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**FORESIGHT FOR SOCIAL AND LABOR MOBILITY OF YOUTH  
BASED ON THE USE OF THE HACKATHON ECOSYSTEM**

*The article discusses contemporary issues related to social and labor mobility of youth. In particular, it is observed that social and labor mobility is influenced by such factors as social order; ethnocultural stereotypes at the modern stage of social process development; system of social and moral values; changes in the employment types and patterns, a range of professions and occupational prestige in public opinion; demographic processes; regional specifics; social structure and organisation; settlement structure, etc. The study reveals that from a microenvironment perspective, the youth social and labor mobility level is primarily affected by the following group of impact factors: family, education system, immediate environment, media, territorial specifics of professional and social structure and others. The study findings demonstrate that the correlation between objective realia and microenvironment in the process of professional self-identity of an individual could be viewed as the relationship between the two external sources of shaping a person's professional focus. To attain the research agenda, foresight technologies were employed to encourage social and labor mobility of young people. Data collection on graduates was conducted at the Kyiv National University of Technologies and Design during 2019–2020. Based on the use of the Hackathon ecosystem, this study presents a foresight on youth social and labor mobility. It is argued that such a mechanism contributes to building socioeconomic relationships between institutions, enterprises and organizations on youth social and labor mobility, applying a systematic approach to tackling the issues under consideration, developing the key areas for effective interaction, establishing socioeconomic, legal, psychological and didactic terms to coordinate their activity. The regulatory framework to manage social and labor attitudes of young people based on the University Hackathon ecosystem involves the following mechanisms: institutional (developing and implementing a regulatory framework as well as the government workforce policy), organizational (assessing the situation within the educational environment: social, household-based, psychological), economic (which covers optimality, efficiency, structuring) along with personal and motivational (insights into the demands, values, interests and motifs).*

**Keywords:** *Hackathon ecosystem; university; foresight; youth social and labor mobility.*

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**ФОРСАЙТ СОЦІАЛЬНО-ТРУДОВОЇ МОБІЛЬНОСТІ МОЛОДІ  
НА ОСНОВІ ВИКОРИСТАННЯ ХАКАТОН-ЕКОСИСТЕМИ**

*Статтю присвячено дослідженню актуальних проблем, пов'язаних із соціально-трудовою мобільністю молоді. Зокрема, зазначається, що соціально-трудова мобільність зумовлюють такі чинники, як громадський устрій; етнокультурні стереотипи сучасного етапу соціальних процесів; система соціальних і моральних цінностей; зміни у видах та формах трудової діяльності, перелік професій та їх престижність у громадській думці; демографічні процеси; регіональні особливості території; соціальна структура суспільства; структура розселення тощо. Виявлено, що на рівні мікросередовища на соціально-трудова мобільність молоді впливають, насамперед, такі фактори, як сім'я, система освіти,*

найближче оточення, засоби масової інформації, територіальні особливості професійної і соціальної структури та інші. Результати дослідження свідчать, що кореляція об'єктивних умов та мікросередовища в процесі професійного самовизначення особистості можна розуміти як співвідношення двох зовнішніх джерел формування професійної спрямованості особистості. Для вирішення поставлених завдань застосовано форсайт-технології щодо стимулювання соціально-трудової мобільності молоді. Збирання даних про випускників проводилось у Київському національному університеті технологій та дизайну впродовж 2019–2020 років. На основі використання Хакатон-екосистеми запропоновано форсайт соціально-трудової мобільності молоді. Доведено, що такий механізм дозволяє організувати соціально-економічні взаємозв'язки установ, підприємств та організацій з питань соціально-трудової мобільності молоді, забезпечує системний підхід до вирішення досліджуваної проблеми, заздалегідь проєктуючи основні напрями реалізації ефективної взаємодії, закладаючи соціально-економічні, правові, психологічні, дидактичні умови координації їх діяльності. Визначено такі механізми регулювання соціально-трудоустановок молоді на основі Хакатон-екосистеми університету, що охоплюють: інституційний (розроблення та впровадження нормативно-правової бази, державної кадрової політики), організаційний (аналіз умов усередині освітнього середовища: соціальні, побутові, психологічні), економічний (що включає оптимальність, ефективність, структурування) та особистісно-мотиваційний (вивчає потреби, ціннісні орієнтації, інтереси та мотиви) механізми.

**Ключові слова:** Хакатон-екосистема; університет; Форсайт; соціально-трудова мобільність молоді.

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### **ФОРСАЙТ СОЦІАЛЬНО-ТРУДОВОЇ МОБІЛЬНОСТІ МОЛОДІЖИ НА ОСНОВЕ ІСПОЛЬЗУВАННЯ ХАКАТОН-ЕКОСИСТЕМИ**

Статья посвящена исследованию актуальных проблем, связанных с социально-трудоустановкой молодёжи. В частности, отмечается, что на социально-трудоустановку влияют такие факторы, как общественный строй; этнокультурные стереотипы современного этапа социальных процессов; система социальных и моральных ценностей; изменения в видах и формах трудовой деятельности, перечень профессий и их престижность в общественном мнении; демографические процессы; региональные особенности территории; социальная структура общества; структура расселения и т.д. Выявлено, что на уровне микросреды социально-трудоустановки молодёжи обусловлена, прежде всего, действием такой группы факторов влияния, как семья, система образования, ближайшее окружение, средства массовой информации, территориальные особенности профессиональной и социальной структуры и другие. Результаты исследования свидетельствуют, что корреляцию объективных условий и микросреды в процессе профессионального самоопределения личности можно понимать как соотношение двух внешних источников формирования профессиональной направленности личности. Для решения поставленных задач применены форсайт-технологии, направленные на стимулирование социально-трудоустановки молодёжи. Сбор данных о выпускниках проводился в Киевском национальном университете технологий и дизайна на протяжении 2019–2020 годов. На основе использования Хакатон-екосистемы предложен форсайт социально-трудоустановки молодёжи. Доказано, что такой механизм позволяет организовать социально-экономические взаимосвязи учреждений, предприятий и организаций по социально-трудоустановки молодёжи, обеспечивает системный подход к решению

*проблемы, заранее проектируя основные направления реализации эффективного взаимодействия, закладывая социально-экономические, правовые, психологические и, дидактические условия координации их деятельности. Определены следующие механизмы регулирования социально-трудовых установок молодёжи на основе Хакатон-экосистемы университета, охватывающие: институциональный (разработка и внедрение нормативно-правовой базы, государственной кадровой политики), организационный (анализ условий внутри образовательной среды: социальные, бытовые, психологические), экономический (включающий оптимальность, эффективность, структуризацию) и лично-мотивационный (изучающий потребности, ценностные ориентации, интересы и мотивы) механизмы.*

**Ключевые слова:** *Хакатон-экосистема; университет; Форсайт; социально-трудовая мобильность молодёжи.*

**Introduction.** Currently, the results of sociological research show that the general trend is a decrease in the proportion of graduates who are determined with employment even before graduation in their senior year [1]. The main problem when looking for a job for graduates is the low initial pay for young professionals [2]. The time to find a job in their specialty has also decreased noticeably. The rating of difficulties faced by university graduates during the period of professional adaptation remains as follows: lack of practical skills and low initial pay, lack of legal culture, limited opportunities for job promotion, career, need for additional knowledge, problems in interpersonal relations, lack of demand for industry graduates and insufficient knowledge of information technology [3–5]. Knowledge of a foreign language, computer skills, high level of professional training, in-demand profession, personal connections, acquaintances, age, ability to find a common language with different people are considered the main requirements of the modern labor market [6]. The need of graduates for additional professional training is quite high. The preferred option of additional professional training for graduates working in their specialty is a second higher education [7].

In the regions, external migration contributes to the weakening of local human resources [8]. The territorial distribution of the labor force should be used to balance the labor market. This way of solving the problem of imbalance of labor supply and demand has a number of advantages over making science-based forecasts in staffing needs, as it is less science-intensive and costly, more operational, aimed at the near future and quick results [9]. Thus, the analysis of the main attitudes of young people and their life orientations allows us to conclude that the value of individual life emerges in the new conditions [10]. The main goals of young people are associated with justice, life well-being, optimism, personal independence [11]. It is necessary to implement an effective system of professional information, counseling and psychological support for young people. Its purpose is to increase competitiveness and facilitate the reorientation of young people to professions that are in demand in the labor market [12]. Social and labor mobility is a complex and multilevel social phenomenon, which acts as a dynamic system of perspective social orientation of young people, aimed at consciously positive changes in their lives in the context of their professionalization [13]; a way of planning and designing young people's own social and professional life through the gradual formation of professional present and future [14]. The process of transformation of modern Ukrainian society in conditions of unsecured employment is accompanied by new challenges to young people in the process of their professional self-determination, professional formation and professional career [15]. Therefore, socio-labor mobility and problems of vocational guidance of young people as the most important structural elements of their life positions and socio-economic strategies are decisive in the system of life orientations, leading to the achievement of qualitatively new states of social and working life in the professional environment.

The purpose of the study is to propose the use of Foresight technology to stimulate the socio-labor mobility of young people through the use of the University Hackathon Ecosystem. The

study was conducted on the basis of collecting information about graduates of Kyiv National University of Technologies and Design in 2019–2020.

**Materials and methods.** The methodology of the study is the use of Foresight technology to stimulate the social and labor mobility of young people through the use of Hackathon ecosystem of the university.

Collection of data on graduates was conducted at Kyiv National University of Technologies and Design in 2019–2020.

**Results and discussion.** It is possible to manage the socio-labor mobility of the region's youth in modern conditions on the basis of the cluster approach to the formation of the socio-economic system of professional education. The cluster is a group of neighboring enterprises, educational institutions and organizations operating in one sector of the region's economic complex. The cluster socio-economic system of social and labor mobility of the region's youth is the interaction of enterprises, organizations, institutions and educational structures on the basis of parity funding in order to create conditions for the vertical upward and horizontal mobility of young people, as well as to neutralize the conditions leading to downward mobility. The structure of the cluster socio-economic system includes the subjects of interaction (social institutions and organizations, enterprises, institutions, as well as employers, schools, universities and youth – on the regulating side), forms of regulation (depending on the level of implementation of the regulation process; types of socio-labor mobility of youth; youth belonging to different social groups) and regulatory functions (stabilizing, economic, innovative, distributive, regulatory, personal and motivational), through.

Vocational guidance work should be based on forecasting the demand of the economy for personnel of various qualifications in the region. It is advisable to place the responsibility for its organization on the relevant state bodies, the sphere of competence of which is the regulation of the labor market and employment, the organization of professional training. To overcome structural disproportions between the supply of educational services and the needs of economic sectors in qualified personnel [2], it is necessary to develop and implement a set of measures, including: determination of priority areas, specialties and directions of professional training, in respect of which state support measures will be implemented, including through state order, implemented on a competitive basis; bringing the structure of personnel training in accordance with the promising directions of economic development.

The role of regional executive authorities is increasing in solving the issues of optimizing the network of vocational training institutions, taking into account the needs of the regional labor market; determining the list of professions and specialties for which training is required in the region, establishing admission limits for vocational training institutions of different levels; creating regional funds for vocational education development, accumulating funds from state organizations, professional associations.

It is necessary to develop a methodology for forecasting the need for workers and specialists and graduates of vocational education institutions, which will allow regional executive authorities to reasonably form state targets for the admission of citizens for training, and to develop and implement a methodology for constructing indicators of the socio-labor potential of youth, which is applicable to the calculation and analysis of the regional social and labor potential of youth. Its use will make it possible to identify priorities in the activities of the state aimed at increasing the adaptive level of the population and its labor resources, and thus will help increase the level of competitiveness of the regional economy.

The vacancies market in the region today has a complex structure, which depends on the sources of information. Three quarters of the newspaper ad market consists of job vacancies. The advertisements on the websites more often contain information about jobs for clerks. The market of

vacancies, offered on websites, to a greater extent corresponds to the needs of educated young people, some of whom continue their studies at universities. There is an unsatisfied demand for workers: fitters, turners, milling operators, etc. There is a high demand for workers of trade and catering, medical institutions cannot fill the vacancies of doctors and nurses, and pre-school institutions cannot fill the vacancies of educators.

The system of continuing professional education in the region is weak. This is evidenced by the large number of job offers, especially for technical and blue-collar occupations. Managers of large industrial enterprises note the need for state assistance in the implementation of personnel retraining programs. The heads of medium-sized and small enterprises are more interested in the development of the external labor market. The official part of the open labor market is characterized by a significant number of vacancies for working professions. Unemployed young people are more interested in retraining than older unemployed people. Youth employment strategies more often include opportunities to move to other regions for employment than older and middle-aged people. The level of the unemployed's claim to wages is higher than the pay conditions offered by employers.

The labor market of Kiev region has a significant potential in terms of employment of workers with primary and secondary vocational education, while the labor potential of those in need of work is focused on the sphere of commerce, business and trade. The region needs to use the full potential of internal mobility of young people, which will reduce the need for external migration, weakening local human resources. The conditions of economic impact on the social and labor mobility of young people in the region that determine youth mobility are: at the macro level – the socio-economic situation in the region, the status and prestige of the profession; at the mesolevel – wage level, lack of conditions for career growth; at the micro level – gender, age, education, profile and qualifications.

State youth employment policy should be forward-looking (including on the part of the population) to form a modern structure of the labor force.

One of the main peculiarities of regional labor market of Kyiv region is the consideration of the influence of different factors on the processes of labor movement in the region. On the one hand, it is a movement directed to "entry", i.e. employment of workers; on the other hand, it is a movement to "exit" from enterprises, institutions, organizations, which can be considered as social institutions that regulate and reproduce social relations. Distinguishing between these two sides, we distinguish organizational and socio-structural, as well as institutional factors of social and labor mobility of young people. Organizational factors are related to the financial and economic situation of enterprises, institutions and organizations, their ability to pay high wages, and in the current situation it is also about modern wage payments. The two groups of enterprises, institutions and organizations are in different conditions on the labor market: the first takes advantage of excess supply, the second faces a labor deficit. Organizational factors include the peculiarities of the technological structure of enterprises, institutions and businesses, which determine the hiring of workers with certain qualifications. The following socio-economic processes have an ambiguous effect on young people's professional self-determination and choice of professions:

1. Structural transformations in the region's economy.
2. The heavy ecological situation.
3. Changes in the demographic situation.
4. Growth of rural unemployment.
5. Increase of intensity of supply of free labor force, which is characterized by low professional and qualification level.
6. Continuing marginalization of the population, the active "movement" to the cities of villagers who have no educational, vocational training and clear normative-value orientations.
7. Ambiguity of migration processes: "Outflow" of qualified specialists, uncontrolled "inflow" of low-skilled workers from the former republics of the Union.

If we compare the total number of workers and employees with the reduced volume of production, with the level of labor productivity, with the number of released personnel, the presence of unemployment in latent form will be evident, which is especially noticeable in agricultural regions. At the same time, there is a structural deficit in the professional sphere: highly qualified builders, woodworkers, agricultural products processors, social workers, jewelers, masters in traditional branches of national economy, specialists in processing precious stones, maintenance of water pipeline engineering, railroad transport, etc. are in demand. Naturally, the situation developing in the sphere of reproduction of personnel professional structure of the region is not left without attention of state institutions and organizations.

In general, purposeful activity to influence the professional self-determination of young people is concentrated in the education system and employment agencies. The function of state bodies is mainly administration, which can hardly be called coordination of one or another type of activity, much less a system that forms vectors for the development of regional socio-labor mobility of young people.

Drafts of a state target program for the development of vocational education and the law "On Education" are being developed; special incentive measures to encourage secondary specialized educational institutions to implement programs for the multistage training of students; the creation of a system of state order for the training of specialists with secondary vocational education and their employment. Transition to continuous education is planned; creation of the status of educational institutions for retraining and professional development of working and discharged workers; transition to an integral multilevel system to ensure interconnection and interchange of all forms and methods of education; opening of commercial departments, faculties, specialties.

Given the low prestige of vocational education, the Department of Elementary Technical Education plans to coordinate the needs of various industries for qualified workers through the following measures:

- creation of new vocational schools, colleges;
- lyceums for in-demand workers' specialties;
- modernization of existing vocational education institutions;
- training of a certain part of the pupils by order of the industrial enterprises, using the system of distribution of young specialists (return to the past), creation of tax and other benefits for such enterprises;
- development and implementation of a regional programme to train qualified workers for industrial occupations;
- training of professional staff in new professions at regional basic vocational schools to serve large investment projects;
- creation of a regional center, which will become a center for the exchange of experience, professional development of workers, and the development and production of educational and training and methodological products.

The management of specialized secondary institutions is engaged in strengthening ties with institutions and organizations in the profile activity; restoration of training and production complexes; opening of new departments in scarce specialties. It should be noted that research institutions have recently begun to pay more attention to the formation of professional orientations of young people. The merit of academic scientists is their participation in all-Ukrainian youth programs. An important moment in the training of specialists can be considered the resumption of the practice of working with university students, the selection of graduates during employment placement, the strengthening of direct links between scientific institutions and industrial enterprises, the creation of a national network of computer telecommunications for science and higher education and the development of a corresponding state program in the region.

One of the important areas of influence on the professional self-determination of young people is the organization by municipal bodies of public works for school students aged 12 years and older. Traditionally, public works are carried out for young people from among the unemployed in order to alleviate unemployment and social tension. In many developed countries public works programs operate constantly and have the following functions: to provide financially for low-income populations, to help young people in various life situations (initial entry into employment, compensation, job loss, etc.). At first glance the essence of public works is traditionally not career guidance, because most people employed in them are unlikely to choose a profession as a collector of household waste, a painter, a landscaper, etc. The point is different: by participating in public works, young people should be aware of the value of any work, to form an idea of the "world of professions" not from the perspective of "dirty", "non-prestigious", "low-wage", but from the perspective of a creator: "useful", "necessary", "interesting to me personally. Therefore, the organization of community service for young people must be planned with a mandatory end result, motivation, a long-term perspective, and a system of rewards and punishments. At the moment there is no coordinated system of influence on the socio-professional self-determination of young people. The formation of professional orientations of young people takes place in addition to the state social institutions. There are no conditions created for young people that allow them to provide adequate material benefits through work and enterprise; there are no targeted and guaranteed social support from the state, primarily for economically vulnerable segments of the population; there are no conditions for a person to enter the "information society". To develop the socio-professional environment in the region, it is necessary to develop comprehensive programs based on the coordination of all interested social institutions on the basis of employment services. The program should include several directions: economic, socio-legal, career guidance, methodological, organizational, socializing.

It is proposed to rely on the following principles:

- consideration of the region development goals in accordance with the economy of Kyiv region, which are characterized by rapid changes in the market of high-tech and science-intensive services, rapidly increasing complexity of production, a sharp increase in competition from both Ukrainian regions and foreign countries. In these conditions one of the decisive components of a powerful breakthrough forward in economic terms are qualified human resources, the level of professional competence of which corresponds to the new innovation model of the regional economy:

- outpacing, rather than "keeping up" with staffing requirements, the nature of the professionally oriented work program;

- use of specific socio-psychological and national peculiarities of the region, influencing the formation of certain forms of ownership, organization of production, labor activity and mobility of the population [5].

Formation of economic thinking and economic consciousness of young people can develop not only special economic knowledge and skills, actual in modern conditions, but also socially demanded qualities of personality, form moral-valuable motives of economic activity.

The problem of economic consciousness is relevant and multidimensional [6], as it affects the interests of students, their parents, teachers, administrators of educational sphere, employers. Analyzing current changes in Ukrainian society, we should distinguish two types of economic education: mass education, which allows to form rational economic thinking, gives knowledge of modern economy, develops creative skills to solve economic problems, and special economic education, which forms professional community of applied economists, teachers, scientific employees, expert analysts, financiers and other specialists, working in the sphere of economic activity. Both these types of economic education represent systems including pre-university education [7].

The peculiarity of the current process of economic socialization in Ukraine is that there is still no consensus in society about the need to identify the sociological aspects of economic design



system of coordination of state and socio-economic structures for the formation of vectors of orientation on social and labor mobility of young people. The active inclusion of high school students in the phases of production, and in the conditions of market economy and labor competition turns out to be the most demanded competence in the economic sphere, is determined, therefore, by their choice of a profession of this specialization [9]. Due to the changes in the socio-economic situation, the content of the main determinants of social and professional self-determination of young people has changed. In the author's opinion, the approach to this problem should be systemic, which would achieve the coordination of professional, cadre provision of society and individual properties and interests of an individual.

The analysis conducted and the results of sociological research allow us to formulate the following conclusions. Professional self-determination of young people is of great importance in the process of personality socialization and is considered to be an essential aspect of individual development. Labor activity is one of the most important spheres of human life. Professional self-determination of young people is a process that covers the entire period of professional activity of an individual: from the emergence of professional intentions to the exit from labor activity. As the process of self-determination develops, there is an expansion of social roles and intentions regarding the desired social status. Due to changing socio-economic conditions, people have to accept new economic norms and values, master new spheres and types of professional activity. Thus, the Foresight of social and labor mobility of young people is formed under the influence of a number of different vector socio-economic factors, acting spontaneously and purposefully. All these factors affect the individual not directly and automatically, but indirectly, through consciousness and formation of internal activity of the individual [13]. Any choice, including the choice of the "channel" for professional training, is associated with limitations. The first group of limitations is related to personal characteristics of a young person: temperament, character, interests, aptitudes, needs. In addition, knowledge, skills, abilities, gender and age criteria, and family status play an important role in the process of professional choice [11].

**Conclusion.** Foresight of social and labor mobility of young people of Kyiv region, implemented on the basis of KNUTD hackathon ecosystem, has several characteristic features:

- bringing the professional choice to the needs of the region's economy in personnel, which is associated with the formation in the public consciousness of a certain prestigious "row" of professions and the elaborate structure of educational institutions;

- coordination of professional self-determination of young people and information about types of professional work, classification of professions, characteristics of specialties according to various parameters; state of labor market, demand for specialists and workers and employment opportunities for graduates of primary, vocational education institutions, technical colleges and universities;

- graduates of peripheral schools are more realistic in their choice of profession, highlighting the professions of a prestigious range, but choosing for themselves more necessary in the industry and infrastructure of their own settlement;

- regardless of academic performance, students express a preference for the same educational institutions and professions, focusing on the new socio-economic conditions of life and the labor market;

- vocational school students reproduce the educational and professional status of their parents and have little chance of demonstrating vertical upward mobility in the level of education and achievement of the desired professional role.

The mechanisms of regulating socio-labor attitudes of young people on the basis of Hackathon ecosystem of the university are: institutional (development and implementation of regulatory framework, state personnel policy), organizational (analysis of conditions within the



educational environment: social, domestic, psychological), economic (including optimality, efficiency, structuring) and personal-motivational (studying needs, value orientations, interests and motives) mechanisms.

## References

## Література

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| <p>1. Stoltzfus, A., Rosenberg, M., Lapp, H. et al. (2017). Community and Code: Nine Lessons from Nine NESCent Hackathons. F1000 Research. DOI: 10.12688/f1000research.11429.1.</p> <p>2. Linnell, N., Figueira, S., Chintala, N. et al. (2014). Hack for the homeless: A humanitarian technology hackathon. In: <i>Global Humanitarian Technology Conference (GHTC)</i>, IEEE, P. 577–584. URL: <a href="http://ieeexplore.ieee.org/document/6970341/?reload=true">http://ieeexplore.ieee.org/document/6970341/?reload=true</a>.</p> <p>3. Groen, D., Calderhead, B. (2015). Science hackathons for developing interdisciplinary research and collaborations. <i>eLife</i>. URL: <a href="https://www.ncbi.nlm.nih.gov/pmc/articles/PMC4511834/">https://www.ncbi.nlm.nih.gov/pmc/articles/PMC4511834/</a>.</p> <p>4. Gryshchenko, I. M. (2015). Pidvyshchennia efektyvnosti diialnosti vyshchych navchalnykh zakladiv yak peredumova zabezpechennia potreb rynku pratsi [Improving the efficiency of higher education institutions as a prerequisite for meeting the needs of the labor market]. <i>Rynok pratsi ta zainiatist naseleennia = Labor market and employment</i>, № 2, P. 32–35 [in Ukrainian].</p> <p>5. Zhurko, T. O. (2016). Optymizatsiia uzghodzhennia interesiv firmy ta ZVO v protsesi innovatsiinoi diialnosti [Optimization of coordination of interests of firm and ZVO in the course of innovative activity]. <i>Aktualni problemy ekonomiky = Actual Problems of Economics</i>, № 9, P. 488–494 [in Ukrainian].</p> <p>6. Taylor, W. G. K. (1989). The Kirton Adaption – Innovation Inventory: A Re-Examination of the Factor Structure. <i>Journal of Organizational Behavior</i>, 10(4): 297–307. <a href="http://www.jstor.org/stable/2488187">http://www.jstor.org/stable/2488187</a>.</p> <p>7. Yao, J., Li, H., Shang, D., Ding, L. (2021). Evolution of the Industrial Innovation Ecosystem of Resource-Based Cities (RBCs): A Case Study of Shanxi Province, China. <i>Sustainability</i>, 13(20): 11350. <a href="https://doi.org/10.3390/su132011350">https://doi.org/10.3390/su132011350</a>.</p> | <p>1. Stoltzfus A., Rosenberg M., Lapp H. et al. Community and Code: Nine Lessons from Nine NESCent Hackathons. 2017. F1000 Research. DOI: 10.12688/f1000research.11429.1.</p> <p>2. Linnell N., Figueira S., Chintala N. et al. Hack for the homeless: A humanitarian technology hackathon. In: <i>Global Humanitarian Technology Conference (GHTC)</i>, IEEE. 2014. P. 577–584. URL: <a href="http://ieeexplore.ieee.org/document/6970341/?reload=true">http://ieeexplore.ieee.org/document/6970341/?reload=true</a>.</p> <p>3. Groen D., Calderhead B. Science hackathons for developing interdisciplinary research and collaborations. <i>eLife</i>. 2015. URL: <a href="https://www.ncbi.nlm.nih.gov/pmc/articles/PMC4511834/">https://www.ncbi.nlm.nih.gov/pmc/articles/PMC4511834/</a>.</p> <p>4. Грищенко І. М. Підвищення ефективності діяльності вищих навчальних закладів як передумова забезпечення потреб ринку праці. <i>Ринок праці та зайнятість населення</i>. 2015. № 2. С. 32–35.</p> <p>5. Журко Т. О. Оптимізація узгодження інтересів фірми та ЗВО в процесі інноваційної діяльності. <i>Актуальні проблеми економіки</i>. 2016. № 9. С. 488–494.</p> <p>6. Taylor W. G. K. The Kirton Adaption – Innovation Inventory: A Re-Examination of the Factor Structure. <i>Journal of Organizational Behavior</i>. 1989. 10(4): 297–307. URL: <a href="http://www.jstor.org/stable/2488187">http://www.jstor.org/stable/2488187</a>.</p> <p>7. Yao J., Li H., Shang D., Ding L. Evolution of the Industrial Innovation Ecosystem of Resource-Based Cities (RBCs): A Case Study of Shanxi Province, China. <i>Sustainability</i>. 2021. 13(20): 11350. <a href="https://doi.org/10.3390/su132011350">https://doi.org/10.3390/su132011350</a>.</p> |
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8. Yildizer, G. (2017). Examining Attitudes of Physical Education Teacher Education Program Students Toward the Teaching Profession. *Monten. J. Sports Sci. Med.* 2017. 6(2): 27–33. URL: [https://www.ncbi.nlm.nih.gov/pmc/articles/PMC7166002/pdf/11432\\_2020\\_Article\\_2849.pdf](https://www.ncbi.nlm.nih.gov/pmc/articles/PMC7166002/pdf/11432_2020_Article_2849.pdf).
9. Lopatenko, G. (2016). Optimization of training process in pre-start fencing training on the base of out-of-training means' of mobilization orientation application. *Pedagogics, psychology, medical-biological problems of physical training and sports*, 20(2): 34–39.
10. Riesener, M., Dlle, C., Kuhn, M. (2019). Innovation Ecosystems for Industrial Sustainability. *Proc. CIRP.* 2019. 80: 27–32.
11. Scherbak, V., Arabuli, S. (2021). Methodology and technology of Hackathon ecosystem to engage university faculty and students in innovation and entrepreneurship in the context of reducing the impact of the Covid-19 pandemic. *Management*, 1(33): 105–114. DOI:10.30857/2415-3206.2021.1.10.
12. Krakhmalova, N. (2021). Determining whether the prototype Hackathon ecosystem for technology transfer in a higher education institution meets the needs of stakeholders. *Management*, 1(33): 61–73. DOI:10.30857/2415-3206.2021.1.6.
13. Goncharenko, I. (2021). Conceptual model of the Hackathon ecosystem of technology transfer in an institution of higher education. *Management*, 1(33): 74–84. DOI:10.30857/2415-3206.2021.1.7.
14. Hanushchak-Yefimenko, L. (2021). Using the Hackathon ecosystem as an effective tool for managing the competitiveness of an institution of higher education. *Management*, 1(33): 85–93. DOI:10.30857/2415-3206.2021.1.8.
15. Dudko, P. (2021). Social responsibility of business in preventing a COVID-19 pandemic. *Management*, 1(33): 43–51. DOI:10.30857/2415-3206.2021.1.
8. Yildizer G. Examining Attitudes of Physical Education Teacher Education Program Students Toward the Teaching Profession. *Monten. J. Sports Sci. Med.* 2017. 6(2): 27–33. URL: [https://www.ncbi.nlm.nih.gov/pmc/articles/PMC7166002/pdf/11432\\_2020\\_Article\\_2849.pdf](https://www.ncbi.nlm.nih.gov/pmc/articles/PMC7166002/pdf/11432_2020_Article_2849.pdf).
9. Lopatenko G. Optimization of training process in pre-start fencing training on the base of out-of-training means' of mobilization orientation application. *Pedagogics, psychology, medical-biological problems of physical training and sports*. 2016. 20(2): 34–39.
10. Riesener M., Dlle C., Kuhn M. Innovation Ecosystems for Industrial Sustainability. *Proc. CIRP.* 2019. 80: 27–32.
11. Scherbak V., Arabuli S. Methodology and technology of Hackathon ecosystem to engage university faculty and students in innovation and entrepreneurship in the context of reducing the impact of the Covid-19 pandemic. *Management*. 2021. 1(33): 105–114. DOI:10.30857/2415-3206.2021.1.10.
12. Krakhmalova N. Determining whether the prototype Hackathon ecosystem for technology transfer in a higher education institution meets the needs of stakeholders. *Management*. 2021. 1(33): 61–73. DOI:10.30857/2415-3206.2021.1.6.
13. Goncharenko I. Conceptual model of the Hackathon ecosystem of technology transfer in an institution of higher education. *Management*. 2021. 1(33): 74–84. DOI:10.30857/2415-3206.2021.1.7.
14. Hanushchak-Yefimenko L. Using the Hackathon ecosystem as an effective tool for managing the competitiveness of an institution of higher education. *Management*. 2021. 1(33): 85–93. DOI:10.30857/2415-3206.2021.1.8.
15. Dudko P. Social responsibility of business in preventing a COVID-19 pandemic. *Management*. 2021. 1(33): 43–51. DOI:10.30857/2415-3206.2021.1.