

УНІВЕРСИТЕТ СВІТОВОГО РІВНЯ ЯК СУЧАСНИЙ ВИМІР СТРУКТУРНИХ ТРАНСФОРМАЦІЙ У СИСТЕМІ ВИЩОЇ ОСВІТИ

Анотація

Сьогодні у сучасному глобалізованому світі філософія вищої освіти кардинально змінюється, і система вищої освіти України потребує абсолютно нової парадигми розвитку як адекватної відповіді на глобальні системні проблеми та протиріччя. У дослідженні розглядаються основні міжнародні університетські рейтинги та місце українських вищих навчальних закладів у них. Зважаючи, що кожна країна прагне бути представленою у престижних міжнародних університетських рейтингах, виникає необхідність створення та розвитку університетів світового рівня. У роботі здійснюється аналіз основних характерних рис університету світового рівня та пропонується концептуальна модель університету світового класу.

Ключові слова: вища освіта, міжнародний рейтинг, економіка знань, університет світового рівня, сталий розвиток, економічне зростання.

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УНІВЕРСИТЕТ МИРОВОГО УРОВНЯ КАК СОВРЕМЕННОЕ ИЗМЕРЕНИЕ СТРУКТУРНЫХ ПРЕОБРАЗОВАНИЙ В СИСТЕМЕ ВЫСШЕГО ОБРАЗОВАНИЯ

Аннотация

Сегодня в современном глобализованном мире философия высшего образования кардинально меняется, и система высшего образования Украины требует совершенно новой парадигмы развития как адекватного ответа на глобальные системные проблемы и противоречия. В исследовании рассматриваются основные международные университетские рейтинги и место украинских высших учебных заведений в них. Учитывая, что каждая страна стремится быть представленной в престижных международных университетских рейтингах, возникает необходимость создания и развития университетов мирового уровня. В работе анализируются основные отличительные черты университета мирового уровня и предлагается концептуальная модель университета мирового класса.

Ключевые слова: высшее образование, международный рейтинг, экономика знаний, университет мирового уровня, устойчивое развитие, экономический рост.

Problem statement. Today the philosophy of higher education in world is changing and the Ukrainian higher education system faces global systemic challenges and contradictions and needs a completely new development paradigm. At the present stage of progress civilization further development of the world economy is based on building the knowledge economy as a key to sustainable development and ensuring high standards of living. Knowledge economy is a multifaceted concept, which consists of different components. It

should be noted that the importance of the educational component of economic development is confirmed with its inclusion in the calculation of many international indexes (Knowledge Economy Index, Human Development Index, Global Competitiveness Index, Global Innovation Index, etc.). So, the recent trends at the national level have clearly defined a strategic aim for our country. It means that Ukraine should have at least a few world-class universities. Ukraine has to enrich the modern system of education with new organizational structures and management technologies, which will be an actual significant step in the development of higher education. Today, in this context, the issues of higher education, as one of the key areas of the knowledge economy, is the subject of serious research in the scientific literature.

Analysis of resent studies. The scholars like P. G. Altbach, J. Salmi [1; 2], Hsiou-Hsia Tai [3], Y. Sharma [4] have analyzed the features, challenges and problems of building world-class universities in the current conditions. The authors of Report to the European Commission on *"Improving the quality of teaching and learning in Europe's higher education institutions (2013)"* [5] have concentrated their attention on such points as improving the quality of higher education in the European Union. The trends and technology developments, the challenges regarding technology adoption and educational change are considered by experts (L. Johnson, Adams S. Becker, M. Cummins, V. Estrada, A. Freeman, and C. Hall, 2016) in the *"NMC Horizon Report: 2016 Higher Education Edition"*. To their mind this NMC Horizon Report (2016) "will help to inform the choices that institutions are making about technology to improve, support, or extend teaching, learning, and creative inquiry in higher education across the globe" [6]. Despite the recognition of the need to establish world-class universities, many aspects because of its complexity and contradiction are not investigated. As Altbach noticed: "Everyone wants a world-class university. No country feels it can do without one. The problem is that no one knows what a world-class university is, and no one has figured out how to get one" [1].

Main aim of the study is an attempt to develop a conceptual model on world-class university in Ukraine in the context of sustainable development based on existing trends.

Basic material. As a matter of fact, globalization of the higher education is a multi-vector convergence of various elements, which have a significant impact on all aspects of our life. The global systemic contradictions of modern higher education present a mix of challenges, threats and opportunities for main actors at different levels. It should be noted the modern world-class university is a peculiar educational phenomenon and a synergy of values, experience and knowledge accumulated in this institution through active international cooperation, permanently promoting and developing teaching, research, knowledge transfer and international outlook.

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Now, in order to examine the activities of universities and their influence in the international community the rules, principles and methodologies of world university rankings are actively developed. World university rankings have different goals, target groups, methodologies, indicators and quality. The most famous world university rankings are: Academic Ranking of World Universities (ARWU), QS World University Rankings, Times Higher Education Ranking and Webometrics [7-10]. Each of these rankings is different and has unique methodology (tables 1-3). Unfortunately, only several Ukrainian universities are included in world university rankings. It should be noted, the Times Higher Education World University Rankings employ 13 carefully calibrated performance indicators to provide the most comprehensive and balanced comparisons available, which are trusted by students, academics, university leaders, industry and governments (table 1) [7; 8].

Table 1

World University Rankings 2015-2016 methodology [8]

SUBJECT RANKINGS METHODOLOGY													
Indicator	Total students/ academic staff	PhD awards/ bachelor	PhD/Academic staff	Reputation Survey (teaching)	Institutional income/ Academic staff	Scholarly papers/ Academic Staff	Research income/ Academic Staff	Reputation Survey (research)	Citations: Research Impact	Income from industry/ Academic Staff	Ratio of international to domestic staff	International co-authorship	Ratio of international to domestic students
	Teaching: The learning environment					Research: volume, income and reputation			Citations per paper	Industry income: innovation	International outlook		
ARTS & HUMANITIES													
Group weight	37.5					37.5			15	2.5	7.5		
Indicator weight	3.8	1.9	4.7	25.3	1.9	3.8	3.8	30	15	2.5	2.5	2.5	2.5
CLINICAL, PRE-CLINICAL & HEALTH, LIFE SCIENCES & PHYSICAL SCIENCES													
Group weight	27.5					27.5			35	2.5	7.5		
Indicator weight	2.8	1.4	4.1	17.9	1.4	4.1	4.1	19.3	35	2.5	2.5	2.5	2.5
ENGINEERING & TECHNOLOGY													
Group weight	30					30			27.5	5	7.5		
Indicator weight	3	1.5	4.5	19.5	1.5	4.5	4.5	21	27.5	5	2.5	2.5	2.5
SOCIAL SCIENCE													
Group weight	32.5					32.5			25	2.5	7.5		
Indicator weight	3.3	1.6	4.9	21.1	1.6	4.9	4.9	22.8	25	2.5	2.5	2.5	2.5

Source: [8]

ARWU considers every university that has any Nobel Laureates, Fields Medalists, Highly Cited Researchers, or papers published in Nature or Science. In addition, universities with significant amount of papers indexed by Science Citation Index-Expanded (SCIE) and Social Science Citation Index (SSCI) are

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also included. In total, more than 1200 universities are actually ranked and the best 500 are published on the web. Universities are ranked by several indicators of academic or research performance, including alumni and staff winning Nobel Prizes and Fields Medals, highly cited researchers, papers published in Nature and Science, papers indexed in major citation indices, and the per capita academic performance of an institution. Scores for each indicator are weighted as shown below to arrive at a final overall score for an institution (table 2) [9].

Table 2

Indicators and Weights for ARWU [9]

Criteria	Indicator	Weight
Quality of Education	Alumni of an institution winning Nobel Prizes and Fields Medals	10%
Quality of Faculty	Staff of an institution winning Nobel Prizes and Fields Medals	20%
	Highly cited researchers in 21 broad subject categories	20%
Research Output	Papers published in Nature and Science*	20%
	Papers indexed in Science Citation Index-expanded and Social Science Citation Index	20%
Per Capita Performance	Per capita academic performance of an institution	10%
Total		100%

Source: [9]

Today universities with a view to train high quality professionals should be effectively represented in the Internet space. This aspect highlights ranking Webometrics (Ukrainian universities are also in it). The four ranks were combined according to a formula where each one has a different weight but maintaining the ratio 1:1 (table 3) [10].

Table 3

Indicators and Weights for Webometrics [10]

Indicator	Weight
Visibility (external links) (the total number of unique external links received (inlinks) by a site, according to Yahoo Site Explorer.	50%
Stize (web pages) (number of pages recovered from four engines: Google, Yahoo, and Bing Search)	20%
Rich files (after evaluation of their relevance to academic and publication activities and considering the volume of the different file formats, the following were selected: Adobe Acrobat (.pdf), Adobe PostScript (.ps), Microsoft Word (.doc) and Microsoft Powerpoint (.ppt). These data were extracted using Google, Yahoo and Bing.)	15%
(Google) Scholar	15%
Total	100%

Source: [10]

So, according to J.I Salmi [1], Hsiou-Hsia Tai [3], Y.Sharma [4] the main factors distinguish top international universities from their competitors: 1) a high concentration of talented teachers, researchers and students (the recruiting of students and staff without concern for national borders enables to focus on attracting the most talented people and open themselves to new ideas and approaches. Harvard, for instance, has a student population that is 19%

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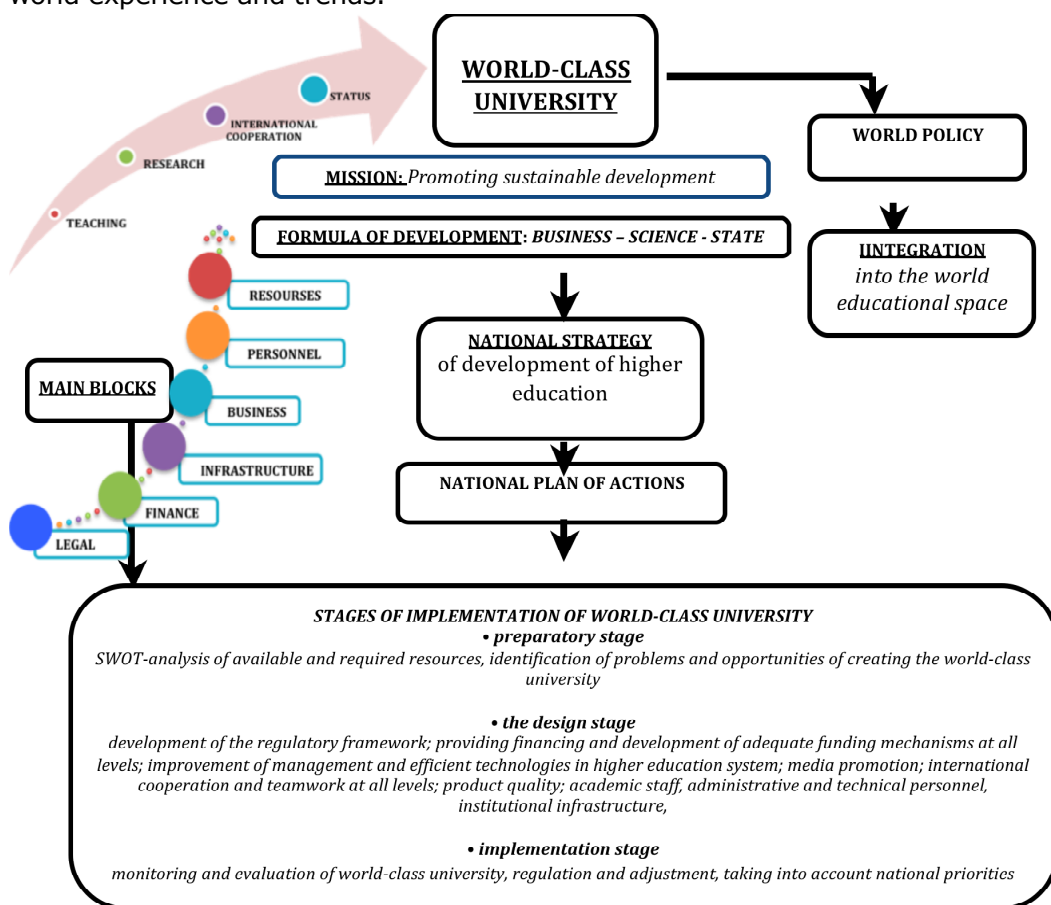
international; Stanford, 21%; Columbia, 23%. At the University of Cambridge, 18% of the students are from outside the European Union); 2) the sizable budgets (world-class universities have several sources of funding: government money for operational spending and research, contract research from public organizations and private firms, and earnings from endowments, gifts and tuition fees); 3) most of the world-class universities have medical schools (institutions that have a significant commitment to biomedical science tend to have a competitive advantage than institutions that are more committed to other subject areas); 4) a combination of freedom, autonomy and leadership (world-class universities thrive in an environment that fosters competitiveness, unrestrained scientific inquiry, critical thinking, innovation and creativity).

World university rankings show not only the quality and competitiveness of education institutions at the global level, but the level of the whole country. It should be acknowledged that examples of "world-class universities" show how important it is to take into account global tendencies and national traditions demonstrating a country's uniqueness and competitiveness. Ukraine needs to attract additional resources to provide socio-economic innovation growth as a basis for sustainable development of the country. So we propose to create the projects of our own "world-class university" that can promote economic growth through the realization of the potential in various spheres. As Y.Sharma noticed: "Although some of the world's top-ranked institutions such as Harvard, Cambridge and Oxford are hundreds of years old, a series of case studies of successful world-class research universities, prepared by the World Bank, shows that a faster and more effective approach to achieving world-class status is to establish a new institution" [4].

However, the process of creating and implementation of "world-class university" has its own opportunities and benefits on one hand, and risks and problems on the other hand. But the results of "world-class university" for country in general can be new knowledge, experience and innovations, new technologies, products and services, new forms of business and employment opportunities, attractive additional advertisement of a country, new investments, etc. In a changing context of the world tendencies, challenges and contradictions include a growing role of higher education for development of the country and undoubtedly it's very important to develop the conceptual model on "world-class university" as a tool for implementing sustainable development strategy in Ukraine based on the constructive interaction of business, science and state at appropriate levels through the improving the use of existing geo-economic and scientific potential in conditions of global challenges. Thus, let's define the conceptual points (figure 1): model on "world-class university" is formed as an important part of a national sustainable development strategy that provides a

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balanced and comprehensive development of the higher education system with increasing the efficiency of domestic educational institutions; providing structural reforms with a view to ensure the functioning and development of the “world-class university” (main components: the legal framework, finance, institutional infrastructure, business, personnel, resources, science), taking into account national interests and priorities of Ukraine; constructive interaction between business, science and state at appropriate levels to improve the using of existing geo-economic and scientific potential for creating own world-class universities; integration of national education system into the global educational system in the context of active and constructive cooperation in the implementation of the above plans; choosing the optimal model for Ukraine, taking into account the world experience and trends.



*Figure 1. Conceptual model on "World-Class University"**

*Source: author

Available information indicates that Ukraine for the development of the world-class universities and achieve its strategic objectives primarily to do the following

steps: analysis, audit and make the necessary changes to the regulatory framework; development of a national strategy of development higher education and adequate measures to provide the building of world-class university; further improvement of management and technologies in higher education system; active cooperation with international organizations and experts through the mobility of students and educational staff, joint educational programs, international collaboration in the framework of various research projects, etc.

Obviously, a place in university rankings reflects the relevant parameters such as quality of education, scientific potential, quoting scientific publications, inclusion into the global information field, the credibility of the institution, the potential to attract talented students and faculty, reputation among employers and others. Despite that Ukraine has great intellectual potential in terms of providing quality education, unfortunately, we must note that there has been a significant deterioration in the national higher education system that needs urgent government intervention to improve the current situation.

Conclusions and directions of further researches. We can summarize, Ukrainian universities almost don't get into the world rankings or take very low positions. So, for Ukrainian universities a place in the respective reputable world rankings should be as a signal to reflect the problems facing universities in a globalized education, and therefore to take adequate measures to remedy the situation. In the context of building knowledge economy the development of quality education and the building of world-class universities is a main priority for Ukraine. The critical view of realistic situation in Ukrainian higher education demonstrates that Ukraine strives to be more distinctive in its offer of high quality education. It outlines the importance of the balanced qualitative and quantitative approach to management of higher education. Finally, it underlines the crucial role of quality management in helping to achieve strategic aims of development of higher education in the process of shaping its worldview values and the integration into the world educational space.

Thus, it has to be born in mind that despite some positive changes and achievements the development of Ukrainian higher education requires the accumulation of a wide array of domestic and international resources from different sources with the purpose of catalysing the building of world-class universities. Thus, as mentioned above, "world-class university" can be an effective instrument for achieving the integration of Ukrainian educational institutions into world educational space and increasing trust to them. **Further research** should be focused on developing and implementing of world-class universities in Ukraine based on a comprehensive analysis of complex problems and their solutions in the context of the integration of Ukrainian educational institutions into world educational space and increasing trust to them.

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WORLD-CLASS UNIVERSITY AS A CONTEMPORARY DIMENSION OF STRUCTURAL TRANSFORMATIONS IN HIGHER EDUCATION

Abstract

Nowadays, in the modern globalized world, the philosophy of higher education is changing dramatically, and the higher education system of Ukraine requires a completely new development paradigm as the appropriate response to global systemic problems and contradictions. The main international university rankings and place of Ukrainian higher educational institutions in them are examined in the article. It should be noted that each country wishes to be represented in international university rankings, thus it is necessary to create and develop world-class universities. Key characteristic features of a world-class university are analyzed in the article and a conceptual model of a world-class university is suggested.

Keywords: higher education, international ranking, world-class university, sustainable development, economic growth.

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