
Research article

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Designing the Educational Environment of the University for the Development of Entrepreneurial Skills of Students

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Abstract: Introduction. One of the university's educational environment priorities is the formation of students' skills related to the ability of professional development in conditions of socio-economic uncertainty. Entrepreneurial skills can significantly increase the value of students of all specialities in the labor market and the effectiveness of their professional activities. The purpose of the study is to design the university's educational environment for the development of students' entrepreneurial skills development on the example of Sevastopol State University (SevSU). **Methods.** Based on the methods of systematization and classification of domestic and foreign experience of entrepreneurial education in universities, the principles of design thinking (using focus groups) and visualization were used to design the educational environment. Assessment of students' entrepreneurial preferences was carried out by a survey of 821 SevSU students of various specializations, followed by a frequency semantic analysis of responses. **Results.** A model of the educational environment for students' entrepreneurial skills development has been made with the designation of target results and the recommended composition of the necessary organizational and pedagogical conditions. Entrepreneurial preferences were revealed in 29.4 % of the students, regardless of their professional specialization. **Discussion.** The theoretical aspect of the performed research novelty lies in the concretization of the students' entrepreneurial skills as a form of their personal and environmental professional interaction factor. In the applied aspect, the author's model of the educational environment for the development of students' entrepreneurial skills has been developed, which is ready for adaptation and use in the universities to design organizational and pedagogical infrastructure for teaching students regardless of their professional specialization. The main stages of designing the educational environment are identifying the key experiences of students using the principles of design thinking; determining the target results of mastering the entrepreneurial track with modelling the composition of the necessary organizational and pedagogical conditions of the educational environment; identification and research of the contingent of various specialities students interested in the development of entrepreneurial skills.

Keywords: entrepreneurial skills, educational environment, environment design, personal development, professional development, organizational and pedagogical conditions, design thinking, personal and environmental interaction, entrepreneurial education, educational track

Highlights:

- ▶ Students' entrepreneurial skills, regardless of their professional specialization, increase their competitiveness in the labour market in conditions of socio-economic uncertainty.
- ▶ The design of the educational environment of the university for the development of entrepreneurial education can be carried out using the approach of design thinking.
- ▶ About a third of all students can effectively develop entrepreneurial skills in the university educational environment.

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Introduction

Modern society is at the stage of renewal, the review of principles, development priorities, and the search for new models and tools to improve the effectiveness of existing social processes. One of the main areas of improvement of such processes is the formation of conditions for cooperation, partnership, and cooperation of organizations and people (Worsley et al., 2021). The university, as one of the mandatory participants in the socio-economic development of society, creates an environment for students to establish reliable and, at the same time, flexible links of joint productive activities (Klemeshev et al., 2019).

Studies of foreign and Russian experiences of cooperation between universities, business, and government institutions demonstrate several advantages: activation of the introduction of innovative technologies in the activities of organizations; improvement of the quality of satisfaction of labour market demands; increasing students' interest in professional development; providing conditions for maintaining a high level of professionalism of lifelong learning (Shabaeva & Kekkonen, 2017).

This position is shown in the third mission of universities, which positions the university as a powerful driver of socio-economic development in the region through active participation in the formation of the main characteristics of human capital (Compagnucci & Spigarelli, 2020). For its implementation, each university chooses its path, considering the peculiarities of the external and internal environment, including the socio-cultural context (Shishlova, 2021). But the general directions of the programs are most often: continuous/continuing education; participation in the life of society through the upbringing of socially responsible youth; technology transfer and innovation development for the region through the formation of an ecoenvironment of entrepreneurship, support for youth technological entrepreneurial initiative (Kudryashova & Sorokin, 2020).

Effective activity in conditions of uncertainty requires the development of skills related to the ability to quickly and efficiently organize activities to achieve the desired results, analytics and multi-scenario forecasting when carrying out activities with a high risk of failure (Makhmutova,

2021a; Kleimola & Leppisaari, 2022). A set of such skills can be formed in professional educational institutions due to the choice and implementation of an entrepreneurial model of students' education. The need for universities to master the concept of "University 3.0" determines the objective need for entrepreneurial skills formation among all participants in the educational process (Voronina et al., 2021, Abdrakhmanova & Litvinova, 2020).

Entrepreneurial education is growing in steam every year (Zobnina et al., 2019). The conditional start of an active discussion of methodology, concepts, and technologies in this matter can be associated with 2008 when at the World Economic Forum, an educational initiative for training entrepreneurs was announced as one of the significant components of ensuring sustainable social development and economic recovery (Tranchet & Rienstra, 2009). The main approaches for the formation of entrepreneurial skills are the development of leadership skills and possession of personal development tools, the use of the cross-disciplinary principle of mastering the basics of entrepreneurship, and the use of modern psychological, pedagogical, and digital technologies. Several Western studies confirm the practicability of targeted entrepreneurial education not only for students becoming business owners, but also for the formation of personal and business qualities of students for successful professional implementation in various fields. The problem of employment of graduates of educational institutions is considered in connection with teaching flexible skills of independent decision-making, active creative thinking, personal responsibility for one's choice (Hardie et al., 2020), teamwork, objective assessment of the labour contribution of each of the participants, a constant search for opportunities to implement tasks in conditions of high uncertainty, self-reflection in the case of successful or negative experience for improving activities at subsequent stages, generating and testing new business ideas (Penaluna, 2018). In this regard, the importance of entrepreneurial education is emphasized.

In the Russian Federation, entrepreneurial education issues are of high relevance today. According to experts Sorokin et al. (2020) and other researchers, several conditions can ensure an increase in the effectiveness of entrepreneurial education:

- 1) The importance of a teacher's experience in entrepreneurship, consulting, and training to help students master the course and advance on the project (market analysis, generating ideas, drawing up a portrait of a consumer, etc.) (Klarin, 2019).

- 2) The presence of business contacts with the external environment (companies, laboratories, invited speakers) – business partners of the university.

- 3) Formation of infrastructure for student self-determination regarding the importance of mastering entrepreneurial skills (Lazareva & Kolycheva, 2020).

- 4) Emphasis on the applied nature of knowledge in combination with modern psychological and pedagogical approaches and methods (Makhmutova, 2021b; Klarin, 2018).

- 5) Designing and implementing a set of digital solutions for the educational environment that provide the opportunity for learning and access to materials in a convenient format (Cheung et al., 2021; Araka et al., 2022) can be used as a communication platform and implement an assisting function of support and decision-making support on professional development issues students (Chuganskaya, 2020).

It is also worth noting that a high level of importance for the effective development of entrepreneurial skills has a factor associated with providing such educational conditions that allow maintaining a high level of student participation throughout the study time (Korchagina et al., 2017). The study of emotional aspects, expectations, and problematic issues that accompany

students in professional and personal development at the university contributes to the design of a more comfortable educational environment. It is possible to use a design thinking approach to solve such a problem. Foreign and domestic authors confirm the effectiveness of using this approach in teaching students (Panke, 2019; Buzhinskaya & Vaseva, 2021; Fazylyanova et al., 2020).

Thus, in the field of scientific research, there is a great interest in the issues of entrepreneurial education. However, there is no clear understanding of the related problems, such as requirements for the necessary educational infrastructure, the composition and structure of the educational program for teaching entrepreneurship, the methodology for assessing the intermediate and final effectiveness of the educational process, the level of formation of entrepreneurial skills of students, etc.

The purpose of our study is to consider the main issues of designing the university educational environment for the formation and development of students' entrepreneurial skills from the organizational and pedagogical conditions point of view.

Methods

Based on Russian and foreign scientific sources, various approaches and experiences in the implementation of entrepreneurial education in universities were systematized and classified. The principles of design thinking methodology and visualization of key elements were used to design an entrepreneurial educational environment. The study of the motives, requests and expectations of students from entrepreneurial education was carried out by the method of focus groups: 2 groups of 15 people – students of Sevastopol State University (SevSU) of the second and fourth courses, various specializations (7 areas of study). The evaluation of the effectiveness of the application of the tool to identify entrepreneurial preferences was carried out by a survey of 821 SevSU students of various specializations (21 areas of study), followed by a frequency semantic analysis of the responses.

Results

Currently, a new model of the educational process is being introduced at SevSU "2 + 2 + 2", which assumes a certain choice of professional development trajectories upon completion of the 2nd and 4th courses.

After the second year, each student of any speciality must determine the priority direction of the three proposed tracks.

- Research related to the implementation of scientific activities in parallel with the development of the main specialization of training.

- Professional, providing opportunities to strengthen specialization through the development of innovative skills of the future (FutureSkills).

- Entrepreneurial – for those students who see a high potential for the development of their entrepreneurial skills in parallel with the development of a bachelor's degree program in the main field of study.

The next decision points for students come after the end of the 4th year of a bachelor's degree in connection with admission to the master's program and after its completion, with possible entrance to doctoral school.

When designing an educational environment for the implementation of such a model, it is

proposed to use the principles of design thinking aimed at studying the needs of infrastructure users. Based on the identified requests, emotions, and experiences of the student during the entire time of study during the development of the bachelor's degree program, it is possible to design organizational and pedagogical elements of the educational environment, which allow for increasing the overall effectiveness of the process by increasing the level of student involvement (Belan, 2020).

According to the classical design thinking methodology (Liedtka & Ogilvie, 2011), in the first stage, it is necessary to study the problems of users and understand their true feelings and motivation. The second stage is related to focusing – determining the priority range of tasks. The third stage aims at developing options for appropriate solutions. The fourth stage involves designing a prototype (model) of the object, considering the identified needs and priorities. The final stage includes testing the generated design solution to develop a strategy for further work with it.

In connection with the purpose of the study, the interests of students who chose an entrepreneurial educational path were identified with the help of focus groups and analyzed. Typical emotional experiences and requests for each period of students' education were identified, and tasks of student support have formed that echo their needs and contribute to the conscious identification of priorities for further professional development (Makhmutova & Litvinova, 2021). Considering the data obtained, the main tasks of supporting students in the process of implementing an entrepreneurial educational track for each course of study are the following:

- In the 1st year: support in adaptation and self-determination of students; ensuring understanding of the essence of the entrepreneurial track; testing of entrepreneurial potential.
- In the 2nd year: identification of personal interests and development opportunities; ensuring the possibility of obtaining the first experience in solving entrepreneurial tasks; organization of the exchange of experience in the development of entrepreneurial skills.
- In the 3rd year: organization of conditions for gaining experience in the application of entrepreneurial skills; ensuring work in project teams; expert advice to students on entrepreneurship; assessment of personal progress in the development of skills.
- In the 4th year: facilitation of the process of generating ideas for entrepreneurial projects; support for the development, development and launch of projects; evaluation of the effectiveness of the development of entrepreneurial skills.

The designated tasks served as the basis for the creation of an algorithm for mastering entrepreneurial skills by students in the university educational environment and determining the expanded composition of the corresponding organizational and pedagogical conditions. Thus, a model of the educational environment has been obtained, which can serve as a basis for further refinement, approbation, and testing to assess the effectiveness of the implementation of the task set (Fig. 1).

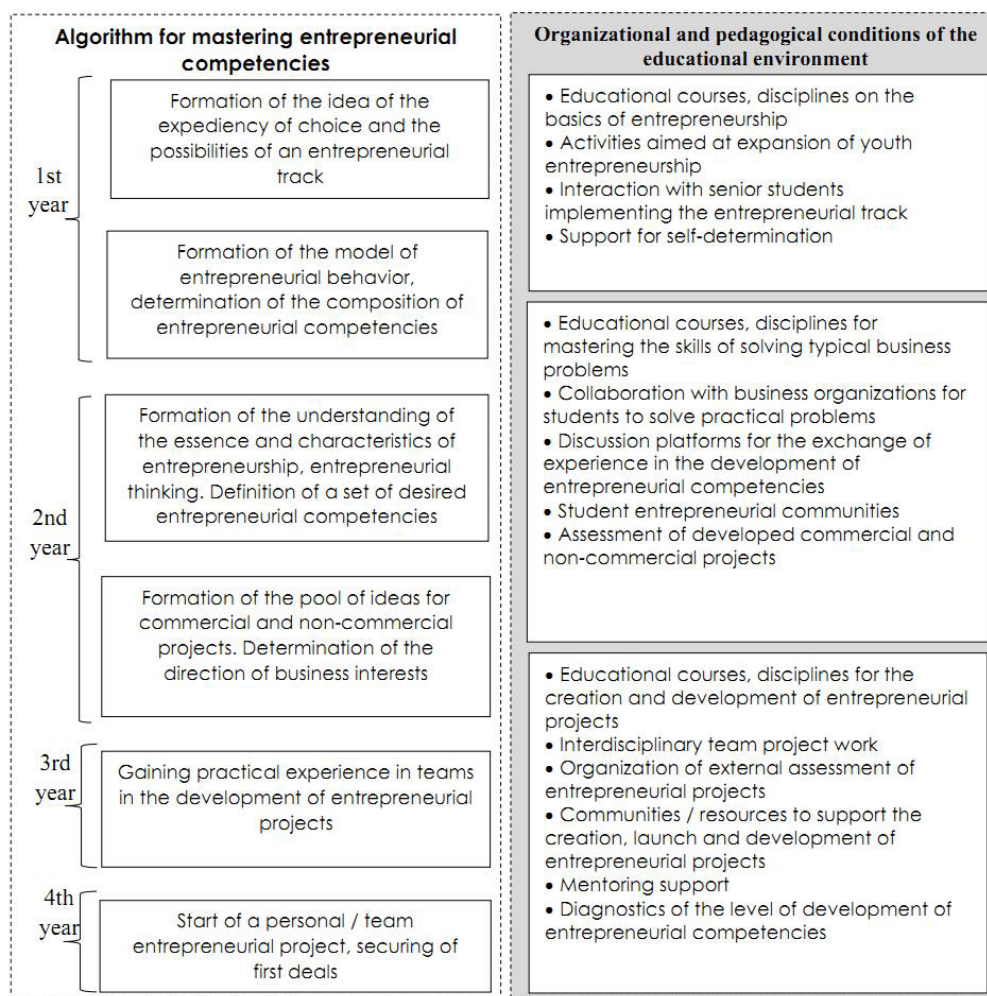
Having mastered all the stages of the entrepreneurial track, a student, in addition to a bachelor's degree in the main speciality, can form/develop the desired set of entrepreneurial skills; create a contact base for interaction with the business community; develop and launch his entrepreneurial project.

The further design of the educational environment for the development of entrepreneurial skills development involves the next level of decomposition of the central elements, considering the characteristics of the potential contingent. In this regard, the identification task is to find those

from the total number of students interested in developing entrepreneurial skills development. The most common tools for solving this problem are questionnaires that include a list of questions about certain characteristics of entrepreneurial activity (Mishurova, 2020; Ostrovskii, 2021; Pozdeeva & Nazarova, 2020; Tverdovskaya & Gnezdilov, 2022).

Figure 1

The model of the university educational environment for the development of entrepreneurial competencies from the organizational and pedagogical conditions point of view



To predict the flow of students on the proposed tracks at Sevastopol State University, the survey was conducted. An assumption was made about the uneven distribution of students' interests in the following proportion: entrepreneurship (20 %), scientific activity (10 %), and professional activity (70 %).

To identify students interested in entrepreneurship, the following open-ended statements were

included in the questionnaire:

Question 1. "Describe in 2 to 3 sentences how you understand the phrase 'entrepreneurial behavior model'".

Question 2. "Describe in 2 to 3 sentences what opportunities you see for the development of entrepreneurial competencies at the university".

Question 3. "In what area would you like to implement your own business project?"

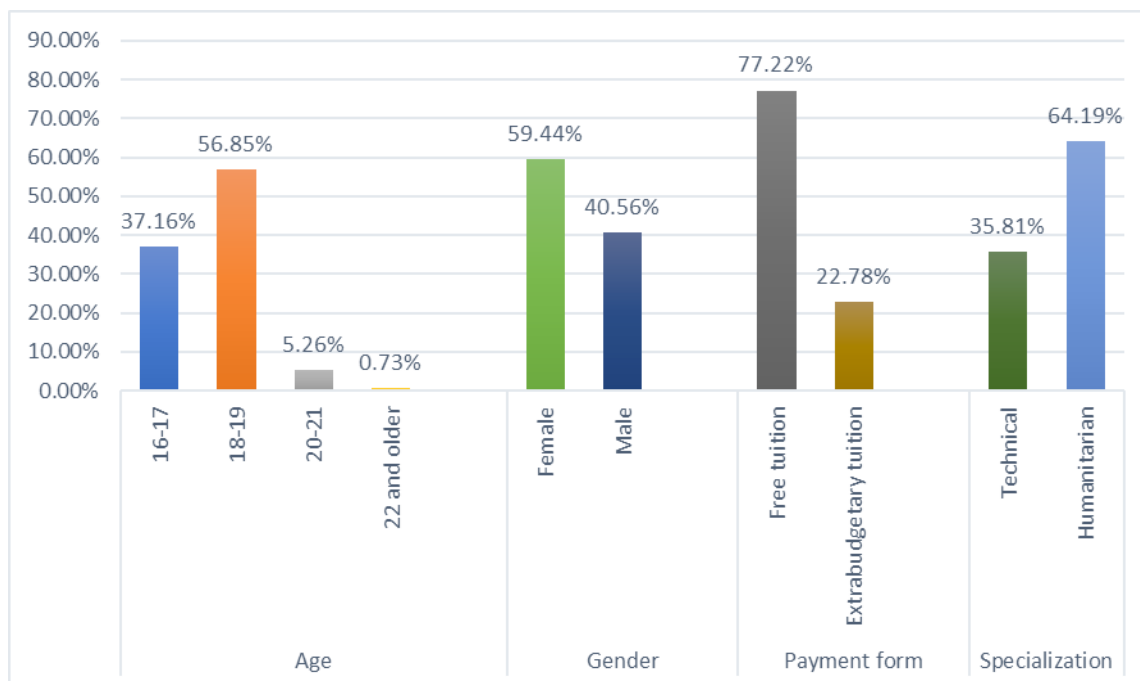
Question 4. "What entrepreneurs do you know (indicate the field of activity)?"

Question 5. "How do you feel about risks?"

The questionnaire was offered to first-year students from Sevastopol State University in the second half of the first semester of study as part of the discipline "Technologies of Personal Development". The answers were received from 821 respondents and were distributed in various proportions according to the criteria of age, gender, form of tuition fees, specialization (Fig. 2).

Figure 2

Composite portrait of students who participated in the survey



In the first stage of processing the obtained data, semantic analysis was conducted to determine the students' comprehensive understanding of the entrepreneurial behavior model. For Question 1, the following words are most often mentioned in the answers: 'risk' (77 answers), 'skill' (59), 'goal' (57), 'profit' (52), 'solution' (45), 'business' (42), 'benefit' (41), and so on. Among the most frequent two-word phrases, they are defined: 'making a profit' (19), 'leadership qualities' (11), 'goal achievement' (8), 'degree of risk' (7).

In response to Question 2, most students (83 %) identify the following elements of the

educational environment: 'project' (76 answers), 'activity' (68), 'business' (67), and so on. It is positive that students have a clear understanding of the possibility of implementing project activities. However, the students turned out to be poorly informed about other means.

In the answers to Question 3, the list of preferred types of business for students ended up being quite wide. A chosen field more often corresponded to the specialty of study: information technology, psychology, educational services, design, food services, and so on.

In the answers to Question 4, among the well-known entrepreneurs mentioned by the students, the leaders were: Pavel Durov (107 answers), Elon Musk (73), Mark Zuckerberg (62), Aleksandr Ozhelsky (37), Fedor Ovchinnikov (20), Kirill Rodin (19), Anastasia Faizulnova (16), and others.

In response to Question 5, 8.9 % of the students showed a negative attitude towards risk and 91.1 % of the respondents understood that this factor is the mandatory characteristic of the activity.

The information obtained allows the preparation of educational content in such a way that it more closely matches the interests of students, increasing their interest in relevant educational courses.

In *the second stage* of processing the received data, students who may be interested in the entrepreneurial track were identified, according to the following criteria: 1) have their own unique opinion regarding the entrepreneurial model of behavior; 2) see opportunities for the development of entrepreneurial abilities in the educational environment of the university; 3) know in which area they want to implement their business project; 4) can list two or more representatives of the business environment with an indication of the field of activity; 5) risks are treated positively or neutrally.

The data obtained showed that 241 respondents correspond to established conditions, which is 29.4 %, of which 69 % are female, 31 % are male; 77 % are humanitarian specialties (of which 59 % are students of economic specialties), 85.7 % aged 16–18 years.

Therefore, about 30 % of students from various fields of study are interested in developing entrepreneurial competencies (in relation to the research track – 6.7 % of preferences; in relation to the professional track – 63.9 %).

Discussion

The novelty of the study has both theoretical and applied components. In theoretical terms, we have specified the factor of "personal-environmental interaction in the context of the personal-professional development of university youth" (Atamanova et al, 2021, p. 33). Such a factor is the entrepreneurial competence of students, regardless of their professional specializations. Solving the problem of personal-environmental interaction of university youth on the example of Sevastopol State University involves the identification of students by educational tracks. It helps to work purposefully with an interested audience and increase the efficiency of using resources (personnel, information, and so on). A separate task is to form the image of a student who has chosen and implemented an entrepreneurial track, in terms of a set of relevant competencies.

The main directions for the development of a set of solutions for the design of the educational environment are issues related to: implementation of the model for the formation of a target profile of students' entrepreneurial competencies; clarification of criteria and methodology for assessing the effectiveness of means, tools, technologies used at all stages of the implementation of the entrepreneurial track; development of a set of related regulatory documentation for the implementation of the entrepreneurial track in the educational environment of a university; formation of a digital infrastructure of automated software tools for entrepreneurial education

using technologies of assisting systems (Voronina et al., 2021).

The formation of an educational environment that provides conditions for entrepreneurial self-determination and gaining real experience in implementing the tasks of generating, developing, and implementing business projects is a current task of professional education. As a result of studying the issues of designing the educational environment of a university for the development of entrepreneurial competencies, the following conclusions can be drawn:

- Identify the main stages in the development of the desired set of entrepreneurial competencies by students, specify the target results, modeling the composition of the necessary organizational and pedagogical tools.
- Use the principles of design thinking to identify the key experiences of students and determine the tasks of mastering the entrepreneurial track.
- Conduct special surveys to form recommendations for identifying and routing students within educational tracks and adjusting the current educational process.

The design of the educational environment of a university should focus on scaling up successful practices aimed at developing the personality and innovative competencies of students (Buravleva & Bogomaz, 2020), to which entrepreneurial competencies can be fully attributed.

References

- Abdrakhmanova, A. A., & Litvinova, R. N. (2020). Formation of entrepreneurial competencies in future specialists as a factor in the development of the innovation potential of the economy. *Economics and Management: Theory and Practice*, 6(1), 43–50. (in Russ.).
- Araka, E., Oboko, R., Maina, E., & Gitonga, R. (2022). Using educational data mining techniques to identify profiles in self-regulated learning: An empirical evaluation. *The International Review of Research in Open and Distributed Learning*, 23(1), 131–162. <https://doi.org/10.19173/irrodl.v22i4.5401>
- Atamanova, I. V., Perikova, E. I., Shchekoturov, A. V., & Bogomaz, S. A. (2021). Personal-environmental interaction: a study of value orientations and the psychological system of activities of Russian youth. *Russian Psychological Journal*, 18(3), 32–53. <https://doi.org/10.21702/rpj.2021.3.3> (in Russ.).
- Belan, N. V. (2020). Design thinking as methods to design a student-oriented educational environment in a university. In A. P. Khomenko, E. V. Apanovich, V. V. Smirnov et al. (Eds.), *Modern problems of vocational education: Experience and solutions* (pp. 75–79). Irkutsk State Transport University. (in Russ.).
- Buravleva, N. A., & Bogomaz, S. A. (2020). Readiness for innovative activities among students of technical universities. *Russian Psychological Journal*, 17(3), 30–43. <https://doi.org/10.21702/rpj.2020.3.3> (in Russ.).
- Buzhinskaya, N. V., & Vaseva, E. S. (2021). Implementation of design thinking stages in the educational process of higher education. *Bulletin of Surgut State Pedagogical University*, 1, 84–91. <https://doi.org/10.26105/SSPU.2021.1.70.009> (in Russ.).
- Cheung, S. K. S., Kwok, L. F., Phusavat, K., & Yang, H. H. (2021). Shaping the future learning environments with smart elements: challenges and opportunities. *International Journal of Educational Technology in Higher Education*, 18. <https://doi.org/10.1186/s41239-021-00254-1>
- Chuganskaya, A. A. (2020). Modern challenges of professional self-determination of students: to the problem of building assistive systems of human activity. In A. N. Degtyarev, A. R. Kuznetsova (Eds.), *Ufa humanitarian scientific forum «Humanitarian mission of social science on the threshold of a new industrial society»* (pp. 719–724). Autonomous State Scientific Institution "Institute for

- Strategic Studies of the Republic of Bashkortostan". (in Russ.).
- Compagnucci, L., & Spigarelli, F. (2020). The Third Mission of the university: A systematic literature review on potentials and constraints. *Technological Forecasting and Social Change*, 161. <https://doi.org/10.1016/j.techfore.2020.120284>
- Fazylzyanova, G. I., Sokolova, T. Yu., & Balalov, V. V. (2020). Design thinking methodology as a creative resource for the development of the modern education system. *Pedagogical Journal*, 10(1A), 415–427. <https://doi.org/10.34670/AR.2020.1.46.165> (in Russ.).
- Hardie, B., Highfield, C., & Lee, K. (2020). Entrepreneurship education today for students' unknown futures. *Journal of Pedagogical Research*, 4(3), 401–417. <https://doi.org/10.33902/JPR.2020063022>
- Klarin, M. V. (2018). Innovative educational practices in organizations – responses to the challenges of the XXI century. *Education and Society*, 3–4, 43–48. (in Russ.).
- Klarin, M. V. (2019). Innovative educational practices as initiatives in the field of additional education for children and youth. *ETAP: Economic Theory, Analysis, Practice*, 6, 31–48. <https://doi.org/10.24411/2071-6435-2019-10121> (in Russ.).
- Kleimola, R., & Leppisaari, I. (2022). Learning analytics to develop future competences in higher education: A case study. *International Journal of Educational Technology in Higher Education*, 19. <https://doi.org/10.1186/s41239-022-00318-w>
- Klemeshev, A. P., Kudryashova, E. V., & Sorokin, S. E. (2019). Stakeholder approach in the implementation of the "third mission" of universities. *Baltic region*, 11(4), 114–135. <https://doi.org/10.5922/2079-8555-2019-4-7> (in Russ.).
- Korchagina, I. V., Rogova, K. V., & Korchagin, R. L. (2017). Involvement of Russian students in modern innovative entrepreneurship. *Russian Entrepreneurship*, 18(16), 2301–2316. <https://doi.org/10.18334/rp.18.16.38218> (in Russ.).
- Kudryashova, E. V., & Sorokin, S. E. (2020). Human capital formation as the implementation of the "third mission" of universities. *Personality. Culture. Society*, 22(1–2), 121–127. (in Russ.).
- Lazareva, I. N., & Kolycheva, V. B. (2020). Problem of positive self-determination of students in the projection of educational tasks of vocational education. *Modern Science-Intensive Technologies*, 9, 168–172. (in Russ.).
- Liedtka, J., & Ogilvie, T. (2011). *Designing for growth: A design thinking tool kit for managers*. Columbia University Press.
- Makhmutova, E. N. (2021a). Entrepreneurship as a source of innovation and human capital growth. In L. S. Valinurova (Ed.), *Economics and management: Theory, methodology, practice* (pp. 125–128). Editorial and Publishing Center of Bashkir State University. (in Russ.).
- Makhmutova, E. N. (2021b). Psychological support for the formation of entrepreneurial competencies of students of network generation. *Herzen Readings: Psychological Research in Education*, 4, 364–368. <https://doi.org/10.33910/herzenpsyconf-2021-4-45> (in Russ.).
- Makhmutova, E. N., & Litvinova, R. N. (2021). Formation of conditions for professional and personal development of students of economic profile. In T. I. Rakovchena, A. K. Paptsova, S. I. Lupashku (Comp.), *Science, education, culture* (pp. 540–543). Comrat State University. (in Russ.).
- Mishurova, I. V. (2020). Development of entrepreneurial skills based on the study of the specifics of the phenomenon of entrepreneurship. *Bulletin of the Academy of Knowledge*, 36(1), 153–158. (in Russ.).
- Ostrovskii, S. N. (2021). Study of the attitude of first-year students towards the development of the entrepreneurial potential of Belarusian youth. In A. N. Danilov (Ed.), *Sociological science*

- and education: Modern challenges and risks: Proceedings of the International Scientific and Practical Conference dedicated to the memory of Prof. G. P. Davidyuk (pp. 246–251). Belarusian State University. (in Russ.).
- Panke, S. (2019). Design thinking in education: Perspectives, opportunities and challenges. *Open Education Studies*, 1, 281–306. <https://doi.org/10.1515/edu-2019-0022>
- Penaluna, A. (2018). Enterprise and entrepreneurship education: Guidance for UK higher education providers. *The Quality Assurance Agency for Higher Education*. https://www.qaa.ac.uk/docs/qaas/enhancement-and-development/enterprise-and-entrepreneurship-education-2018.pdf?sfvrsn=15f1f981_8
- Pozdeeva, E. G., & Nazarova, N. S. (2020). Analysis of the readiness of polytechnic university students for entrepreneurship. *Society. Communication. Education*, 11(1), 100–114. <https://doi.org/10.18721/JHSS.11108> (in Russ.).
- Shabaeva, S. V., & Kekkonen, A. L. (2017). Practical study of cooperation between universities and business in Russia and EMCOSU countries. *University Management: Practice and Analysis*, 21(6), 93–100. <https://doi.org/10.15826/umpa.2017.06.078> (in Russ.).
- Shishlova, E. E. (2021). Renovating higher education content in the context of modern sociocultural trends. *Higher Education in Russia*, 30(6), 70–79. <https://doi.org/10.31992/0869-3617-2021-30-6-70-79> (in Russ.).
- Sorokin, P. S., Povalko, A. B., & Chernenko, S. E. (2020). *Teaching Entrepreneurship in Russian and World Universities: Why, How, and with What Results?* National Research University Higher School of Economics. (in Russ.).
- Tranquet, N., & Rienstra, D. (Eds.) (2009). Educating the next wave of entrepreneurs. *World Economic Forum*. https://www.gvpartners.com/web/pdf/WEF_EE_Full_Report.pdf
- Tverdovskaya, A. V., & Gnezdilov, G. V. (2022). Criteria and indicators of the effectiveness of the professional activity of an entrepreneur and characteristics of their training. *Human Capital*, 2(5), 200–209. (in Russ.).
- Voronina, R. N., Potanina, M. V., & Abdrakhmanova, A. A. (2021). Digital technologies as a factor in the development of the educational environment of a university. *Current Issues of Accounting and Management in the Information Economy*, 3, 417–422. (in Russ.).
- Worsley, M., Anderson, K., Melo, N., & Jang, J. Y. (2021). Designing analytics for collaboration literacy and student empowerment. *Journal of Learning Analytics*, 8(1), 30–48. <https://doi.org/10.18608/jla.2021.7242>
- Zobnina, M., Korotkov, A., & Rozhkov, A. (2019). Structure, challenges and opportunities for development of entrepreneurial education in Russian universities. *Foresight and STI Governance*, 13(4), 69–81. <https://doi.org/10.17323/2500-2597.2019.4.69.81>

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Author Contributions

E. N. Makhmutova defined the conceptual foundations of the study, conducted methodological verification of the study, formed the review part, edited the text of the article.

R. N. Voronina formed the review part, collected empirical data, analyzed and interpreted the

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Conflict of Interest Information

The authors have no conflicts of interest to declare.