards;

-low: The institution's innovative activity is insufficient, which indicates limited implementation of modern practices. More efforts are needed to achieve a modern level of innovation;

– critical level: Innovative activity is almost absent or minimal, which indicates a critical need for change, since the current state of innovation does not meet modern requirements and requires immediate implementation of measures to improve the quality of the educational process and the development of the institution.

The relevance of the results of the level of innovation of HEIs according to this methodology is given in Table 2.

Table 2

Structures that can use the results of the level of innovation of HEIs based on integral indexes

Table 1

Structure name	Purpose of use
Ministries of	Government authorities can use data to develop strategies and policies for the innovative development of
Education and	the country and its education system, the results of which can influence the financing of higher education
Science, Economy and	institutions, support for research activities, and the distribution of grants for innovative projects
Regional Development	
Innovation and	National agencies responsible for innovation development can use the assessment of the level of
Development	innovation of HEIs to identify priority institutions and support their projects, or which universities can be
Agencies	centers of innovation clusters or regional research centers
National and	Integrated innovation indices will help rating agencies such as QS, Times Higher Education and others to
international rating	form rankings of HEIs based on innovation activity indicators. These rankings will influence the
agencies	international reputation of HEIs, attracting foreign students and investors
Investment and	Investment funds specializing in financing innovative projects will use the innovation indicators of HEIs
venture capital funds	to select educational institutions with high potential for innovative growth. Venture funds can finance
venture eupitar ranas	startups and business incubators at HEIs
	Companies can use the HEI innovation indices to identify potential partners for research and development,
Business and industry	new products or technologies. Companies are also interested in collaborating with HEIs that have a high
	level of innovation to recruit qualified graduates and develop corporate R&D (Research & Development)
~ .	projects
Science and	State and private foundations will use the data to allocate grant funding aimed at supporting the innovation
innovation support	activities of HEIs. Innovation indices will help foundations identify HEIs that require additional support
funds	for the implementation of promising projects
	Local administrations can use the results of the assessment of the innovativeness of HEIs to develop
Regional authorities	innovation support programs in their region and determine which HEIs should be involved in regional
	economic and scientific clusters
International	organizations such as the European Commission, UNESCO, and the world Bank use HEI innovation
organizations and	assessments to provide funding and support for international research projects, and integrated indices will
grantmakers	anow them to select HEIS with high innovation potential for participation in scientific and technical
	Colorities are and recerch institutes will use inneutring date to daughe partnerships, conduct
Academic and	scientific associations and research institutes while use innovation data to develop partnerships, conduct
scientific communities	joint research and exchange experiences, and select riefs for hosting scientific contenences and research
	Consulta placement platforms can use innovation indices of HEIs whose graduates have the graduate
Career platforms and	orauuate practition pration is can use innovation indices of fields whose graduates have the greatest
recruitment agencies	their high layel of innarket. Rectument agencies onter is been out graduates from universities known for
-	men ingi ievel of innovation for future employment in ingi-tech companies

Developed by the authors.

Let us consider in more detail the practical focus of each block of this methodology in accordance with the hierarchy of its construction:

1. Innovation Infrastructure Block: allows you to assess the effectiveness of educational and scientific processes, as well as the quality of specialist training, contributes to the introduction of modern technologies,

the development of scientific research and the increase in the competitiveness of higher education institutions, namely:

- transforming scientific ideas into commercial products and services and contributing to the creation of new jobs;

- attractiveness of HEIs for grantors and investors;

- attracting funding for research, development of startups and support of innovation initiatives;

- cooperation of HEIs with companies interested in developing new technologies and products.

2. Block of scientific and scientific-pedagogical workers: promotes the development of innovative teaching methods and helps integrate the latest scientific achievements into educational programs. In addition, this block provides:

- course diversity and flexibility in choosing disciplines;

- active research activities;

 participation in international scientific programs and integration into the global scientific space;

- software each student with mentoring and support during their studies and research;

– innovative solutions development that can be commercialized or applied in industry;

- supporting technology transfer through cooperation with business to attract additional resources and promote the creation of startups based on HEIs.

3. Block of higher education applicants: allows you to assess the effectiveness of the educational process, the relevance and quality of educational programs, as well as the level of their preparation for professional activity. An increase in the number of students in higher education institutions leads to:

- increasing financial revenues of HEIs, especially through tuition fees;

- increasing state funding (subject to a state order) and attracting additional investments to support infrastructure, equip laboratories and scientific research;

- expanding the list of specialties and programs that meet the diverse needs and demands of the labor market;

- implementation of new programs and courses;

- creation of large-scale scientific research and projects;

- infrastructure development, including academic buildings, dormitories, sports facilities, libraries, and other resources;

- the formation of an active socio-cultural environment;

- expanding the institution's opportunities for international cooperation and exchanges;

- encouraging the institution's management to attract the best teachers and improve their qualifications to ensure a high-quality educational process;

- implementing innovative teaching methods, such as distance learning, the use of digital technologies and interactive courses;

- cooperation with local enterprises and organizations, which contributes to the formation of ties between higher education institutions and business, as well as the employment of graduates.

4. Patent activity block: encourages scientific and pedagogical workers and students to create new technologies, inventions and research projects. The

presence of patent activity in higher education institutions ensures:

- interest of industrial companies and development of partnerships for the implementation of joint projects, attracting financing;

- protection of innovative solutions from unauthorized use by third parties and preservation of the exclusive right to use them;

- preservation of the scientific achievements of the HEI, which increases its competitiveness and reputation in the scientific community;

- commercialization of scientific developments through the sale of licenses, royalties, or transfer of rights to inventions to companies and investors;

- attracting additional funding that contributes to the development of the research base, the purchase of equipment, and the involvement of young scientists;

- increasing the authority of HEIs among other scientific and educational institutions;

- promoting the institution as a center of advanced research and innovation, attracting students, faculty, and investors.

5. International activities block: promotes the integration of higher education institutions into the global educational space, increases its prestige and competitiveness at the international level, and ensures:

- exchange programs for students, teachers and researchers with foreign educational institutions;

- joint programs for obtaining double degrees;

- internships, practices and training programs abroad;

- international scientific projects and grants and participation in them, joint activities with foreign colleagues on current research;

– joint scientific research with foreign partners;

- joint international scientific conferences, symposia, seminars and forums to popularize research and scientific achievements of HEIs on the world stage;

- educational programs in foreign languages to attract students from different countries;

- courses and programs focused on international educational standards to increase the competitiveness of higher education institutions in the global market;

- inviting foreign teachers to give lectures and seminars to broaden students' worldviews and introduce them to international experience;

- inclusion in international rankings that increase the prestige of the institution;

- concluding cooperation agreements with foreign higher education institutions for the joint development of educational and scientific projects, academic mobility and cultural exchange;

- cooperation with international foundations, associations, institutes and government organizations to finance projects and support research initiatives;

- membership in international associations and university networks, which opens up opportunities for joint research, exchange of experience, and participation in educational and scientific projects; - international funding of educational and research projects;

- opportunities for teachers and students to receive scholarships and grants from international organizations to conduct research and study abroad.

6. Grant activity block: contributes to the support of talented students and teachers, the development of scientific and research infrastructure. This block allows you to obtain information about:

- conducting scientific research leading to new discoveries in various fields;

- number of grants received;

- development of innovative products, technologies, methods or materials;

- preparation and publication of scientific articles in professional journals on the topic of the grant;

– publication of monographs, textbooks, and methodological guides on the topic of the grant;

- dissemination of research results at scientific conferences, forums and other platforms on the topic of the grant;

- registration of patents for developed technologies, inventions or new materials;

- copyright protection for innovative solutions;

- implementation of projects in the public or industrial sectors;

- implementation of research results into the educational process;

- expansion of infrastructure for conducting research, in particular, laboratories, classrooms, and research centers;

- preparation of detailed reports on results that allow assessing the effectiveness of the use of grant funds and the achievement of set goals;

- analysis of the achieved results and recommendations for further research or project implementation.

7. Block of the level of attractiveness of higher education institutions for applicants: can be evaluated according to the following criteria:

- the image and authority of the HEI;

- getting into rankings, both nationally and internationally;

- the diversity and relevance of educational programs;

– qualified teaching staff;

- access to modern educational materials and technologies;

- the availability of accreditation of educational programs;

- international exchange programs;

- graduate employment indicators;

- internships and practices during studies;

- cooperation of the university with leading companies and organizations;

- the opportunity to participate in research projects, technology parks, laboratories and startup incubators;

- the presence of innovative infrastructure that allows developing new ideas and implementing scientific projects;

- the opportunity to receive grants, scholarships and financial support for participation in research;

- the availability of dormitories and the quality of living conditions;

- the availability of modern technical support, access to online courses, digital libraries and platforms;

– use of distance learning and interactive educational platforms;

- flexibility of the educational process, the possibility of mixed learning;

- the availability of double degree programs;

- active work of higher education institutions on social networks, on websites for applicants, and participation in career guidance events.

8. Block of participation in competitions and research works: provides information on:

- completed scientific research (R&D);

- completed economic contract topics;

- additional financing attracted;

- increasing the prestige of the higher education institution among higher education institutions, scientific institutions and partners;

- creating opportunities for publications in scientific journals.

9. Foreign students block: allows you to assess the internationalization and global attractiveness of a higher education institution and contributes to:

- improving the quality of education and the popularity of higher education institutions at the international level;

- adaptation of curricula to international standards;

- additional financial resources for HEIs;

- establishing ties with foreign universities through an alumni network for the development of joint international research projects;

10. Dual education block: promotes greater integration of education and business, adaptation of curricula to the real needs of the labor market. Dual education is implemented through:

- close cooperation between higher education institutions and enterprises, organizations and institutions;

- development of individual training plans that take into account the needs of employers;

 a system of mentoring and regular assessment of the results of students' practical training;

- increasing the competitiveness of graduates;

- the opportunity to work with modern equipment and technologies.

11. Publication activity block: is an important indicator of scientific productivity, reputation and contribution of teachers and students to the development of science. This block assesses:

level of publication activity;

- visibility of the HEI in the scientific community;
- positions of HEI in international rankings;

– obtaining grants and funding for further research;
– availability of scientific publications in higher

education institutions.

12. Graduate employment block: ensures the implementation of the acquired knowledge and skills in professional activities, confirms the effectiveness of the educational process in a higher education institution through:

- compliance of educational programs with labor market requirements;

- development of cooperation with employers;

- establishing contacts with employers;

- the presence of Career Centers in HEIs;

- tracking the level of employment and career development of graduates allows higher education institutions to assess the effectiveness of educational programs and adapt them to changes in the labor market in a timely manner.

13. Block for the implementation of research and economic contract topics: provides information on:

- additional financial revenues that can be used to develop the research base, purchase equipment and support young scientists;

- improvement of the material and technical base of HEIs;

- establishing partnerships with enterprises and other organizations that commission research;

- opportunities for students and postgraduates to gain practical experience;

- opportunities for teachers and scientists to work on relevant practical tasks, improve their qualifications and level of knowledge.

In order to assess the activities of HEIs, it is necessary to carry out monitoring, on the basis of which it is possible to calculate integral indicators. For this purpose, we offer a typical form of monitoring under such an observation program (see Table 3).

Table 3

Surveillance program for monit	oring the innovati	iveness of HEIs
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No.	Type of work	Evaluation criteria	
1	2	3	
1	Innovative	Number of open and operating:	
	Infrastructure	– laboratories;	
		– research centers;	
		– technoparks;	
		 business incubators; 	
		 technology transfer centers; 	
		– research centers;	
		- testing centers;	
		- training classes, etc.	
2	Number scientific and	Total number of research and teaching staff, including:	
	scientific-pedagogical	- doctors of sciences;	
	workers	 – candidates of sciences (doctors of philosophy); 	
		– professors;	
		 associate professors (senior researchers) 	
3	Number	Total number of education seekers, including:	
	education seekers	– full-time form of study;	
		 by correspondence form of study; 	
		- through distance learning	
4	Patent activity	 number of patents for inventions obtained; 	
		 number of industrial design patents obtained; 	
		 number of patents for utility models obtained; 	
		 number of copyright certificates received 	
5	International activities	 number of student and teacher exchange programs with foreign universities; 	
		 number of joint double degree programs; 	
		- the number of joint international scientific conferences, symposia, seminars, forums,	
		guest lectures, etc.;	
		 number of educational programs conducted in foreign languages; 	
		- the number of foreign lecturers invited to give lectures and seminars;	
		- number of entries into international rankings;	
		- number of concluded cooperation agreements with foreign higher education institutions;	
		- number of projects financed with international funds, associations, institutes and	
		government organizations;	
		- membership in international associations and university networks;	
		- the number of teachers and students who receive scholarships from international	
		organizations;	
	Creat estimities	- number of teachers who have completed international internships	
0	Grant activities	- number of grants received;	
		- the number of developments of innovative products, technologies, methods or materials;	
		number of publications of scientific articles on the topic of the grant;	

1	2	3
		- number of published monographs, textbooks, and methodological guides on the topic of
		the grant;
		- number of speeches on the dissemination of research results at scientific conferences,
		forums and other platforms
7	The level of attractiveness of	– number of famous graduates;
	higher education institutions	- the number of HEIs included in international rankings;
	for applicants	– qualified teaching staff;
		 number of accredited educational programs;
		– number of international exchange programs;
		 percentage of graduates' employment;
		 number of applicants who completed internships abroad;
		- the number of projects in which students are involved;
		- the number of applicants participating in research projects, technology parks, laboratories
		and startup incubators;
		 number of double degree programs
8	Participation in competitions	 number of winners in competitions;
	and research	– number of competitions participated in
9	Presence of foreign students	- the share of foreign applicants in the total number of applicants for education at a specific
		higher education institution;
		- the number of foreign applicants in full-time studies;
		- the number of foreign applicants for part-time studies;
		- the number of foreign applicants for distance learning
10	Dual education	- the number of educational programs that provide dual training for education seekers;
		- the number of students studying in the dual form
11	Publication activity	– number of monographs;
		 number of textbooks/study guides;
		 number of articles in professional publications in Ukraine;
		– number of articles in foreign publications;
		- the number of articles indexed by Scopus and Web of Science scientometric data;
		– number of presentations at conferences;
		– number of published abstracts of reports;
		– number of scientific publications of HEIs
12	Graduate employment	– employment rate of HEI graduates
13	Implementation of research	- number of completed scientific research works (R&D);
	and economic contract topics	 number of completed economic contract topics;
		- the amount of funds received for the implementation of research and development;
		- the amount of funds received for the performance of economic contractual tasks

Developed by the author.

Conclusions. Methodological principles for assessing the level of innovation of higher education institutions using integral indexes are proposed, namely: criteria for calculating integral indicators of the level of innovation of HEIs and their purpose are defined; a methodology for integral assessment of the level of innovation of HEIs is developed. The hierarchical scheme for calculating the combined integral index of innovation contains 13 blocks: innovation infrastructure, scientific and scientific-pedagogical workers, education seekers, patent activity, international activity, grant activity, the level of attractiveness of higher education institutions for applicants, participation in competitions and research works, foreign students, dual education, publication activity, graduate employment and implementation of research and economic contract topics. It is proposed to consider the identification of the results obtained regarding the level of innovation of HEIs according to the evaluation scale of the level of innovation, which has four classes.

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Лозова Т. Методика оцінювання рівня інноваційності закладів вищої освіти за інтегральним критерієм

У статті запропоновано методичні засади оцінки рівня інноваційності закладів вищої освіти за допомогою інтегральних індексів, які характеризують різні аспекти внутрішнього потенціалу закладу та його використання.

Визначено критерії щодо розрахунку інтегральних індикаторів рівня інноваційності ЗВО та їх призначення.

Розроблено методику інтегральної оцінки рівня інноваційності ЗВО та розглянуто ієрархічну схему розрахунку зведеного інтегрального індексу інноваційності, яка містить 13 блоків.

Запропоновано типову форму проведення моніторингу оцінки діяльності ЗВО, на основі якого можливо розрахувати інтегральні показники.

Ідентифікацію отриманих результатів щодо рівня інноваційності ЗВО запропоновано розглядати за оціночною шкалою рівня інноваційності, яка нараховує чотири класи.

Ключові слова: інноваційність, заклад вищої освіти, вища освіта, інтегральний індекс, рівень інноваційності, моніторинг інноваційності.

Lozova T. Methods for Assessing the Level of Innovation of Higher Education Institutions Using Integrated Criteria

In the article methodological principles for assessing the level of innovation of higher education institutions using integral indexes are proposed, which characterize various aspects of the institution's internal potential and its use.

The criteria for calculating the integral indicators of the level of innovation of HEIs and their purpose are determined.

A methodology for the integral assessment of the level of innovation of HEIs is developed and a hierarchical scheme for calculating the combined integral index of innovation, which contains 13 blocks, is considered a typical form of monitoring and evaluating the activities of higher education institutions is proposed, on the basis of which it is possible to calculate integral indicators. It is proposed to consider the identification of the obtained results regarding the level of innovation of HEIs using the evaluation

scale of the level of innovation, which has four classes.

Keywords: innovativeness, institution of higher education, higher education, integral index, level of innovativeness, monitoring of innovativeness.

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