JEL Classification: H53; I23; I25

UDC 386.013.42-056.2/-056.3(085.9)

DOI: 10.30857/2415-3206.2021.2.6

ADAPTATION OF STUDENTS TO RESEARCH AND PROFESSIONAL ACTIVITIES BASED ON THE USE OF THE UNIVERSITY HACKATHON ECOSYSTEM

Iryna GONCHARENKO[1]
[1] *Kyiv National University of Technologies and Design, Kyiv, Ukraine*

BACKGROUND AND OBJECTIVES. For student youth the process of entering the profession and harmonization of interactions with professional environment and future professional activity is the key moment of life activity. This process, according to the majority of modern researchers, is a certain complexity and contradiction both for students and for higher education institution, as well as social institutions and organizations acting as social customers.

METHODS. The study of the process of adaptation of student youth to research and professional activity was carried out on the basis of the Kyiv National University of Technologies and Design. Assessment of students' expectations regarding studies, the level of students' awareness of the future professional and scientific activity was carried out with the help of the University Hackathon Ecosystem toolkit. Processing of the obtained results of the survey was carried out on the basis of the "Methodology of research of students' adaptability to dual education in higher education". The methodology includes two scales: adaptability to professional activity and adaptability to research activity.

FINDINGS. The following directions of training are distinguished: professional, social and research, as well as stages of adaptation to professional training: learning identification, learning-professional activation, professional-value reflection. Integration of these directions allows us to organize activities that ensure formation of necessary professionally important qualities (competences) in students (graduates), agreed with potential employers and demanded by the corresponding profession. The conducted experiment on the basis of Hackathon-ecosystem of the university was carried out taking into account the directions of training and their corresponding adaptation criteria: professional direction – activity-result and motivation-value criteria; humanitarian – communication-professional criterion; research – personal-creative criterion.

CONCLUSION. Students' adaptation to future professional and research activities can be defined as one of the most urgent social problems at the pre-production stage. This is due to the fact that the student spends one of the main periods of his life in a higher education institution, since it is at this time he is formed as a professional and as a person, masters the necessary competencies in order to achieve a certain professional and research level. At this stage the professional intentions of the individual and the requirements of the profession come into alignment, i.e. there is an adaptation to professional and research activities.

KEYWORDS: Hackathon ecosystem; adaptability; professional and research activities; institution of higher education.

NUMBER OF REFERENCES	NUMBER OF FIGURES	NUMBER OF TABLES
10	0	4

JEL Classification: H53; I23; I25

УДК 386.013.42-056.2/-056.3(085.9)

DOI: 10.30857/2415-3206.2021.2.6

АДАПТАЦІЯ СТУДЕНТСЬКОЇ МОЛОДІ ДО НАУКОВО-ДОСЛІДНОЇ ТА ПРОФЕСІЙНОЇ ДІЯЛЬНОСТІ НА БАЗІ ВИКОРИСТАННЯ ХАКАТОН-ЕКОСИСТЕМИ УНІВЕРСИТЕТУ

Ірина ГОНЧАРЕНКО[1]
[1] *Київський національний університет технологій та дизайну, Україна*

ПОСТАНОВКА ПРОБЛЕМИ ТА ЗАВДАННЯ. Для студентської молоді процес входження у професію та гармонізація взаємодій із професійним середовищем та майбутньою професійною діяльністю – ключовий момент життєдіяльності. Цей процес, на думку більшості сучасних дослідників, є певною складністю і суперечливістю як для студентської молоді, так і для вищого навчального закладу, а також соціальних установ та організацій, які виступають як соціальні замовники.

МЕТОДИ. Дослідження процесу адаптації студентської молоді до науково-дослідної та професійної діяльності здійснено на базі Київського національного університету технологій та дизайну. Оцінку очікування студентів щодо навчання, рівень поінформованості студентів про майбутню професійну та наукову діяльність здійснено за допомогою інструментарію Хакатон-екосистеми університету. Обробка одержаних результатів опитування проводилася на підставі «Методики дослідження адаптивності студентів у ВНЗ до дуальної освіти». Методика включає дві шкали: адаптивність до професійної діяльності та адаптивність до науково-дослідної діяльності.

РЕЗУЛЬТАТИ. Виділено такі напрями підготовки: професійний, соціальний та науково-дослідний, а також етапи адаптації до професійної підготовки: навчальна ідентифікація, навчально-професійна активізація, професійно-ціннісна рефлексія. Інтеграція даних напрямків дозволяє нам організувати діяльність, яка забезпечує формування у студентів (випускників) необхідних професійно-значущих якостей (компетенцій), узгоджених з потенційними роботодавцями та затребуваних відповідною професією. Проведений експеримент на базі Хакатон-екосистеми університету здійснювався з урахуванням напрямів підготовки та відповідних їм критеріїв адаптації: професійний напрямок – діяльнісно-результативний та мотиваційно-ціннісний критерії; гуманітарне – комунікативно-професійний критерій; науково-дослідний – особистісно-креативний критерій.

ВИСНОВКИ. Адаптацію студентів до майбутньої професійної та науково-дослідної діяльності можна визначити як одну з найактуальніших соціальних проблем на довиробничому етапі. Це зумовлено тим, що у вищому навчальному закладі студент проводить один із головних періодів свого життя, оскільки саме в цей час він формується як професіонал і як особистість, що опановує необхідні компетенції з метою досягнення певного професійного та науково-дослідного рівня. На даному етапі професійні наміри особи та вимоги з боку професії приходять у відповідність, тобто відбувається адаптація до професійної та науково-дослідної діяльності.

Ключові слова: Хакатон-екосистема; адаптивність; професійна та науково-дослідна діяльність; заклад вищої освіти.

INTRODUCTION.

The process of modernization of higher education in Ukraine is due to intensive changes occurring in all spheres of social and economic life. Universities are designed to provide training of highly qualified specialists, capable of professional growth and professional mobility in the constantly changing conditions of life. In this regard, the problem of students' adaptation in the educational environment of the university does not lose its relevance. Mobility, competitiveness, ability to self-development and self-education acquire professional and moral character for each professionally active person (Linnell et al., 2014). The modern market of professions is filled with young specialists who do not have the necessary professional education. Many have not formed social and professional-moral qualities, professional culture, often they do not need it (Groen and Calderhead, 2015). Practice shows that most of the products created by them are in demand in a short period of time, which does not allow improving the quality of professional training. A similar phenomenon was observed among young people during the formation of industrial society. When adolescent labor began to be used, no thought was given to the social and personal consequences of the lack of professional and moral qualities in the young people involved in the labor process.

Modern post-industrial society actualizes the problems of individual socialization and professional socialization. The process of professional socialization can be considered in the context of "lifelong learning", which makes it difficult to distinguish the subject of education (Yildizer, 2017). The subject of education should be connected with the surrounding activity, regardless of where it takes place in the surrounding society (Scherbak and Arabuli, 2021). The answers to the questions related to early professionalization of a person can be found in the system of higher education (Krakhmalova, 2021).

The era of post-industrialism imposes new requirements on the personality of the professional (Goncharenko, 2021). However, a balance, a measure in the combination and mutual enrichment of traditional and new, innovative means of socialization is very important. Some scholars often search not for new ideas and strategies, but for ready-made solutions or algorithms (Gryshchenko, 2015; Zhurko, 2016; Taylor, 1999; Lopatenko, 2016). The search for new non-standard solutions requires a different way of thinking from the growing person, the formation of integrated knowledge, the ability to construct ideal images of socially-oriented orientation (Hanushchak-Yefimenko, 2021). Professionalization of young people is focused on personal development, formation of socio-moral qualities, formation of understanding of the new society, formation of human capital, preservation and strengthening of human health (Lopatenko, 2016).

The adoption of the competence model of education in an uncertain and unstable economy assumed that its implementation would solve various socio-

economic problems (Dudko, 2021). For higher education it meant bringing the quality of training in line with the achievements of scientific and technological progress (Zhurko, 2016).

We often do not think about the fact that professional training in higher education is accompanied by high intellectual loads, irrational intensification of educational activities, unfavorable social and educational environment, negative environmental loads associated with professional activities, hypodynamia, emotional stress, non-compliance with healthy lifestyle requirements, lack of awareness in maintaining professional health and safety. At the same time, the complexity and intensity of the educational process, insufficient awareness of the value of the profession, the lack of ability to rationally allocate time for independent work makes it difficult for a university graduate to successfully adapt to the new socio-professional environment. The presence of emotional, environmental and industrial stressors affects the health and performance, i.e. the competitiveness of the graduate. It is impossible to solve these problems without developing professional-valuable attitude towards professional activity on the basis of integrating professional, humanitarian and health-saving knowledge, which allows developing general human and professionally important qualities in a graduate and successfully realizing the adaptive possibilities of the organism without any harm to own health.

It is known that the adaptation process takes place during the whole period of higher education, but the initial period of higher education is sensational for the development of adaptive properties of personality and ways of behavior (Riesener et al., 2019). In the process of adaptation of recent schoolchildren to student life there are psychophysiological, psychological and social levels. Adaptation requires involvement of psychophysiological reserves of the not yet fully formed organism and is associated with the crisis of adolescence, an important stage of personality formation. Typical difficulties of students are caused by both external (objective) and internal (subjective) factors among which there are factors reflecting the level of pre-university training; factors characterizing individual characteristics of a student as a subject of adaptation process; factors related to the learning conditions; factors related to living conditions in the family (Gryshchenko, 2015). The process of university adaptation is not a passive adaptation of a student to the conditions and influences of educational environment, adaptation involves active interaction of a student with educational environment, in the course of which the development and transformation of a student's personality takes place.

The aim of the study is to propose a model for student youth adaptation to research and professional activities based on the use of the university's Hackathon ecosystem. The study was conducted in 2021 on the basis of the

results of the survey of students of Kyiv National University of Technologies and Design (KNUTD).

MATHERIALS AND METHODS.

The study of the process of adaptation of student youth to research and professional activity was carried out on the basis of Kyiv National University of Technologies and Design.

Assessment of first-year students' expectations regarding studying in KNUTD, the level of students' awareness of future professional and scientific activity was carried out with the help of the University Hackathon Ecosystem toolkit.

The processing of the survey results was carried out on the basis of the "Methodology for studying students' adaptability to dual education in higher education". The methodology includes two scales: adaptability to professional activity and adaptability to research activity.

RESULTS AND DISCUSSION.

The problem of a person's adaptation to future professional activity begins long before entering the university and is connected with personal-professional formation, i.e. with his professional socialization. Professional training is one of the stages of formation. The process and results of professional training influence a graduate's readiness to accept the future profession and future professional activity. In this regard, it is necessary to significantly modify the very educational process, the process of professional training, giving them a subject-oriented orientation.

The organization of purposeful pedagogical process, in which students solve professional tasks and have an opportunity to simulate future professional activity, significantly affects their professional socialization in real practice. Consequently, the specificity of an educational institution, peculiarities of professional training organization significantly influence the professional formation of a university graduate (Linnell et al., 2014; Lopatenko, 2016). The improvement of professional training quality and the formation of various competences in a university graduate is determined by the effectiveness of his/her adaptation to professional training (Stoltzfus et al., 2018; Yildizer, 2017).

Let us consider students' adaptation to professional training from the position of their value orientations to education and profession. We consider this process as an element of a unified process of social, professional, psychophysiological entry of a student into educational environment of a university and into future professional activity. At the same time, professional training of university students is aimed at forming not only knowledge and skills, but also readiness for interaction and cooperation, aspiration for sustainable professional growth, culture of professional health and safety. The process of students' adaptation to future professional activity is considered

taking into account the analysis of socio-psychological, professional-pedagogical, medical-physiological aspects and is a complex psychological and pedagogical task.

The medico-physiological interpretation of the studied concept gives grounds to conclude that adaptation is a functional indicator of a graduate's health state, affects the result of educational activity and successful entry into future professional activity.

The main way of social adaptation is the adoption of norms and values of the new social environment (group, collective, organization), established forms of social interaction (formal and informal connections, leadership style, family relationships, etc.), as well as forms of subject activities (ways of professional performance of work or family responsibilities). Psychological aspect of this problem is associated with the peculiarities of mental processes, personality traits of a student. The process of learning, student's assimilation of professional values, norms and attitudes of behavior puts an imprint on his attitude to education as a value and on future professional activity.

In the first stage of experimental work (2020–2021) a survey was conducted. More than 50 teachers and 500 students from Kyiv National University of Technologies and Design participated in the survey. 94% of the interviewed teachers understand the necessity of solving the problem of students' adaptation to professional training in the university. At the same time, they note that they have insufficient knowledge, methods and technologies necessary for this. In addition, it was found that 90% of the teachers-experts believe that professional training requires professional knowledge and skills, 92% – the humanities knowledge and 94% – knowledge of the opportunity to participate in research work.

According to 46% of students, adaptation to professional training begins directly at the company, and 14% consider adaptation to professional training "as an opportunity to fit into the team, into student life". 29% of students associate adaptation to professional training with "getting used" to learning activities and future profession, and 12% of students had difficulty in defining the concept of "adaptation to professional training. On the basis of the Kyiv National University of Technologies and Design a study was conducted to study the process of students' adaptation to the educational environment of the university. On the first academic day, a written survey of first-year students revealed students' expectations regarding studying at KNUTD, a total of 50 people (out of 69) were interviewed. The following table presents the motives for choosing a university and profession in descending order of importance. It should be noted that respondents could choose several of the proposed answer options (Table 1).

Table 1

Results of a survey of students about their motivation for choosing their future profession and place of study

Motives for choosing a university and profession	Number of elections (%)
They give a high quality education	49
On the advice of friends and relatives	38
I want to devote myself to work in the railway industry	30
Low admission contest, it was easier to enter the university	12
Closer to home than other universities	6
Moderate tuition fees	2

According to the data received, almost half of the students entering this university expect to receive a quality education in the first place. Also on the first academic day, students were asked if they had an idea about their future professional activity. To this question, 59% of first-year students responded that they were confident in their choice and knew their future professional activity well; 39% had a very vague idea of their chosen profession; 2% chose the options: "have not yet thought about professional activity, the main thing for me is to finish university" and "for me it is more important to get higher education in general than to evaluate the field of professional activity". Thus, we can state that the career guidance work with applicants is not effective enough and it needs to be improved. In our opinion, in order to further professional adaptation in the university it is necessary to conduct career guidance in such forms as specialty weeks, meetings with graduates and practitioners, trainings on career planning, etc. This will reduce the likelihood of professional disadaptation and the number of students leaving for other universities and areas of professional activity.

At the end of the first month of study at the institute a questionnaire survey of students was conducted in order to identify the difficulties they face in the first month of study at the university (the sample was 65 people). According to the data received, three groups of problems are the most difficult for students: lack of free time (48% of respondents), inconvenient schedule (34%) and overload of classes (26%). Thus, the most significant for first-year students is the problem of rational time planning. In our opinion, this explains the appearance of fatigue, tiredness, overwork in the first days of study at the institute, which was pointed out by 30% of the students surveyed.

In general, 95% of the students surveyed attend classes with interest, 19% note a cheerful state, 9% indicate a constant need to fight laziness, 6% experience boredom in the learning activities, and for 4% of respondents studying at the institute is associated with anxiety, worry.

Only 2% of respondents said that they had difficulties establishing contact with classmates, 82% said that they liked communicating with their classmates,

51% of students said that they had several friends in their group, and 49% of students considered themselves members of the collective.

In the middle of the first semester of study with the help of "Methodology of express-diagnostics of students' adaptation level to research and professional activity" the data on the adaptation level of KNUTD students were obtained (tab. 2).

Table 2

The level of adaptation of KNUTD students to research and professional activities

Types of adaptation	Adaptation level (%)		
	high	medium	low
Social adaptation	15	59	26
Research adaptation	15	44	41
Professional adaptation	4	41	55

As can be seen from Table 2, low scores on the scale "Professional Adaptation" in more than half of the students (55%) indicate that the process of professional adaptation in the university is not given proper attention. Also a rather high percentage of low indicators is noted on the scale "Research adaptation" (41%). This indicates that many students find it quite difficult to take additional participation in research activities in the process of study, such students may need specially organized pedagogical support.

At this stage, we studied the relationship between the obtained adaptation indices and individual-typological properties of students' personality, which were assessed by means of the method "Individual-typological questionnaire". To establish the statistical relationship between the adaptation indices and individual-typological properties, Pyson's correlation coefficient was used. Table 3 presents the obtained correlation coefficients (statistically significant ones are highlighted in bold).

Table 3

Relationship of adaptation indicators and individual-typological features of KNUTD students

Indicators	Social adaptation	Research adaptation	Professional adaptation
Extraversion	**0,815***	-0,159	-0,293
Spontaneity	0,448	0,155	0,143
Innovativeness	0,056	**-0,892****	-0,464
Creativity	0,305	-0,489	0,249
Introversion	-0,425	-0,069	0,025
Sensitivity	0,552	0,391	-0,291
Anxiety	0,438	-0,094	0,095
Lability	0,493	0,199	0,490

*Notice: *p≤0,05; **p≤0,01*

Thus, statistically significant correlations were revealed in the following cases: positive correlation between the extraversion indices and the level of social adaptation (at the significance level of 0.05), and high negative correlation between the innovativeness and creativity indices (at the significance level of 0.01). No correlation between the indicators of professional adaptation and individual-typological qualities was revealed. The obtained data can be interpreted as follows: students of extraverted personality type adapt to the new social environment faster and easier, as they tend to show initiative in communication, they like to communicate with different people, in general they have social courage; lack of creativity negatively affects the indicators of research adaptation due to the fact that teachers often negatively perceive students' desire for self-assertion and independence, suppress manifestation of excessive a The absence of statistically significant indicators of correlation between individual-typological traits and professional adaptation can be explained by the fact that this type of adaptation is rather related to the motivational structure of the personality, its orientation, the presence of certain interests and inclinations, rather than individual-typological features.

In the middle of the second semester of the academic year 2020–2021, we conducted a study of the process of students' adaptation according to the "Methodology for studying students' adaptability in higher education to dual education" (Gryshchenko, 2015). The methodology includes two scales: adaptability to professional activity and adaptability to research activity. The data obtained through the methodology are presented in Table 4.

Table 4

Adaptability level of students in higher education to dual education (middle of the 2nd semester)

Adaptability criterion	Level of adaptability, %				
	high	above average	medium	below average	low
To professional activity	4	54	18	25	0
To research activities	13	29	25	25	9

According to the data obtained, students with a low level of adaptation to professional activity were not identified. This indicates that students in general do not experience serious difficulties in employment and training practice, but a quarter of students (25%) still have a level of adaptation to professional activity below average. This shows that the professional activity at the moment is still in its formative stage, the norms and rules of interviews, internships, some students have not fully assimilated.

On the scale of adaptability to research activity the following results were obtained: 9% of students have a low level of adaptability, and 25% have a lower than average level. The data obtained indicate that more than 30% of students

have difficulty in mastering the basics of research work, need additional counseling; they have difficulty speaking in class, express their thoughts, they can not show their individuality and abilities.

The obtained results allow us to single out the following training areas: professional, social and research, as well as the stages of adaptation to professional training: learning identification, learning-professional activation, professional-value reflection. Integration of these directions allows us to organize activities that ensure the formation of students (graduates) with necessary professionally important qualities (competences), agreed with potential employers and demanded by the relevant profession.

We propose to implement the following activities in professional training in higher education institution:

- value (socio-moral) orientation of education aimed at self-development and self-improvement in professional activities;
- organization, management and pedagogical support of students' adaptation to professional activity;
- orientation of students on the value attitude towards research activity.

In the framework of this activity during professional training a graduate (student) forms readiness to work in new socio-economic conditions, which allows him/her to self-determine in the labor market and professions, to be ready to change professional functions, roles and even professions.

The conducted experiment on the basis of Hackathon-ecosystem of the university was carried out taking into account the directions of training and their corresponding adaptation criteria: professional direction – activity-result and motivation-value criteria; humanitarian – communication-professional criterion; research – personal-creative criterion.

The diagnostics included: questionnaire, testing, observation, interview, computer diagnostic methods for each criterion. During the diagnostics three assessment levels were used to assess the level of adaptation – low, medium, high. The quantitative composition of the experimental groups and the control group was determined by the present composition of specific study groups. Representativeness was achieved by random selection of four experimental groups and the control group. Each of the allocated directions was realized in one of the experimental groups, and in the fourth group a complex of all directions was realized. This allowed us to evaluate the impact of each of the selected areas on the adaptation of students of different courses to professional and research training. The statistical criterion $\chi 2$ (chi-square) was used to compare the results of adaptation of different experimental groups.

Professional direction correlates with activity-result and motivation-value criteria, its indicators are the formation of the system of educational-professional knowledge, instrumental and analytical skills and the presence of professional

motivation. The results on the first criterion obtained during the entrance diagnostics show that the students have a low level of educational-professional knowledge, instrumental and analytical skills and availability of professional motivation. This is manifested in the fact that more than half of the students have a weak interest in the chosen profession and, as a consequence, low performance, which does not contribute to the development of their adaptive needs for professional training.

The implementation of the first activity direction allows to form motivational and value orientation of students to self-development in intellectual, professional and creative activity. The low level of formation of the system of educational-professional knowledge, instrumental and analytical skills among students has decreased from 38% to 19%, and the high level has increased from 15% to 35%. This reflects the positive influence of this direction on students' adaptation to professional training and formation of professional knowledge base as a value of professional activity.

The socially responsible direction corresponds to the communicative-professional criterion, its indicator is the formation of professional behavior and professional stability. This manifests itself in the inclusion of students in the system of public relations, during which the necessary professional qualities of personality are formed, communication skills and organizational skills in the professional environment are acquired. The results showed that the actual majority of students have a low level of perception of professional behavior and professional stability. The implementation of the second direction of the activity allowed to form students' communication skills, professional motivation taking into account professional traditions and value to the future profession. Diagnostics carried out at the end of the experiment revealed a positive impact of this direction on students' adaptation to professional training, the presence of professional motivation (low level changed from 33% to 18%, high from 14% to 31%, average almost unchanged).

The research direction corresponds to the personal-creative criterion, its indicator is the formation of students' value attitude to scientific knowledge and professional innovations. It is manifested in the ability of a future specialist to independently plan his/her lifestyle, organize research process, and take into account innovative factors of production environment. The implementation of the third direction allows students to form a value attitude towards professional health and safety. This was manifested in an increase in the number of students who are aware of the importance of scientific knowledge, the ability to rationally plan the research process. The results of diagnosis are as follows: low level changed from 33% to 20%; average from 52% to 56%; high from 15% to 24%, which suggests the presence of positive dynamics of students' adaptation to the research activity.

The obtained results show that the students of the experimental group, where the set of training areas was introduced, had the greatest positive dynamics of adaptation to professional training (the low level decreased from 29% to 11%, and the high level increased from 11% to 24%) compared to the three experimental groups. This is explained by the fact that most students were included in cognitive, creative and research activities, as well as in the socio-professional environment. The control group, formed by the principle of random selection of the same number of students from the three experimental groups, confirmed the reliability of the obtained results (low level decreased from 28% to 16%, and high level increased from 10% to 20%).

According to the results of the study we made the following conclusions:

- university adaptation is a process of active interaction of the student with the educational environment, the result of which is the change and development of personality, the formation of new adaptive behavioral strategies. University adaptation includes three interrelated components: socially responsible, research and professional;
- the majority of students have a focus on quality education and a vague idea about the content of future professional activity;
- in the first month of study at university students face difficulties in rational organization of their own time, which is subjectively accompanied by a feeling of fatigue and states of fatigue and overfatigue;
- in the initial period of study most students do not experience serious difficulties in communicating with their classmates. However, from the middle of the second semester a quarter of students note misunderstanding on the part of their classmates, which may indicate a crisis stage in the formation of the student group. Social adaptation is generally easier for students with pronounced extroversion traits;
- a significant part of the students experience difficulties in adapting to research activities (research adaptation) throughout the whole period of study, as evidenced by the test data conducted in the middle of the 1st and 2nd semesters. Moreover, the most difficulties in terms of research adaptation are experienced by students of independent personality, who show excessive activity and desire for self-assertion, in particular, by resisting the rules and not performing the proposed tasks, which is perceived by teachers as aggressiveness, which should be eliminated by reducing grades and toughening requirements.

The conclusions obtained in the course of the study can be used in the development of comprehensive programs of professional and research support for university students' adaptation.

CONCLUSION.

Diagnostic cuts to track the results showed: at the beginning of the experiment students had a low level of professional and research adaptation, at

the end of the experiment the number of students with a low level decreased by an average of 1.4 times, and those with a high level increased by an average of 1.9 times.

Thus, as a result of the study it was found that:

- organization, management and pedagogical accompaniment of students' adaptation to professional training is a system of interaction between university management, faculty and students, aimed at developing a unified concept of organizational and pedagogical accompaniment of the process of students' adaptation to professional training in the university in view of the socio-moral orientations of society;

- research adaptation includes the formation of students' value attitude towards science as a form of participation in intellectual and creative development. Comprehensive readiness of a specialist for professional training, for future professional activity includes physical, mental, psychophysiological well-being, sufficient professional work capacity and safe interaction skills in the rapidly changing socio-professional sphere. Adaptation of a university graduate to future professional activity is a process of formation of integral, mature personality of a future specialist-professional. The process of adaptation includes the formation of scientific and professional knowledge, development of communicative skills and ways of interaction in professional environment, formation of social and moral attitudes to professional health and safety. The results of adaptation manifest themselves in the value orientation of the graduate for self-realization and self-development, which ensures his/her competitiveness and mobility in the labor market.

ACKNOWLEDGEMENT.

The author is grateful to the heads of higher educational institutions for their assistance in conducting this research

ABBREVIATIONS:

Eq.	Equation
fig.	Figure
HEI	Higher education institution
HETT	Hackathon Ecosystem of Technology Transfer
KNUTD	Kyiv National University of Technologies and Design
MES	Ministry of Education and Science in Ukraine

REFERENCES:

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.

Linnell, N., Figueira, S., Chintala, N., et al. (2014). Hack for the homeless: A humanitarian technology hackathon. *In Global Humanitarian Technology Conference (GHTC), IEEE*: 577–584. URL: http://ieeexplore.ieee.org/document/6970341/?reload=true.

Groen, D., Calderhead, B. (2015). Science hackathons for developing interdisciplinary research and collaborations. *eLife*, 4, e09944. https://doi.org/10.7554/eLife.09944.

Gryshchenko, I. M. (2015). Pidvyshchennia efektyvnosti diialnosti vyshchykh 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]. *Rynok pratsi ta zainiatist naselennia = Labor market and employment,* 2: 32–35 [in Ukrainian].

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]. *Aktualni problemy ekonomiky = Actual problems of economics,* 9: 488–494 [in Ukrainian].

Taylor, W. G. K. (1999). The Kirton Adaption – Innovation Inventory: A Re-Examination of the Factor Structure. *Journal of Organizational Behavior,* 10(4): 298–308. URL: http://www.jstor.org/stable/2488187.

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. *Sustainability*, 13 (20): 11350. https://doi.org/10.3390/su132011350.

Yildizer, G. (2017). Examining Attitudes of Physical Education Teacher Education Program Students Toward the Teaching Profession. *Monten. J. Sports Sci. Med.,* 6(2): 27–33. DOI: 10.26773/mjssm.2017.09.004.

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.

Riesener, M., Dlle, C., Kuhn, M. (2019). Innovation Ecosystems for Industrial Sustainability. *Proc. CIRP*, 80: 27–32.

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): 105–115. DOI: 10.30757/2515-3206.2021.1.10.

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: 10.30757/2515-3206.2021.1.6.

Goncharenko, I. (2021). Conceptual model of the Hackathon ecosystem of technology transfer in an institution of higher education. *Management, 1*(33): 74–84. DOI: 10.30757/2515-3206.2021.1.7.

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: 10.30757/2515-3206.2021.1.8.

Dudko, P. (2021). Social responsibility of business in preventing a COVID-19 pandemic. *Management, 1*(33): 43–51. DOI: 10.30757/2515-3206.2021.4.

AUTHOR (S) BIOSKETCHES

Goncharenko Iryna, PhD in Economics, Associate Professor, Department of Entrepreneurship and Business, Kyiv National University of Technologies and Design, Ukraine.

https://orcid.org/0000-0002-5033-9833
Researcher ID: Q-6115-2016
E-mail: goncharenko.im@knutd.edu.ua

HOW TO CITE THIS ARTICLE
Goncharenko, I. (2021). Adaptation of students to research and professional activities based on the use of the university hackathon ecosystem. *Management*, 2(34): 62–76. https://doi.org/10.30857/2415-3206.2021.2.6.