

DOI: <https://doi.org/10.34069/AI/2023.63.03.4>

How to Cite:

Aliexieieva, H., Shchetyynina, O., & Nyshcheta, V. (2023). The realities of postmodern internationalization: The experience of the ukrainian vocational education. *Amazonia Investiga*, 12(63), 42-52. <https://doi.org/10.34069/AI/2023.63.03.4>

## The realities of postmodern internationalization: The experience of the ukrainian vocational education

### Реалії постмодерної інтернаціоналізації: досвід української професійно-технічної освіти

Received: January 8, 2023

Accepted: February 28, 2023

Written by:

**Hanna Aliexieieva<sup>1</sup>**

ID Web of Science: H-1648-2018

<https://orcid.org/0000-0003-3204-3139>**Olha Shchetyynina<sup>2</sup>**<https://orcid.org/0000-0001-7023-1902>

ID Web of Science: E-7111-2019

**Volodymyr Nyshcheta<sup>3</sup>**<https://orcid.org/0000-0002-4500-7746>

Web of Science: ABD-1898-2021

#### Abstract

The topical problems of increasing country's competitiveness considering world experience should be solved only in accordance with modern requirements of rapidly changing information society, where competitive advantages largely depend on the quality of human resources and investments in human capital. The article describes the practical aspects of the development of internationalization of vocational education in Ukraine on the experience of Berdyansk State Pedagogical University; clarifies the current opportunities for improving the quality of education in the light of international practice on the example of the Benemérita Autonomous University of Puebla (Mexico), and identifies the ways to realize the potential of partnership in vocational education in Ukraine. The experience of Ukraine, Poland and Mexico, where the main condition for integration into the global university of knowledge is the quality of higher education institutions in accordance with international standards of curricula, has been analyzed. The practical experience of international scientific activities of Berdyansk State Pedagogical University and Benemérita Autonomous University of Puebla is described. The article concludes about the effectiveness of international cooperation in science, which

#### Анотація

Актуальні проблеми підвищення конкурентоспроможності країни з урахуванням світового досвіду мають вирішуватися лише відповідно до сучасних вимог швидкозмінного інформаційного суспільства, де конкурентні переваги значною мірою залежать від якості людських ресурсів та інвестицій у людський капітал. У статті описано практичні аспекти розвитку інтернаціоналізації професійно-технічної освіти в Україні на досвіді Бердянського державного педагогічного університету; з'ясовано сучасні можливості підвищення якості освіти у світлі міжнародної практики на прикладі Заслуженого Автономного університету м. Пуебла (Мексика) та визначено шляхи реалізації потенціалу партнерства у сфері професійно-технічної освіти в Україні. Проаналізовано досвід України, Польщі та Мексики, де основною умовою інтеграції у світовий університет знань є якість вищих навчальних закладів відповідно до міжнародних стандартів навчальних програм. Охарактеризовано практичний досвід міжнародної наукової діяльності Бердянського державного педагогічного університету та Заслуженого Автономного університету м. Пуебла. У статті зроблено висновок про ефективність міжнародного наукового співробітництва, що

<sup>1</sup> PhD of Pedagogical Sciences, Associate Professor, Berdyansk State Pedagogical University, Berdyansk, Ukraine.

<sup>2</sup> PhD of Pedagogical Sciences, Associate Professor, Berdyansk State Pedagogical University, Berdyansk, Ukraine.

<sup>3</sup> Doctor of Pedagogical Sciences, Associate Professor, Berdyansk State Pedagogical University, Berdyansk, Ukraine.



determines the status and prestige of the university, examines the European integration process of higher education system of Ukraine and the existing international training technologies.

**Keywords:** international scientific cooperation, scientific and educational programs, internationalization of higher education, quality of education.

## Introduction

The quality and accessibility of education today is a necessary modern requirement in a rapidly changing technological world, where competitive advantages largely depend on the quality of the human resources and investments in human capital. The level of education and the amount of constantly updated knowledge accumulated by society (Trondal, 2010; Nestorenko et al., 2018) is a key factor of national competitiveness, which reflects the implications of internationalization of higher education.

Neither natural resource wealth nor significant amounts of financial capital are competitive advantages in today's information society (Altbach, Reisberg, & Rumbley, 2009). Only by integrating into the global university of knowledge, where the criteria for determining the quality of higher education institutions is compliance with the standards of curricula of the international system, a solution to this problem is possible.

Therefore, an international cooperation in the scientific field, which determines the status and prestige of the university, will be a key factor in the training of a new type of staff with international exposure (Shchetynina et al., 2022).

## Literature Review

The analysis of scientific domestic and international studies of national educational proposals shows that the issue of studying the impact of modern integration processes in the field of education and its international partnership is gaining relevance. The conceptual principles of the process of internationalization of higher education are devoted to the scientific works of many foreign scientists, in particular, F. Altbach (Altbach, Reisberg, & Rumbley, 2009), M. Bartell, (Bartell, 2003), M. Ballatore (Ballatore, 2015), N. Nestorenko, O. Bordousov (Nestorenko, & Bordousov, 2015), De Wit H. (De Wi., 2020), J. Knight (Knight, 2011),

визначає статус і престиж університету, розглянуто євроінтеграційний процес системи вищої освіти України та існуючі міжнародні технології навчання.

**Ключові слова:** міжнародне наукове співробітництво, науково-освітні програми, інтернаціоналізація вищої освіти, якість освіти.

S. Marginson, J. Mason (Marginson, 2007), J. Mestenhauser (Mestenhauser, & Ellingboe, 2005), A. Ostenda (Ostenda, 2022), P. Scott (Scott, 2011), U. Teichler (Teichler, 2017), K. Schnitzer (Schnitzer, 2003), M. Van der Wende (Van der Wende, 2007), J. Fielden (Fielden, 2017), I. Ferentz (Ferentz, 2014), and others.

Ukrainian scientists, including L. Abyzova (Abyzova, 2015), H. Aliksieieva (Aliksieieva, 2012), A. Verbytska (Verbytska, 2019), M. Debych (Debych, 2020), S. Dombrovska (Dombrovska, & Husarov, 2019), O. Koziiivska (Koziiivska, 2012), N. Kravchenko (Kravchenko et al., 2017), T. Nestorenko (Nestorenko et al., 2018), O. Nitenko (Nitenko, 2015), etc. H. Aliksieieva (Aliksieieva et al., 2022), T. Nestorenko (Nestorenko et al., 2018) and others considered the relationship between the internationalization of higher education and the prospects for the development of universities. However, despite the important contribution of these scholars to highlighting issues of internationalization in higher education, many theoretical and practical aspects have not been studied enough.

The group of ISO 9000:2000 series of standards is one of the criteria for establishing a university management system in general and the quality of education in particular. They focus on process and measurement monitoring, which are necessary to obtain objective data on the organization and functioning of an educational institution as a whole, as well as to make informed decisions on the improvement and adjustment of its activities (Hura et al., 2022). At the same time, students' qualifications and education, individual characteristics such as age and research interests contribute significantly to determining the quality of education. The following factors also have a strong influence on the quality of education: socio-economic (including marital status and income), environmental and cultural (De Wit, 2020).

The studies show that quality education must necessarily be student-centered. Therefore, attention should be paid not only to the qualifications of the teacher, but also to the learning environment, taking into account the personal needs of the students and providing assistance where necessary (financial, social and academic support, counselling services, etc.) (Zlenko et al., 2019).

Quality is considered as a relative concept, responding to the priorities of different groups of beneficiaries' interests. These beneficiaries are students, teaching and academic team, technical and administrative staff, parents, potential employees, funding agencies, stakeholders and others (Ovsiannikov & Aliexsieieva, 2019).

Nowadays, the development of science and education is rapid and new knowledge is quickly becoming obsolete: the educator does not teach students, but stimulates and coordinates their activities and manages the means of learning. He becomes a tutor. The main task of the teacher, reflecting his pedagogical skills, is to choose the necessary content, apply the best methods and means of teaching in accordance with the program and the set objectives (Martynovych, Hornyk, & Boichenko, 2021).

### Methodology

In the work on the research, we used the following methods. Theoretical: analysis of the development of the internationalization of professional education of Ukraine based on the experience of the Berdyansk State Pedagogical University, international experience of improving the quality of education on the example of the Honored Autonomous University of Puebla (Mexico), Silesian Academy (Katowice, Poland); synthesis, generalization, comparison to reveal ways of improving the quality of education in the context of international standards; generalization of international experience regarding the investigated problem to determine the possibilities of realizing the potential of partnership in professional education of Ukraine.

**The article aims** are to describe the practical aspects of the development of internationalization of vocational education in Ukraine on the experience of Berdyansk State Pedagogical University, to clarify the current opportunities for improving the quality of education in the light of international practice on the example of the Benemérita Autonomous University of Puebla (BUAP, Mexico), and to

identify the ways to realize the potential of partnership in vocational education in Ukraine.

### The experience of internationalization

The higher education system in Poland and Ukraine started at about the same time the process of European integration, which entailed reforming the higher education system, affecting curricula and research programs, the management system of higher education institutions and mainly the organization of higher education itself.

In accordance with the main provisions of the Bologna Process, it is necessary to improve the education system and introduce innovative technologies and teaching methods (Nitenko, 2015). The current requirements of the global community for the level of education and professional competence of the individual impose great responsibility on the sphere of science and education in the training of highly qualified specialists.

There are many international programs in Poland that offer the opportunity to obtain just as good education at a much lower financial cost than at Oxford, Harvard or Sorbonne, which is automatically a guarantee of a successful career. For example, in Poland there are international study technologies, which allow students to study for some period of time in the foreign countries under the double degree program as part of academic mobility. Not only applicants from Ukraine and former CIS countries, but also from Scandinavia, Western Europe, the USA and even Emirates choose prestigious universities in Poland, because they are attracted by relatively cheap tuition fees and high quality of education at Polish universities.

Internationalization of higher education is occurring, and it is related to the strengthening of the economy, which requires highly qualified professionals (Lukianenko et al., 2013; Ostenda, 2022).

The experience of foreign countries in improving the quality of higher education is important. The main purpose of education, in our opinion, is not only knowledge transfer, but also that a future specialist is able to analyze independently and make correct strategic decisions in a complex competitive business environment. The economy of any country needs competent specialists, professionals capable of analyzing complex situations in a short time and making optimal decisions, taking into account the possible risk

when making the wrong decisions (Horbatiuk et al., 2019).

Primarily, the quality of education depends on the qualifications and experience of teachers. A teacher's competence includes identifying ways to develop effective curricula for disciplines included in state educational standards and for specialties (Kramarenko et. al., 2022). A revision of curricula and syllabuses is also required, including courses from employers aimed at developing skills in line with the sectoral qualification structure and professional standards (Pavlenko & Pavlenko, 2021).

There are many basic criteria for quality higher education – teacher diplomas, academic indicators and administrative management.

For example, according to the "Regulations on the rating assessment of scientific activity and efficiency of scientific and pedagogical workers and departments of Berdyansk State Pedagogical University", which is developed on the basis of the Law of Ukraine "On Higher Education" of 01.07.2014 (Law № 1556-VII, 2014), the University Charter of 19.12.2016 (Order № 1566, 2016); Development Strategy of Berdyansk State Pedagogical University for 2022 – 2025 and other regulatory documents, the rating assessment of the scientific activity of the teacher depends on the following indicators: quantitative; qualitative; grant and financial efficiency; prestige of the academic staff and the university; and student science.

The main objectives of the rating assessment of scientific activity at the university are: to increase the interest in expanding the scientific heritage and enhancing the image, to adopt the experience of advanced science; to ensure greater objectivity in assessing the quality of scientific effectiveness of teachers through the completeness and reliability of information; to strengthen the collective interest of teachers in improving the final results of scientific effectiveness of departments and the university as a whole, increasing the position of the university in the Consolidated Ranking of Higher Education Institutions and global rankings. All of this is directly connected with the internationalization of higher education.

In recent years, BSPU has paid particular attention to a number of areas in international relations: establishing new partnerships with higher education institutions, scientific institutions and organizations in other countries; intensifying cooperation with foreign

educational institutions previously signed cooperation agreements; participating in international research, educational and cultural projects; enhancing international student exchanges; organizing and conducting international scientific and scientific-practical conferences, seminars and round tables on the platform of the BSPU; participation of the University's teachers in similar events at other institutions of higher education, including foreign ones; publication of academic articles by BSPU teachers and students in foreign publications and works by foreign researchers in BSPU publications; grant activities; attraction of foreign specialists and assignment of BSPU teachers for internships abroad.

As a result of the implementation of the BSPU's internal objectives in terms of international integration of higher education into the European market of educational services according to Scopus indicators among Ukrainian universities, the rating increased from 92 (2018) to 110 (2022). According to Webometrics Ranking of World Universities-2022 (IDP Education, 2022) the ranking has increased by 30 points compared to 2019. This is a quality indicator of higher education of Ukraine.

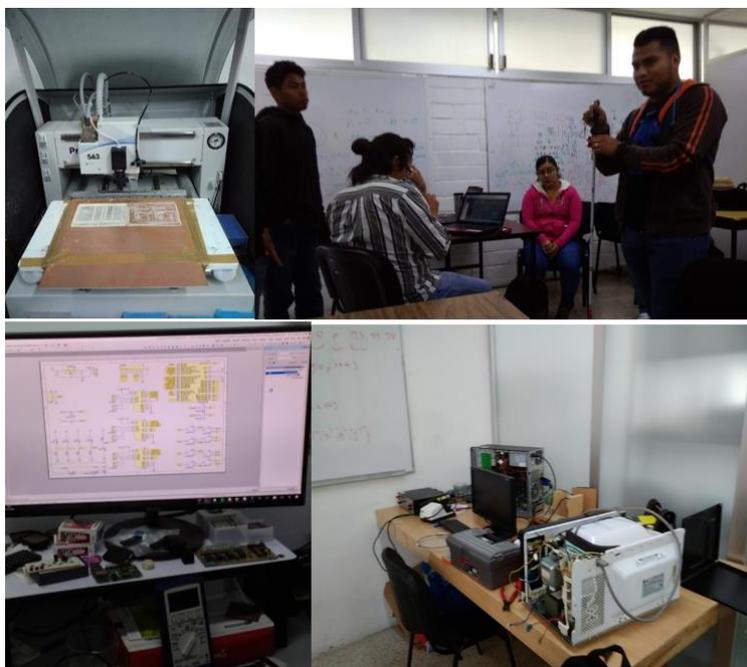
Planning and organization of international cooperation of the University with educational institutions, organizations and institutions of foreign countries under the concluded agreements on cooperation; development and coordination of draft agreements with foreign partners; coordination of work of the University departments and divisions under the international partnership; consulting and assistance in preparation of documents for departure of students and staff of the university abroad for study and internship; organizing the training and internships of the University's students abroad; coordinating the opportunities and meeting dates for foreign specialists, delegations and students; making their meeting programs and hosting foreign delegations has allowed the University to achieve such success.

As an example, the result of active international cooperation has become the academic visit of our scientific partner, the representative of the Faculty of Computer Science of the Benemérita Autonomous University of Puebla (BUAP, Mexico), the head of the laboratory "Research of Digital Systems and Renewable Energy Sources" (LISDER), Professor Jose Italo Cortez, whose dean is Professor, Doctor of Computer Science Marcos Gonzalez Floris (2017, 2018). The lecturer of the Department of Computer

Technologies in Management and Education and Computer Science Hanna Alieksieieva participated in 2017 and 2018 in the international internship at the Benemérita Autonomous University of Puebla on the exchange of scientific and pedagogical staff.

Long-term scientific cooperation has joint developments of students of BSPU and BUAP – this is the result in the field of Embedded

Systems and tools for using gateway-based devices, which allow the development of a wide range of circuits using hardware description language (HDL), such as VHDL or Verilog. On the other hand, microcontrollers are basically processors with various peripherals encapsulated in a single chip, which are programmed using low or high level languages such as Assembler, C or C++. The developments are unique and of great scientific importance (Figure 1).



**Figure 1.** International traineeship of Hanna Alieksieieva at the Benemérita Autonomous University of Puebla (Mexico, 2017, 2018).

The cooperation resulted in new competitive products demanded by the world market, which will allow our countries to take a worthy place in the global economic system. The higher education plays a key role here, being a supplier of highly qualified professionals, a source of new technologies and innovative products.

In March 2018 the lecturer of the Department of Computer Technologies in Management and Education and Informatics of BSPU Olha Shchetyynina completed the traineeship at the Prague Institute for Qualification Enhancement entitled "Organization of the educational process, scientific projects and publication activity in EU countries" that took place in Prague, Czech Republic. The problems and prospects of European education, issues of systems and indices of citation of scientific journals, publication activity and productivity of scientists, peculiarities of academic writing, project management, project and grant

opportunities of the European Union, conditions for successful implementation of scientific projects were considered (Shchetyynina, 2019).

Online traineeships for Ukrainian educators in Poland are made possible by the European League for Professional Development (ELPD). It is not just about gaining new knowledge and communication, but also a real chance to broaden their academic horizons and improve pedagogical skills.

The VIII International Seminar "Quality Management in Education" held in Berlin on 11 February 2020, discussed quality assurance and development in higher education, accreditation systems, approaches to quality management and quality assurance in an international context (News, 2020). There is a productive exchange of experience and enrichment of teaching practices through such international events. Lecturers' participation in international programs,

conferences and symposiums also allows for a qualitative improvement of their level.

Members of the Department of Computer Technologies in Management and Education and Informatics of BSPU Vladimir Lavrik, Hanna Alieksieieva, Olha Shchetytnina, and Iryna Bardus (Lavrik, & Bardus, 2020) had presented a research paper at a IEEE International Conference on Intelligent

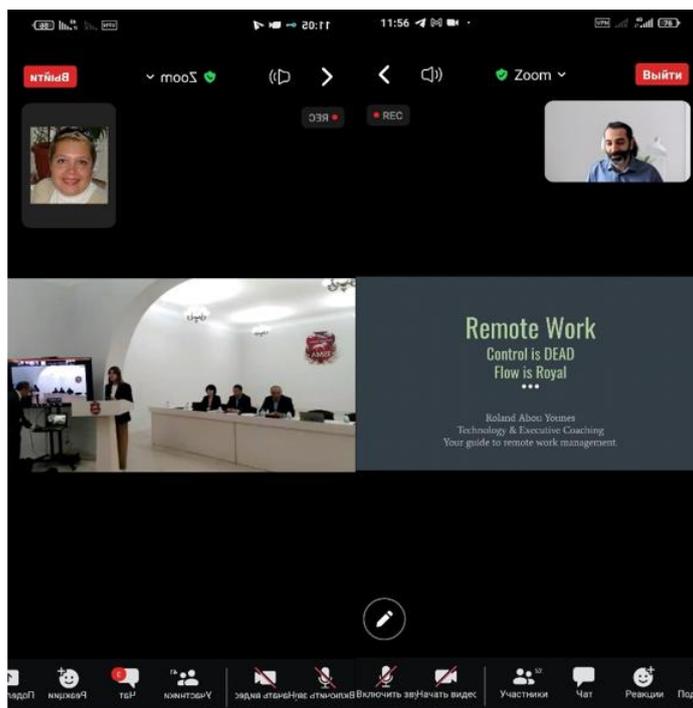
Technologies (CONIT-2021) during 25 - 27 June, 2021 organised by the KLE Institute of Technology, Hubballi, India ((Figure 2) (Lavrik et al., 2021). The conference focused on applications of Intelligence in Science, Communication and Computers, more specifically in the areas like Image Processing, Big Data, Wireless Networks and Cloud computing, etc.



**Figure 2.** IEEE International Conference on Intelligent Technologies (CONIT-2021). Participation of the BSPU representatives.

On November 28, 2022, 5 lecturers and 10 students of BSPU, who are interested in information technology and management in higher education and science, took part in the International Scientific Conference "Information Technology and Management in Higher Education and Science" (Fergana, Republic of

Uzbekistan) (Figure 3). The list of co-organizers of the conference shows the high level of this international event: ISMA University of Applied Sciences in Uzbekistan ISMA University of Applied Sciences, Higher School of Internal Security in Lodz Polonia Academy in Czestochowa and others (Balaban et al., 2022).



**Figure 3.** The fragment of the plenary session of the International Scientific Conference "Information Technologies and Management in Higher Education and Science" (Fergana, Republic of Uzbekistan).

The regular participation of BSPU lecturers in international scientific events promotes engineering and technology, related recent developments and issues that need to be discussed and experienced through interaction between researchers and academics around the world. For example, the IRAJ, one of the largest and most prestigious general scientific societies in the world, is an international non-profit academic association within the Peoples Empowerment Trust, whose stated aims are to promote cooperation between scientists, protect

scientific freedom, encourage scientific responsibility, support science education, and the spread of science for the benefit of all humanity.

Therefore, cooperation with the World Research Society provides opportunities to share research findings through the organisation of international/national conferences, to establish, maintain and manage centres of excellence for research, and to run independent projects regardless of their caste, creed or religion and much more (Figure 4) (Aleksieieva et al., 2022).



**Figure 4.** Proceedings of the World Research Society International Conference, Puerto Plata, Dominican Republic (Hanna Aliksieieva et al., 2022).

Innovative activities of higher education institutions are based on the integration of science and education (Sbruieva & Kozlov, 2016). Thus, an important task of innovative universities in Poland and Ukraine is the development of scientific research and its incorporation into industry in cooperation with the world's leading research centers, which will contribute to the country's competitiveness in the international arena.

The Ukrainian experience of integrating science, education and production is interesting. The country has experienced significant upheaval in recent years: the Maidan Revolution, persistent protests, political disturbances, territorial disputes and, since 2022, Russian military aggression. More recently, falling steel prices, one of the country's largest export items, and declining levels of investment in general, including both foreign and domestic investment, have led to a decline in industrial production. But with a well-educated workforce, a long tradition in science and technology, natural endowments, access to markets, a large and prosperous diaspora, and a nascent but successful IT sector, Ukraine has great potential for innovation. At the same time, despite significant positive reform dynamics in recent years, political and economic instability, corruption and the poor quality of institutions and overall governance continue to constrain Ukraine's ability to create an enabling environment for broad experimentation with ideas and technologies (or for innovation) and to promote such activities, which are necessary to create a solid, diversified and well-integrated

foundation for long-term sustainable economic development of the country (Unece, 2021).

However, many Ukrainian cities have built an effective innovative scientific and educational infrastructure based on strategic development programs. It includes not only educational institutions, but also offices for commercialization of innovations established in universities and academic institutions, business incubators, innovation and technological centers, and development clusters. Many universities in the country now have their own research and education complexes, which provide systematic support for the commercialization of research results and the introduction of their high-tech developments into enterprises.

For example, the experience of Berdyansk State Pedagogical University, which has been actively cooperating with stakeholders for many years, shows that the gap between business research and practice is steadily narrowing.

All these measures will help to bring academic education closer to practice and business organizations, and the possibilities for international programs will lead to the internationalization of higher education as a whole. When designing curricula, employers' views are considered and relevant elective courses are included. Particular attention is paid to the development of students' entrepreneurial skills. The courses "Entrepreneurship", "Innovative Entrepreneurship" are taught not only to students of economic specialties, but also

to students of other faculties. Students participate in research projects, project development, and start-up business project competitions (Aliexsieieva, 2012; Nestorenko et al., 2018). Moreover, employers, mostly university graduates, invite students for internships. This is done on mutually beneficial terms, as employers can further conclude employment contracts with the best graduates (Trondal, 2010).

In today's realities, higher education around the world is characterized as more corporate and more competitive, precisely because of internationalization

### Conclusions

Participation in various international programs and projects guarantees the quality of educational services, which corresponds to the world standards of the ISO series, and the quality management process of educational services corresponds to the TQM system.

Bridging the gap between business research and practice is an important issue in the integration of science, education and industry. The task of constantly updating knowledge throughout life, as required by the current context, workplace learning is addressed with the introduction of new learning methods using information technology, e-learning and open access to the Internet also contribute to improving the quality of knowledge.

Higher education institutions in Ukraine and Poland strive to improve the quality of education in order to train highly qualified competitive specialists. The level of training and knowledge of foreign languages allows students and graduates under various international external mobility programs to gain international experience in the educational field, expand professional skills, experience international culture and useful language practice. All these measures are aimed at improving the quality of education and the competitiveness of graduates in the international educational environment.

### Acknowledgement

Author 1 formulated the goal, clarified the tasks, described the experience of internationalization of the Ukrainian vocational education, described the experience of Berdyansk State Pedagogical University.

Author 2 analyzed scientific research on the problem, analyzed the experience of foreign countries, selected and presented illustrative

material, analyzed and put in order the list of literature of domestic scientists, and formulated conclusions.

Author 3 researched and systematized the list of literature of foreign scholars and edited the article.

### Bibliographic references

- Abyzova, L. (2015). Modernization of educational strategies in the national pedagogical culture. *Ukrainian studies almanac*, 18.
- Aliexsieieva, H. M. (2012). The essence and structure of the readiness of future social pedagogues to use computer technologies in their professional activities. *Scientific notes of Berdyansk State Pedagogical University. Series: Pedagogical sciences: coll. of science pr. Issue 1. Berdyansk: BDPU, № 2, 9-14.* [http://bdpu.org/sites/bdpu.org/files/foipt/stat\\_Alekseeva\\_8.pdf](http://bdpu.org/sites/bdpu.org/files/foipt/stat_Alekseeva_8.pdf)
- Aliexsieieva, H., Kurilo, O., & Kryvylova, O. (2022). Strengthening the Human Resources Potential of the Food Industry in the Context of Professional Creativity. *World Research. Society International Conference (16th – 17th July 2022). Puerto Plata, Dominican Republic: Institute for Technology and Research (ITRESERCH), 49-56. ISBN: 978-93-90150-32-8.*
- Altbach, Ph., Reisberg, L., & Rumbley, L. (2009). *Trends in Global Higher Education, Tracking an Academic Revolution*. Paris: UNESCO, 246 p.
- Arbelález-Campillo, D. F., Villasmil Espinoza, J. J., & Rojas-Bahamón, M. J. (2021). Inteligencia artificial y condición humana: ¿Entidades contrapuestas o fuerzas complementarias? *Revista De Ciencias Sociales*, 27(2), 502-513. <https://doi.org/10.31876/rcs.v27i2.35937>
- Balaban, O.K., Aliexsieieva, H.M., & Antonenko, O.V. (2022). From brand to trend: the impact of the economy of impressions on the development of educational institution management. *International scientific conference «Information technologies and management in higher education and sciences» : conference proceedings (November 28, 2022. Fergana, the Republic of Uzbekistan). Riga, Latvia : "Baltija Publishing", Part 1., 80-84.*
- Ballatore, M. (2015). *International Conference "Transnational Academic Spaces" at the University of Bielefeld (Germany). Presentation of the following paper: "Internationalization or ensuring competition in European HE Systems?". In International Conference "Transnational Academic Spaces".*
- Bartell, M. (2003). *Internationalization of universities: A university culture-based framework. Higher education*, 45, 43-70.

- De Wit, H. (2020). Quality Assurance and Internationalization, Higher Education. The International Encyclopedia of Higher Education Systems and Institutions. Springer Nature B.V. doi: <https://doi.org/10.1007/978-94-017-8905-9>
- Debych, M. (2020). The Triggers for Internationalization and Quality Enhancement in Higher Education of France. *International Scientific Journal of Universities and Leadership*, 9, 3-14.
- Dombrowska, S., & Husarov, K. (2019). Features of regulation of the migration processes in the European Union countries. *Bulletin of the National University of Civil Defense of Ukraine. Series: Public administration*, 1, 25-28. (In Ukrainian)
- Ferentz, L. (2014). *Treating self-destructive behaviors in trauma survivors: A clinician's guide*. Routledge.
- Fielden, J. (2017). Global: Financial Aspects of Offshore Activities: International Higher Education, Summer 2013, Number 72. *Understanding Higher Education Internationalization: Insights from Key Global Publications*, 45-47.
- Horbatiuk, L., Aliksieieva, H., Kravchenko, N., Lypych, V., & Rozumna, T. (2019). Use of Mobile Applications for Foreign Language Lexical Competence Formation. *Journal of History Culture and Art Research*, 8(3), 113-124. doi: <http://dx.doi.org/10.7596/taksad.v8i3.2093>
- Hura V., Nestorenko T., & Makarenko T. (2022). Study of the category "educational service": an interdisciplinary approach. *Scientific notes of the BDPU*, 2, 91-104. <https://cutt.ly/ANmFYwL>
- IDP Education (2022) *Webometrics Ranking of World Universities in 2022*. <https://www.idp.com/middleeast/webometrics-ranking-of-world-universities/?lang=en>
- Knight, J. (2011). Five myths about internationalization. *International higher education*, (62).
- Koziiievska, O. (2012). Strategies of internationalisation of higher education: international experience and Ukrainian perspective. *High school*, 7, 30-39. (In Ukrainian)
- Kramarenko, A., Stepaniuk, K., Bogdanov, I., Aliksieieva, H., & Kempnińska, U. (2022). The educational component "Teaching methodology of social and health-care educational sector" under quarantine restrictions. *Amazonia Investiga*, 11(49), 259-266. <https://doi.org/10.34069/AI/2022.49.01.28>
- Kravchenko, N.V., Aliksieieva, H.M., Horbatiuk, L.V., & Antonenko, O.V. (2017). Increasing the academic openness of higher education institutions by means of web technologies. *Physical and mathematical education*, 4(14). <https://cutt.ly/9NzSaY>
- Lavrik, V., Aliksieieva, H., Bardus, I., & Shchetynina, O. (2021). Object-oriented Representation of Mechanical Systems for the Automated Design. 2021 International Conference on Intelligent Technologies (CONIT), 1-10. doi: <https://doi.org/10.1109/CONIT51480.2021.9498445>
- Lavrik, V., & Bardus, I. (2020). Use of elements of dual education to prepare future engineers-pedagogues for teaching robotics (Doctoral dissertation), Cognum Publishing House.
- Law № 1556-VII "On Higher Education" of 01.07.2014. <https://zakon.rada.gov.ua/laws/show/1556-18>
- Lukianenko, D., Chuzhykov, V., Wozniak, M., Antoniuk, L., Bal-Woźniak, T., Bolonek, R., ... & Tsyhankova, T. (2013). *Convergence and Divergence in Europe: Polish and Ukrainian Cases-Monograph*. KNEU, 688 p.
- Marginson, S. (2007). Global university rankings: Implications in general and for Australia. *Journal of Higher Education Policy and Management*, 29(2), 131-142.
- Martynovych, N.O., Hornyk, V.H., & Boichenko, E.B. (2021). *Marketing research: a study guide*. Kyiv: from "Ludmila", 323 p.
- Mestenhauser, J. A., & Ellingboe, B. J. (2005). Leadership knowledge and international education. *International Educator*, 14(6), 36.
- Nestorenko, T. P. & Bordousov, O. V. (2015). The value of higher education for the individual. *Bulletin of Khmelnytsky National University. Economic sciences*, 3, 171-174. URL: <https://cutt.ly/SGYr6T9>
- Nestorenko, T., Ostenda, A., Perelygina, L., & Iliina, Y. (2018). The Impact of Foreign Students on Internationalization of University and on the Economy of a Host City (Case of the Katowice School of Technology). Capacity and resources for sustainable development: the role of economics, business, management and related disciplines. EDAMBA-2018. Conference Proceedings of International Scientific Conference for Doctoral Students and Post-Doctoral Scholars. 17-19.04. 2018, 356-366, University of Economics in Bratislava, Bratislava. <https://cutt.ly/RQU7NEU>
- News (2020) The VIII International Seminar "Quality Management in Education". Berlin. <https://news.myseldon.com/ru/news/index/223789061>
- Nitenko, O. V. (2015). Internationalization of higher education as a factor of university development. *Educational discourse*, 2(10), 205-216. <https://od.kubg.edu.ua/index.php/journal/article/view/249>
- Order № 1566. The University Charter of 19.12.2016. <https://bdpu.org.ua/public-information/university-statute/>

- Ostenda, A. (2022). Double diploma as a tool for improving the quality of higher education. *Scientific notebooks of the University of Technology in Katowice*, 15.
- Ovsiannikov, O. S., & Alieksieieva, H. M. (2019). The computer environment of the research work of the engineering-pedagogical studies of the computer profile as an object of design. *Molod i rynek: Scientific and pedagogical magazine*. Drohobych: Ivan Franko Drohobych State Pedagogical University, 9(176), 107-112. doi: <https://doi.org/10.24919/2308-4634.2019.182241>
- Pavlenko, M., & Pavlenko, L. (2021). Formation of communication and teamwork skills of future IT-specialists using project technology. In *Journal of Physics: Conference Series*, 1840(1), 012031. doi: <https://doi.org/10.1088/1742-6596/1840/1/012031>
- Sbruieva, A., & Kozlov, D. (2016). Internationalization as a driver of the development of the innovative system of the university. *Pedagogical sciences: theory, history, innovative technologies*, 6, 71-87.
- Schnitzer, K. (2003). VI. The German Perspective Regarding the Design and Use of System-Level Indicators for Higher Education. Organization, Bucharest (Romania). European Centre for Higher Education., 83.
- Scott, P. (2011). The university as a global institution. In *Handbook on globalization and higher education*. Edward Elgar Publishing.
- Shchetyynina, O. (2019). Project management systems as means of development students time management skills. *CEUR Workshop Proceedings*, 2387, 370–384.
- Shchetyynina, O., Kravchenko, N., Horbatiuk, L., Alieksieieva, H., & Mezhuiev, V. (2022). Trello as a Tool for the Development of Lifelong Learning Skills of Senior Students. *Postmodern Openings*, 13(2), 143-167. doi: <https://doi.org/10.18662/po/13.2/447>
- Teichler, U. (2017). Internationalisation trends in higher education and the changing role of international student mobility. *Journal of international Mobility*, 4, 177-216.
- Trondal, J. (2010). Two worlds of change: on the internationalisation of universities, *Globalisation, Societies and Education*, 8(3), 351-368. doi: <https://doi.org/10.1080/14767724.2010.505097>
- Uece. (2021). *Innovation Policy Outlook 2020: Eastern Europe and the South Caucasus. UKRAINE*. <https://acortar.link/InCwkV>
- Van der Wende, M. (2007). Internationalization of higher education in the OECD countries: Challenges and opportunities for the coming decade. *Journal of studies in international education*, 11(3-4), 274-289.
- Verbytska, A. (2019). The stimulating directions of higher education internationalization in the process of integration into the European higher education and research area. *Economics & Education*, 4(1), 34-39.
- Zlenko, A., Isaikina, O., & Isaikina, O. (2019). Academic mobility as an integral component of Ukraine's integration into the modern European knowledge society. *Society. Document. Communication*. «Society. Document. Communication», 6/2, 56-76. doi: <https://doi.org/10.31470/2518-7600-2019-6/2-56-76>