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WIKINOMICS IN THE HIGHER EDUCATION: THE NEED TO USE TOOLS AND INSTRUMENTS

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The article is devoted to the possibility of using the latest management models in modern higher education. A new economic model based on the use of information technology is analyzed - this model is called "Wikinomics".

Herein the essence of this model is determined - namely, peering, i.e. cooperation of equals, as the basis for the existence of the whole wikinomistic paradigm. The following key principles of wikinomics: openness, exchange of ideas, equality and globality are studied, as well as their content is adapted for use in the provision of higher education services.

In the article the possibility of using the tools of modern management models in higher education, namely wikinomics, is analyzed. The mechanism of functioning of online platforms of the educational courses is considered, and their compliance with the existing requirements of higher education is determined. The possibility of standardizing the use of wikinomistic approaches in higher education through non-formal and informal education is studied. The essence of non-formal and informal education is considered and the thesis that wikinomics is a manifestation of informal education is proved. The importance of adhering to the wikinomistic principles in informal education is proved. The need for the existence of online educational platforms as a tool for building an individual educational trajectory is postulated.

It is argued, that educational courses that are located on the recognized online platforms can and should be considered as the full-fledged educational components of the educational programs.

Herein the necessity of using the principles and approaches of wikinomics in higher education as the guarantee of rapid response to the changing labor market requirements and as the effective tool for increasing the competitiveness of modern students is substantiated

Keywords: wikinomics, higher education, educational courses, online platforms, peering, informal education, non-formal education

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1. Introduction

Ukraine's modern education is still in the net of the post-Soviet heritage. The inertia of changes in the higher education system does not allow to fully complete the transformation and achieve compliance of the educational services with the market requirements.

The announced principle of university autonomy has remained predominantly just a declaration. Weaknesses in the formation of the academic programs are not supported by financial and managerial independence.

The market for the educational services is in the state of stagnation, and the level of knowledge acquired does not meet the requirements of employers.

The existing methods and technologies for building the educational process do not take full advantage of modern economic achievements, and attempts to integrate new management models and technologies into existing methods of higher education are often chaotic.

2. Literary review

The works of both foreign and domestic scientists are devoted to the study of wikinomics as a new management model. Thus, for the first time the theory of

wikinomics was formed by D. Tapscott and A. Williams [1], who defined the essence of this concept and gave the basic mechanisms of its use. In the later works of R. Lombardi [2], D. Kniazev [3], A. Hlyva [4], V. Shved [5–8], A. Zhemchuhov [9] and O. Marchenko [10] there is the further analysis of the content of wikinomics and the possibilities and experience of its use in the economy of post-Soviet countries. In particular, the possibility of using wikinomistic approaches to management in Ukrainian realities was analyzed and the key features of the Ukrainian wikinomistic approach were identified [2, 7, 5, 10]. However, the main emphasis in these works is done exclusively on the entrepreneurial component, and the authors consider wikinomics as an appropriate business strategy [3, 4, 9]. In addition, a retrospective analysis was conducted and the features of wikinomics in the context of its origin from the psychological and business theory of collective action were identified [6].

That is, in general, the author concept of D. Tapscott and A. Williams is still in the net of business activity, and these researchers continue to consider wikinomics quite narrowly, not seeing the potential for its spread to other areas of human activity. It should be noted, that in

his later work V. Shved substantiates the general possibility of using the tools of behavioral economics, which in essence includes wkinomics, in educational activities [8]. However, this work is conceptual in nature, and therefore the issue of using the wkinomistic approach in education needs further study.

The vast majority of authors consider wkinomics purely as the latest economic model, not allowing the possibility of its use in other spheres of life. Thus, a critical analysis of the work of the above researchers, conducted by the authors in previous articles, suggests that wkinomics is not only a business model but also a much broader phenomenon that can be actively and successfully applied in the social and educational spheres of mankind.

The works by V. S. Zaiarna [11] are devoted to the problems of non-formal and informal education as a key element of the transformation of the educational system, in which it is studied the field of non-formal education as a part of the implementation of the concept of lifelong learning; by O. Ivkina [12], who studies civic education (as non-formal education), i.e. learning to be a citizen in the broadest sense.

A fundamental study by Andreas M. Kaplan and M. Haenlein [13] examines the impact of the digital revolution on the higher education system, with particular emphasis on mass online courses as a part of the learning process. The authors study the possibility of using e-learning courses as a part of the acceptable and recognized educational system, as well as the importance of using online tools in training.

In the report, prepared by Heather L. Ainsworth, M.Sc. and Sarah E. Eaton [14], the essence of learning and the relationship between its formal, non-formal and informal varieties are investigated, as well as the differences between them are studied. In addition, attention is paid to the possibility of connecting these types of learning with science.

Also the work of A. Rogers [15] is devoted to the issue of non-formal education, in his book "Non-formal Education: Flexible Schooling or Participatory Education?" he studies the importance of non-formal education in the training of modern specialists; O.V. Reutblatt [16] and others.

Such authors as M. Callanan, C. Cervantes and M. Loomis [17] deal with the issue of the informal education, in their fundamental research they identify the key aspects of the informal education. In the work by V. Rogoff, M. Callanan, K. Gutierrez and F. Erickson [18] attention is paid to the study of the peculiarities of organization of the informal education. It should be noted, that we generally agree with the position of the above authors, but not all of their conclusions and suggestions are currently possible to implement in Ukrainian realities. In the work by I.P. Zhukevych [19] informal education is considered as a factor of transformation of the modern education, but the author focuses exclusively on the informal education, ignoring non-formal education and does not consider the tools of the wkinomistic approach.

In the article by K. Buhachuk [20] the comparative essence of formal, non-formal and distance education is considered and the possibility of their use is studied.

It can be noted, that in general, the issue of informal and non-formal education is quite popular among researchers, but the vast majority of them focus on pedagogical, social and psychological aspects and tools, mostly ignoring management tools.

Therefore, it should be noted, that none of the above authors paid due attention to the possibility of using the tools of modern management models in higher education as the full and recognized educational service. The practice of using wkinomics tools in educational activities is also ignored.

3. The purpose and objectives of the study

The purpose of this article is to analyze the possibility of using the approaches of the latest management models in the educational process.

To achieve this goal we set the following tasks:

1. to explore the possibility of using the wkinomistic approach in education and emphasize the need for total openness, accessibility, comparability and complementarity of the existing university education systems;

2. to prove the possibility of using the informal education in the academic educational process;

3. to emphasize the need to unify the tools of educational university autonomy in order to comply with the wkinomistic approach, which is the key to the flexibility of the individualized educational process.

4. Materials and methods

During the study a set of the theoretical methods was used: comparative and retrospective analysis of economic, educational, didactic, psychological and pedagogical, legal and methodological literature in order to study the conceptual provisions and categories of research; structural and system analysis to determine the readiness and problems of the modern system of higher education in Ukraine to worldview changes in educational activities.

5. Research results and their discussion

As already mentioned, the main wkinomics idea is "either companies create open business models or they stay in the pages of history textbooks." In relation to the educational process, this idea can be formulated as follows – either create the most open institutions of higher education with a minimum number of barriers at the "entry" and "exit", or higher education institutions just disappear [1].

According to the authors' vision, wkinomics is the reflection of changes in technology, business and management. The basis of this phenomenon is the emergence and development of the Internet, which has made goods and services maximally accessible from anywhere in the world. And users no longer just communicate, but unite in communities by interests, goals, to solve any problem or to create a new product.

The main engine of wkinomics includes global communication channels. Today, Internet is transforming from an imaginative environment that was previously concerned about poor visualization and lack of flexibility into the next-generation Web 2.0 information space, a giant computing platform capable of providing tangible

services, and even Web 3.0 – a vast decentralized set of big data, allowing you to quickly create a unique and high quality product at the lowest market demand.

Modern illustrations of the relevance of the phenomenon of wkinomics are self-organized Internet projects – from the world's largest encyclopedia "Wikipedia", created by its members, and ending with the free operating system "Linux" or the project "SETI @ home" – a scientific non-profit project that uses free resources on the computers of volunteers, to search for extraterrestrial intelligence.

In addition to purely non-profit projects, the benefits of the principles of wkinomics are actively enjoyed by the global corporations, including: Boeing, Dow, DuPoint, Procter & Gamble, Novartis, which offer everyone their assistance [2].

That is, the importance of wkinomistic principles and approaches lies in the rapid adaptation of the projects that are adhered towards the changes in the state and society. Rapid and adequate response to the change allows you to transform in a timely manner, respond to the new challenges, ensure the own competitiveness and rationally use the available resources.

It should be noted, that today Ukrainian education has not yet "found itself", existing methods no longer bring the desired result, and attempts to create something new are faced with lack of proper regulation, unwillingness to changes, lack of traditions of autonomy and self-government, but most of all - lack of motivation of the teaching staff.

Most Ukrainian universities still prefer a closed model of operation, when even most of the information, whose public disclosure is required by the legislation, is open or formal or difficult to access.

Educational and methodical materials, used in the educational process, are most often placed in the internal university repositories, which are accessible only to the students of this institution of higher education. In the best case, there are freely available descriptions of the educational programs, parts of the educational components (educational courses), or syllabi. But we can't say that anyone can get acquainted with all the materials of any training course. This situation is often justified by the fact that teachers are not ready to share their experiences with everyone, and management can not find the right motivation to promote open education.

In the field of education, an increasing number of universities are creating the open educational platforms, which can be attended by any student. Also, you can act as a teacher, you only need to meet the quality criteria and be a professional in your own field. The final result of training is confirmed by the certificate of completion of the courses, and such a certificate can be both paid, and free. The success of the course is determined by the number of the students who have studied it, as well as the recognition of the certificate, received by employers.

The basis of wkinomics is peer-to-peer production, a method of producing goods and services based on self-organized communities, whose members come together on a voluntary basis to achieve certain goals. Often, creating a product within such a system is not the main place of human work. Not only does a person do

this in his/her spare time, but he/she also often does not receive money for it. Although many international corporations still use the practice of small monetary rewards for the best solution to this problem [5].

Universities generally do not pay authors for educational courses directly. Payment for their work is made by attendees and students. Poor quality and unpopular products do not receive support from the students and are rejected from the curriculum.

Monetization of the model of the open educational courses, both online and offline, is at the stage of obtaining a certificate of successful completion of the courses. There is no direct interest of the lecturer in as many students as possible who have successfully completed their studies, because, as already mentioned, for not all teachers creation of the educational product is the main place of work.

Wkinomics is based on four powerful principles - openness, exchange of ideas, equality and globality. In relation to higher education, these principles can be stated as follows:

- openness – universities provide full openness and accessibility, minimizing barriers to "entry" and "exit", as well as demonstrating accessibility for the exchange of the external ideas and human resources involved;

- exchange of ideas – universities provide access to intellectual property to anyone, reducing the percentage of information, closed to the use and dissemination. Increasingly, patents, owned by the universities, are made freely available, and articles and publications are distributed under the Creative Commons license.

- equality – there are no subordinates and superiors, with this form of education all participants in the educational process are equal. As mentioned above, anyone can take part in the formation of a learning product, just as anyone can take part in learning.

- globality – there are no regional or physical borders for joint activities. The development of global communication channels provides access to the educational product at any time and from any place [21].

It should be noted, that the possibility of using wkinomics in the educational process is to comply with the full range of the above principles. Failure to adhere to any of these principles destroys the very idea of wkinomics.

In today's global educational world, the application of ideas and principles of wkinomics is becoming increasingly popular. Yes, indeed, there are public mass online educational platforms, such as: Coursera, Khan Academy and others. Such platforms are being developed in Ukraine – EdEra and Prometheus projects, etc.

Many of the world's leading universities officially recognize the courses, hosted on the Coursera platform, as recommended for enrollment. Moreover, the authors of these courses are not full-time teachers of the universities and colleges, but professionals of their craft. The mechanism of credit is as follows: the knowledge seeker independently studies the course, posted on the platform, and after the study there is a face-to-face online exam before the university examination board. This service is paid for by the applicant. After successfully passing the exam, the applicant receives an official certificate from

the educational institution, in which he/she took the online exam.

This change in the methods of the traditional education ensures the maximum availability of the educational services, reduces the applicant's costs for training, and also allows the applicant to independently form their own educational trajectory.

In addition, the use of the above method allows to obtain the quality education also by the students with the special educational needs, as it promotes their barrier-free inclusion in the educational process.

If we try to regulate the use of wikinomics in education, it turns out that the Ukrainian legislator in some way took into account the global educational trends and the Law of Ukraine "On Education" [22] defined two such types of education: non-formal and informal education.

Thus, according to Ukrainian law, non-formal education is education that is usually obtained through the educational programs and does not involve the award of the state-recognized educational qualifications by the level of education, but may end with the award of the professional and/or partial educational qualifications.

At the same time, informal education or self-education is education that involves a person's self-organized acquisition of certain competencies, in particular during daily activities, related to the professional, social or other activities, family or leisure [22].

If we analyze the key differences between these two types of education, they differ only in the degree of institutionality. Thus, non-formal education provides for the availability of certain educational programs, and according to Ukrainian legislation, educational programs are accredited by the National Agency for Quality Assurance in Education at the request of the relevant higher education institution. Thus, it can be argued, that in terms of standardization, non-formal education inherently tends to formal education.

Non-formal education in Ukraine is in no way standardized [11], i.e. each provider of "non-formal" educational services carries out such activities at its own discretion.

Thus, on the one hand, non-formal education operates through the educational programs, and on the other hand, it remains out of the attention of Ukrainian education regulators. Returning to the principles, underlying wikinomics, it can be argued, that non-formal education does not adhere to them.

Types of non-formal education include:

- professional advanced studies courses;
- internship;
- civic education.

Informal education, according to the legislator, is essentially self-education (Article 8 of the Law of Ukraine "On Education") [22]. According to UNESCO standardization, informal education is a form of education that is based on the planned and purposeful activities of the individual, but is not institutionalized and much less structured than other types of education. It is assumed, that informal education can include training in any place convenient for a person: at home, at work, on a trip, etc. [23].

The key principles of informal education can be identified as follows:

- close relationship with practice;
- education, taking into account the actual and specific needs of each knowledge seeker;
- flexibility and variability "just in time";
- free choice of place, time and term of study.

All these principles directly resonate with the basic principles, underlying wikinomics. Openness is realized through interconnectedness with practice and flexibility, exchange of ideas involves education, taking into account the needs of the applicant, equality is largely determined by free choice of time, term and place of study, and globality requires adequate and timely response to the changing labor market requirements and needs.

The most common online educational platforms in Ukraine or mass open online courses (MOOC) should be attributed to the informal education. In essence, mass open online courses are online courses with large-scale interactive participation and open access via the Internet [13].

The key difference between such courses and distance learning is the fact that online platforms are not institutionalized.

In addition, according to the principles of wikinomics, this form of education implies total openness and equality – anyone, anytime and anywhere has the opportunity to join the study and study for as long as they see fit. No expenditure of resources other than time is expected. Similarly, in order to create an online course you need to be a recognized professional in your field and that is all. You do not need to be a teacher or an official of an educational institution.

The quality and demand for the course will be determined by the consumers of the educational services, and the lack of the regulated educational training program will not allow to force students to study frankly "unsuccessful" courses. Globality implies that such a course should be aimed at any consumer in the world, and therefore extremely popular online open courses from the world's leading universities. However, of course, there is a requirement for the language of instruction. English-speaking consumers of the educational services are banal most in the world.

The exchange of ideas implies the possibility of the rapid change of the educational course both at the request of the consumers and under the influence of the changes in world science or technology.

As already mentioned, the most common online platforms in Ukraine are EdEra and Prometheus. Their popularity is explained by the fact that they are designed mainly for Ukrainian-speaking audiences and use Ukrainian realities in the educational process. Yes, indeed, it can be noted, that in addition to these platforms, there are other projects, in particular:

– Ukrainian Academy of Leadership. A 10-month project, aimed at school graduates and aimed at creating creativity and "SoftSkills";

– Other Education. A project, aimed at developing civic activism.

– Open University of Maidan. An educational project, created by activists to promote the formation of the quality civil society through education.

– Proeducation. Foundation for the development of public education in villages and small towns of Ukraine.

– Etc.

However, although Wikipedia classifies all of the above projects as a form of non-formal education, this approach should be rejected. As already mentioned, informal education should include only those projects that use the wikinomistic paradigm, while others are types of non-formal education.

Thus, the Ukrainian Academy of Leadership has a strong territorial affiliation and clearly defined time limits; "Other Education" – restricts participants in the choice of the educational courses by the available coaches and mentors, which also does not allow to talk about compliance with the principle of globality; "Open University of Maidan" is only an integral part of this project, namely "VUM-online" is able to adhere to the stated principles of openness, exchange of ideas, equality and globality; "Proeducation" – aimed at working only with a certain audience of the consumers of the educational services, makes little use of the possibilities of modern online platforms. In addition, the official website of the project is not available at the time of writing.

Ukrainian projects EdEra, Prometheus and VUM-online in general correspond to the essence of wikinomics, in their activities adhere to the above wikinomistic principles, and in addition can be attributed to the informal education. It is worth noting their prevalence and usability among Ukrainian-speaking consumers of the educational services.

However, the education system in Ukraine today is fundamentally unprepared for the use of wikinomistic approaches in the educational process. The teaching staff is skeptical about the benefits of the informal education in general, and the possibilities of the online educational platforms in particular, to a greater extent forming their attitude on the basis of the contrived reasons. Thus, the Ministry of Education and Science of Ukraine recommended the use of some courses on the EdEra platform, but their number is frankly minimal, and using the declaration of university autonomy, the ministry decided to use the online educational platforms in higher education at the expense of the universities.

In addition, the issue of considering such courses as the full-fledged components of a certain educational program is not regulated by the law. Yes, on the one hand, their recognition is not regulated anywhere, but it is not prohibited. However, the draft Regulation on the Procedure for Expulsion, Interruption, Renewal and Transfer of Persons Studying in Higher Education Institutions and Granting them Academic Leave significantly narrows the possibility of such consideration, by bureaucratizing mobility and regulating autonomy.

That is, on the one hand, each higher education institution can independently regulate the issue of recognizing or not recognizing the above courses as achieved learning outcomes and acquired competencies. But, on the other hand, the degree of settlement of such recognition differs significantly in each educational institution, often requiring applicants a large number of documents, confirming the content and quality. Such regulation leads to disappearance of the key benefits of the online educational platforms and the very ability to comply with the principles of wikinomics.

Ukrainian universities actively use information technology in education, but, as a rule, it all comes down

to the use of the Moodle platform and its derivatives in the educational process. Analysis of the report of the National Agency for Quality Assurance in Higher Education for 2021 confirms this thesis, as according to the reports, only one university in Ukraine uses integrated specific software in management of the educational activities that meet wikinomistic principles [24].

However, such products, based mainly on the tools of the Moodle platform, are available to the students of only one university, and such platforms contain mostly theoretical materials, methodological developments and recommendations, tools for testing knowledge, multimedia materials and video presentations of the educational courses etc. The share of the interactive tools and materials (full-fledged videos of all lecture material; educational simulations; collective business games, unique educational trainings, etc.) is still insufficient.

It is worth noting, that in recent years the quality of digitalization of the educational services has improved significantly. Yes, indeed, many higher education institutions have integrated the additional features and tools into the Moodle platform, such as the Big Blue Button for Moodle, IntelliBoard, H5P, and more. The list of the information and communication tools, used in the educational activities, has also expanded. These include Zoom, Kahoot, Miro, Jamboard, Google Meet and Google Forms, Mentimeter, AnswerGarden and others. However, all these tools and instruments primarily improve the quality of education and facilitate the learning process that takes place at a distance. There is no set standard or agreement between the educational institutions in the issue that any preference will be given to one instrument or another. Therefore, there is a situation when teachers of one department prefer Zoom and Miro, and another – Google Meet and Google Jamboard. And all this is used in addition to the tools of the Moodle platform. That is, even within one educational institution, there is no coherence, which creates artificial barriers to some extent, minimizes equality of opportunity and access, and does not promote globality.

Undoubtedly, such pluralism of the possibilities is welcomed, but it cannot be said that it is in line with the wikinomistic principles. What kind of accessibility can we talk about when the average student needs to learn more and more new tools? It is possible to draw an analogy with modern business, in which the standard is to use the analogue of Zoom and Google Meet – Webex. This information and communication platform almost completely complies with the Zoom functionality, and in many respects even surpasses, in particular – integration with the MS Office package. That is, the business environment, realizing the importance of the wikinomistic paradigm, agreed on the tools and platforms used. This approach minimizes barriers, promotes openness, equality and globality.

In addition, Moodle tools are often used purely as distance learning technology, rather than as the full-fledged learning management system. From the very beginning, the developers of the platform provided opportunities for broad individualization, scaling and integration. However, there is still no possibility of full integration between EDEBO and the Moodle platform, it is

extremely difficult to achieve effective interaction between Moodle and existing accounting or financial accounting programs, it is not possible to use Moodle to create a unique schedule of the applicant who chose the individual educational trajectory, there are no “additional downloading” of achievements, received in the informal education system, etc. That is, the possibilities of the platform are huge, but their use requires significant additional financial and intellectual resources.

Requirements for the operation of the Moodle platform are also determined by each educational institution individually, and therefore prone to excessive institutionalization.

The closed nature of the university online educational platforms and isolation of the repositories make it impossible to use the wikinomistic approaches in the educational process of higher education in Ukraine.

It should be noted, that the study was conducted before the Russian aggression against Ukraine, so Ukrainian modernity further actualizes the above, shifting the emphasis to recognition of the non-formal and informal education as full components of the institutional higher education. In further research, the team plans to pay attention to development of the methodological approaches to use of the wikinomistic principles and tools in the educational process, as well as promotion of the ideas of openness, accessibility and interchangeability in use of the university education systems.

6. Conclusions

1. It should be argued, that Ukrainian universities need to think about increasing their competitiveness by adhering to the wikinomistic paradigm, stop isolating themselves in their own educational process, and promote the globalization of Ukrainian higher education.

It should be emphasized, that isolation of the educational processes, lack of flexibility of the educational programs and declarative commitment to academic mobility significantly reduce the specificity of Ukrainian higher education. However, this situation is largely due to the declarative nature of university autonomy, which makes it easier to “brush off” needs of the students and market demands than to try to meet them.

Wikinomistic principles and approaches, on the basis of which the educational courses have been developed, but also knowledge, acquired in the system of the informal education, should be recognized by the universities as the full-fledged educational components, and acquired competencies and learning outcomes should be taken into account in the educational program.

2. It should be noted, that due to the active use of information and communication tools in the educational

process, the university community needs to develop the uniform standards of requirements for such tools. Unification of the requirements and opportunities will allow to minimize the artificial barriers that arise when mastering new programs and tools, promote equality by balancing the level of mastery of a tool for different students, and allow applicants to better exercise their right to education. By the way, even a shallow analysis of the informal education platforms allows us to assert their structural and substantive similarity, which once again emphasizes the importance of compliance with the wikinomistic principle in the educational activities.

Obviously, it is even worth thinking about the possibility of building a modern student's education purely on the basis of the wikinomistic approach, which will not be divided into lectures and practical classes, classroom and independent work. The general term of mastering a certain course, the minimum time of consultations and the form of control will be determined. The student will individually choose time, place and means to obtain knowledge. The educational institution will only record the fact that the student has mastered the relevant competencies and the level of achievement of certain learning outcomes. The amount of training in this case will be measured purely by ECTS credits without reference to the number of hours spent. However, such a situation is possible only with the availability of the appropriate resources in the universities and high self-motivation of the applicants.

3. In addition, recognition of the wikinomistic tools will create extremely flexible educational trajectories, increase the response of the education market to the changes in the needs of employers, and will not require universities to constantly update and accredit the educational programs.

Flexibility, responsiveness and high adaptability of the informal education, which incorporates best wikinomistic practices, is undeniable, and its widespread recognition by the academic institutions will increase competitiveness of the educational programs and higher education institutions that meet the most pressing market demands.

The 25 % requirement for selectivity of the educational components, if recognized as the possibility of its implementation through learning using the mass online platforms, will also contribute to concentration of the educational services in the competitive higher education institutions.

Conflicts of interest

The authors declare that they have no conflicts of interest.

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