

**Global and European Integration**

Valentyna ANTONIUK

**INTEGRATION OF UKRAINIAN HIGHER
EDUCATION INTO THE EUROPEAN
HIGHER EDUCATION AREA
TO DEVELOP HUMAN CAPITAL****Abstract**

The paper is dedicated to the problems of integration of Ukrainian higher education institutions into the European Higher Education Area. Problems of higher education in Ukraine and the importance of Euro-integration for solving them are analysed. The institutional basis of the European Higher Education Area (EHEA) and forms of international cooperation in higher education are investigated. The main priorities of the latter's development at present stage are identified, in particular the indicators for modernizing the higher education system (HES) of Ukraine. Analysis is conducted to examine the development of international cooperation of Ukrainian higher education institutions and their participation in European educational programmes. It is concluded that Ukrainian HEIs are more actively engaging in various forms of international cooperation. Unwavering integration of the Ukrainian higher education system into the EHEA facilitates the advance of Ukrainian universities in the international ratings. However, this reveals the weak spots of the European integration processes, highlighting several directions for improving the state policies and HEI's activities with regards to creating better conditions for deepening cooperation in the field of higher education.

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Introduction

The world has entered a new stage of technological development, characterized by the spread of digital technologies, transition to Industry 4.0, and rapid development of creative sectors of the economy. This has set new requirements for higher education, which is the platform for fostering human capital with a high level of knowledge, creativity, mobility, modern professional skills and the ability to innovate. In most countries of the world, higher education systems are developing in line with the achievements of science, new technologies and the accelerating needs of economic modernization. Therefore, the last decades have been a period of radical changes in education, and the next decade promises that they will persist in the future. Ukraine has an extensive system of higher education, which was formed in Soviet times within the industrial technological system. Over the years of independence, some changes in Ukrainian higher education have occurred, but the inertia of the modernization processes in terms of educational content, educational technologies, and organizational forms, as well as the weak

connection of higher education institutions (HEI) with business cause poor correlation of university training with modern needs of economy and society. Therefore, in Ukraine, despite high levels of literacy, the role of human capital as a factor of production remains low. According to the World Bank, human capital in Ukraine accounts for only 34% of total national wealth, while in countries with below-average incomes it accounts for 51%, and in Europe and Central Asia (ECA) – 62% (World Bank Group, 2019). The Ukrainian system of higher education needs to be modernized to significantly improve the quality of training. Integration into the EHEA and the participation of Ukrainian universities in international educational programs contributes to more active reform of the HES in accordance with European and world standards and increase in its role in the system of economic growth factors.

Literature Statement and Problem Statement

Problems and trends in higher education are always in the field of view of European researchers. In a report to the National Council for Education in 2001, G. Haug and C. Tauch noted that higher education is a powerful source of change and reform in Europe (Haug & Tauch, 2001). Most researchers of educational processes reveal significant potential for reforming the European higher education system for the future economic and social development of Europe. They emphasize the positive impact that the strategy of internationalization of the European HES has on the development of human potential, talent competition and the achievement of greater mutual understanding. S. Garben (2012) noted the importance of creating a strong HES in Europe for both economic and non-economic reasons, and the need for a full legal framework. In recent years, many publications have appeared that analyse the achievements and problems inherent to the creation of the European Higher Education Area. *The European Higher Education Area: Between Critical Reflections and Future Policies*, which presents articles by more than 50 Bologna researchers (Curaj et al., 2015), analyses the main aspects of higher education: the process of its internationalization; financing and management; teaching, learning and attracting students; superiority and diversity of missions; equality and social dimension of HES; the relationship between education, research and innovation; quality assurance; the impact of the Bologna Process on the EHEA and beyond. There is progress and some difficulties facing the European higher education system. Articles by Sjur Bergan and Ligia Deca (Bergan, 2019; Bergan & Ligia, 2018) analyse the development stages of the EHEA, emphasize the significant reform of the education system, but note that there is a decrease in optimism due to growing difficulties in recent years in meeting the commitments. At the present stage, considerable attention is paid to identifying the dominant trends in the development of higher education

in the EU and in the world to develop a more effective educational policy (Hanover Research, 2019; Miller, 2019).

Many Ukrainian researchers analyse the development trends of the EHEA and substantiate the need for active participation of Ukraine as a condition for modernization of the domestic higher education system. The monograph of Transcarpathian State University, making a significant contribution to understanding the need, problems and prospects of Ukraine's European integration in the field of education, sets out the legal framework of European integration processes and experience in implementing European standards and principles of the Bologna process (Vashchuk, 2011). The signing of the Association Agreement between Ukraine and the European Union has both brought more attention to the study of the EHEA and the participation of Ukrainian HEIs in various forms of cooperation. In 2014, specialists of the International Charitable Foundation «International Foundation for Educational Policy Research» prepared a monitoring study on the integration of the Ukrainian higher education system into the European Higher Education Area (Finikov et al., 2014). It analysed the conditions and problems of HES in Ukraine, its legal framework, structure of degrees and qualifications of higher education in Ukraine, quality and other aspects of education in the context of EHEA development, as well as areas for further integration into the European Higher Education Area. A systematic analysis of the evolution of European integration in the field of education is detailed in the «National Report on the state and prospects of education in Ukraine» (Kremen, 2016), where the further development of Ukraine's HES is associated with inclusion in the European Higher Education Area. The publications of Ukrainian authors analyse the problems and prospects of higher education in the EU (Natroshvili, 2020), the EU experience in education management and education policy (Kulchii, 2018), the need to modernize higher education in Ukraine for successful integration into the EHEA (Turuta & Zhydkova, 2019), changes in educational policy in Ukraine under the influence of interaction with the European educational space (Bakhrushin, 2018). The author also studied the development of higher education and science in Ukraine in the context of European integration: systematized the main current problems of HES and the need for its modernization in view of the experience of the EU (Antoniuk, 2019). Another article analysed the state and problems of integration into the European research space (Ivanov & Antoniuk, 2020). Therefore, this publication is a continuation of the study of European integration processes in education and science.

Despite the large number of publications and information available about the EHEA, not all Ukrainian universities are involved in the European integration processes in higher education, the level of their participation in the EHEA lags far behind other countries participating in the Bologna Process. Therefore, Ukraine does not receive all the potential benefits of European integration for more active modernization of higher education, which is a condition for the development and improvement of the quality of human capital in the country. This indicates the need for further research on the problems of educational European integration in

the context of identifying achievements, limitations and directions for its development.

The aim of the article is to analyse the problems of higher education in Ukraine in the context of European educational trends, assess the achievements of Ukraine's integration into the European Higher Education Area, identify limitations in international cooperation and determine the directions for its development.

Research methods and data

In the course of research, general scientific methods of theoretical, statistical and comparative analysis, comparison, generalization, and systematization were applied. The data was collected from international agreements and Ukrainian regulations in the field of European integration and education, materials of the Ministry of Education and Science of Ukraine, information resources of Eurostat, the State Statistics Service of Ukraine and Internet resources, published research results of foreign and Ukrainian experts on this issue.

Research Results and Discussion

Analysis of the higher education problems in Ukraine in the context of European trends

Ukraine has a significant number of higher education institutions capable of providing training at the level of Bachelor's and Master's degrees. However, the volume of training has decreased significantly since 2010. About 1 million 450 thousand students are currently studying in the HEIs of Ukraine, in 2010 there were 2 million 491 thousand of them, thus their number has decreased by more than 1 million people. Such dynamics is caused by the specifics of development of the higher education system for the period of independence and problems of its development in the conditions of a deteriorating economic and demographic situation. Difficulty in accessing higher education for the majority of the population in Soviet times and the processes of higher school liberalization in the post-Soviet period gave rise to a boom in demand for higher education. In the late 1990s and early 2000s, there was an unsubstantiated expansion of institutions offering basic and complete higher education. This happened without proper development of the facilities of higher education institutions. The number

of students of universities, academies, and institutes increased from 922.8 thousand in 1995/96 to 2 million 372.5 thousand people in 2007/08, i.e. almost 2.6 times (State Statistics Service of Ukraine, n.d.). The increase in number of universities was also not tied to the needs of the labour market. According to experts on the quality of education, the total «massification» of higher education is always inversely correlated to the quality of higher education (Kvit, 2020), which leads to a decrease in funding for education, devaluation of university diplomas, and, potentially, contraction of the demand for this level of education, which is why in the 2013/2014 academic year the number of students decreased by almost a million people.

In the last decade there has been a steady trend towards simplifying the HES in Ukraine, which has resulted in a further decrease in the number of institutions of higher education and students (Table 1). Over the past 6 years, the number of students in colleges, technical schools, and vocational schools decreased by 31%, while the reduction for universities, academies, and institutes amounted to 8% (Table 1).

Table 1

Number of higher education institutions and students in Ukraine for 2014-2020

	2014/15	2015/16	2016/17	2017/18	2018/19	2019/20	% to 2014/15
Colleges, technical schools and vocational schools							
Total number of institutions	387	371	370	372	370	338	87,3
Total number of students	251 271	230 110	217 322	208 601	199 926	173 585	69,1
Number of students per 10 000 population	58	53	51	49	47	41	70,1
Universities, academies and institutes							
Total number of institutions	277	288	287	289	282	281	101,4
Total number of students	1 437 955	1 375 160	1 369 432	1 329 964	1 322 324	1 266 121	88,1
Number of students per 10 000 population	335	322	322	314	314	302	90,1

Source: calculated and compiled by the author on the basis of State Statistics Service of Ukraine (n.d.).

The contraction of the higher education system of Ukraine in recent years is caused by a number of reasons: the loss of universities and students due to the annexation and occupation of the Autonomous Republic of Crimea and part of Donbass; deteriorating demographic situation and population decline; departure of a significant proportion of young people to study abroad; reduced value of higher education for the population due to the difficulties in finding employment in the specialty after graduation. The threat to the human capital in Ukraine is that the number of students per 10 thousand population has decreased: in 2014, this figure for all institutions of higher education was 393 people, in 2019 – only 343. In Ukraine, the quantitative problem of the contingent is partially solved by foreign students, but their share in the total number of university students is less than 5%. The number of foreign students does not compensate for the outflow of domestic applicants for higher education abroad, the number of which, according to rough estimates, is 70-80 thousand people.

It should be noted that the problem of reducing the number of institutions of higher education also exists in some European countries. The analysis of Eurostat data shows that in the EU as a whole the number of students is growing: for the period from 2015 to 2019 at the Bachelor's level it increased by 8.2%; at the Master's level of training – by 9.2% (Eurostat, n.d.). This is mainly due to countries such as Germany, France, Italy, Greece, Spain, Portugal and some others (Fig. 1). The number of students is declining mainly in countries with a socialist past – mostly in Bulgaria, the Czech Republic, Poland, Slovenia, Slovakia, Estonia, Lithuania, and Latvia. This indicates that the EU has historically formed powerful centres of higher education, which accumulate applicants from other countries. In other countries of the Bologna process, higher education volumes are also expanding, for example, in the UK the number of students increased by 12%, in Turkey – by 21%.

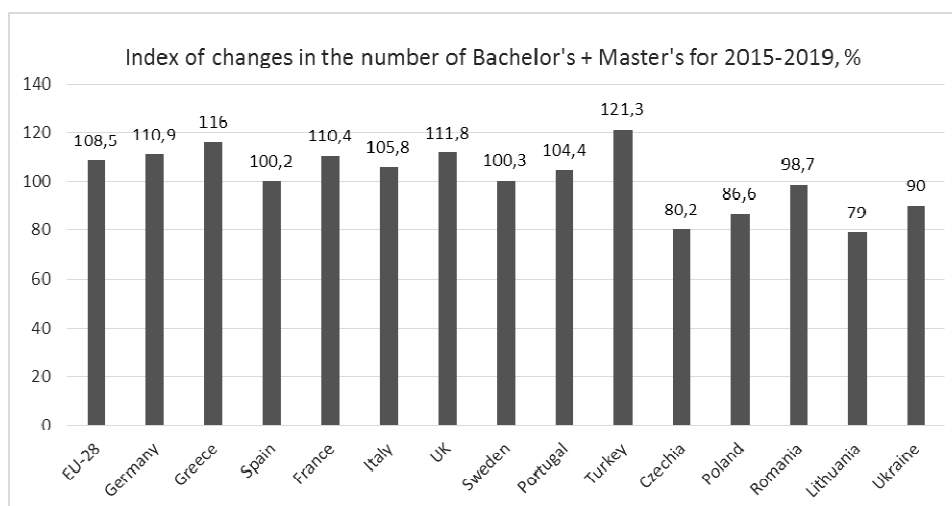
The declining trends in the number of students in some European countries can be explained both by the features of development of these countries (demographic situation, standard of living, difficulty of finding employment for specialists with higher education) and lower competitiveness of national higher education systems compared to those of European educational leaders. The loss of students in Eastern European countries explains their active policy of attracting young people from Ukraine to study.

The declining number of students in the HEIs of Ukraine means the reduction of the latter's activities, reduced funding, worsening of facilities, and reduced number of teaching staff. Due to the decrease in the volume of students, the labour market of university teachers is growing more competitive: at the beginning of 2010/11 more than 200.8 thousand pedagogical and scientific-pedagogical workers were employed in HEIs, but in 2019/20 it was only 156.9 thousand. Analysis of the changes in the teaching staff numbers in 2017-2019 shows some contradictory processes. Despite the decrease in the number of students, the number of HEI teachers has increased slightly, mainly due to universities (by 3.2%), but the share of teachers who do not work full time increased significantly: in colleges and tech-

nical schools – 22%, in universities – almost 30% (State Statistics Service of Ukraine, 2021). Thus, the human resources in higher education are used inefficiently. This was remarked upon by World Bank experts, who in 2019 published a study on education in Ukraine, which highlighted the inefficiency in the field of higher education, namely the low indicators of the number of students per teacher (in Ukraine – less than 11 people) compared to neighbouring countries (in the UK, Finland, Poland – 16-20 people) (World Bank Group, 2019).

Figure 1

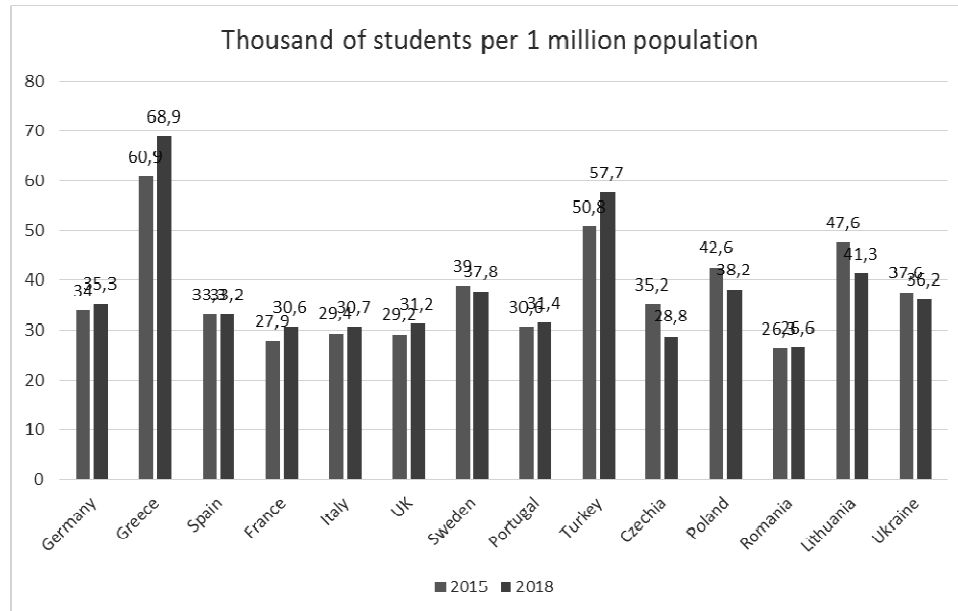
Index of changes in the number of students of higher education institutions in the EU, individual European countries and Ukraine for 2015-2019



Source: calculated and designed by the author on the basis of Eurostat (n.d.) and State Statistics Service of Ukraine (n.d.).

Despite the decrease in the number of HEI students in Ukraine, their number per 1 million population exceeds that of most developed European countries (Fig. 2). In Ukraine, their number in 2018 was more than 36 thousand, in France and Italy – 30 thousand, in the UK, Spain, Portugal – 31-33 thousand, in Germany – 35 thousand. The data in the figure show that Ukraine is comparably close to the largest European countries in terms of the number of higher education students, but lags behind Turkey and Greece, where this figure has been growing in recent years.

Figure 2

**The number of students of higher educational institutions
in some countries of Europe and Ukraine per 1 million population**

Source: calculated and designed by the author on the basis of Eurostat (n.d.) and State Statistics Service of Ukraine (n.d.).

This indicates that while the problem of quantitative contraction of the higher education system in Ukraine exists, it is not critical. Most studies show an excessive number of higher education institutions in Ukraine, as of 2019 there were almost 15 institutions (7 universities, academies, institutes) per 1 million population. In the Netherlands, Germany, France, and the United Kingdom, where the process of quality assurance in higher education has a long and successful history, the number of HEIs per million population is approximately the same and ranges from 4 to 6 (Kvit, 2020). According to World Bank experts, Ukraine has become one of the leaders in this respect – more than 40% of the population over the age of 25 have higher and incomplete higher education, which exceeds the OECD average. However, the role of human capital as a factor of economic growth remains relatively weak (World Bank Group, 2019). According to the State Statistics Service, more than 54% of the employed population of Ukraine have complete, basic and incomplete higher education. At the

same time, Ukraine lags far behind in terms of labour productivity, as the level of qualifications does not meet the requirements of modern production. A World Bank study on employment and productivity skills found that 60% of employers were dissatisfied with the employees' level of training (The World Bank, n.d.).

This situation is caused by the fact that Ukraine has acute problems with the quality of higher education, appropriate structure of vocational training and suitability of acquired competencies for the needs of the economy. These determine the formation of modern human capital, which has a key role in ensuring sustainable inclusive growth. They emerged as a result of stagnancy in higher education, lack of funding and public control over the functioning of the higher education system.

The sociological survey on HES problems by the *Democratic Initiatives* Foundation confirmed the high value of higher education for the population of Ukraine and revealed a number of problems, namely corruption in the teaching staff of universities (noted by 37% of respondents), non-recognition of Ukrainian diplomas in other countries (34%), the divide between the teaching and the requirements of the labour market (32%); insufficient facilities of universities (32% of respondents) (Ilko Kucheriv Democratic Initiatives Foundation, 2017). The World Bank study also found the following shortcomings: outdated curricula and pedagogical teaching methods; the focus of HEIs not on fostering modern skills but mainly on transferring knowledge that does not necessarily correspond to new research and technology; prevalence of contempt for the standards of academic integrity, corruption (The World Bank Group, 2019).

These problems are solved very slowly, which causes the lag of the Ukrainian HES from the educational systems of leading countries and significantly reduces its effectiveness. It should be noted that the existing problems are caused not only by admittedly insufficient funding for higher education, but most likely by the low efficiency of educational management at all levels and in all areas of the Ukrainian education system. Globally in higher education, there is a tendency to introduce multidisciplinary programs based on empirical learning and project approaches to solving complex problems, which is rarely practiced in Ukrainian universities. According to M. Tymoshchuk, General Director of *UFuture* holding, development of education and quality human capital is the first and foremost factor in increasing labour productivity in Ukraine. That is why Ukraine today needs to make every effort to completely restart and prioritize the development of education (Tymoshchuk, 2020). The integration of Ukraine's HES into the European Higher Education Area will facilitate such a restart and a faster solution to existing problems.

Institutional basis of the European Higher Education Area and priority tasks of its development

At the present stage, the European Higher Education Area is actively developing in the EU. Its history began in the first stages of the unification of European countries into a community. This was facilitated by the European Cultural Convention of the Council of Europe (1954), the establishment of the European Centre for the Development of Vocational Training (1975), the European Education Information Network (Eurydice, 1980) and a number of other networks and programmes in the field of education, which facilitated the cooperation between the systems of different European countries. A number of European programmes in the field of education were launched in the 1990s: COMETT (1986 p.), ERASMUS (1987 p.), PETRA (1987 p.), Youth for Europe (1988 p.), LINGUA (1989 p.), EUROTECNET (1989 p.), FORCE (1990 p.), TEMPUS (1990 p.), SOCRATES (1994 p.) (Kremen, 2016). They developed cooperation between universities and enterprises in the field of technology, innovations in vocational education, student mobility, promotion of vocational training and academic exchanges among young people, study of foreign languages, lifelong learning, and preparation of students for adult life, etc.

With the signing of the Treaty establishing the EU in 1992 (the Maastricht Treaty), a common policy of promoting the quality of education, vocational training and cultural development of the EU member states (Articles 149-150 of the Agreement) and promoting research and technical development was enshrined in law (Articles 163-173) (Council of the European Communities, 1992). The active convergence of European higher education systems (HES) and the creation of the European Higher Education Area was finalised with the signing of the Bologna Declaration in 1999. It introduced a system of two-stage higher education – basic (Bachelor's degree) and full (Master's degree) levels, a credit system as a means of increasing student mobility, issuance of mutually agreed upon and standardized diploma supplements for these levels of higher education comparable throughout Europe. It promoted stimulation of mobility and creating conditions for free movement of students, teachers, scientists, education managers within the Bologna area, development of European cooperation in the field of quality control of higher education, development of comparable criteria and methodology, emphasis on the European dimension of higher education in the design of competitive educational programmes and in the field of research (The European Higher Education Area, 1999). In 2001, the report from the Education Council «On the concrete future objectives of education and training systems» set strategic goals: 1) increasing the quality and effectiveness of education and training systems in the EU; 2) facilitating the access of all to lifelong learning; 3) opening up education and training systems to the wider world (Council of the European Union, 2001).

Regular (every 2 years) Summits of Ministers of Education of EU member states and the communiqués they adopt ensure the development of the EHEA, specify the goals and objectives of its development. Thus, in the Leuven / Louvain-la-Neuve Communiqué «The Bologna Process 2020 – The European Higher Education Area in the new decade» defined several tasks for the period up to 2020. These included improving the quality of higher education; equal access to education and the opportunity to complete education; lifelong learning; availability and quality of employment for students and graduates; student-centred learning, research and innovation in HES (Leuven / Louvain-la-Neuve Communiqué, 2009). Further tasks for the development of the education system are defined by the Strategy «Europe 2020. A strategy for smart, sustainable and inclusive growth» (European Commission, 2010). According to this, EU Member States were expected to achieve four key goals directly related to education by 2020: (1) to make lifelong learning and mobility a reality; (2) improve the quality and effectiveness of education and training; (3) establish equality, social harmony and active citizenship; and (4) promote the development of creativity, including entrepreneurship at all levels of education.

The main tasks of the European education system formed under the influence of transformational processes in the economy and society in the last 2 decades. *First, the need to master digital technologies and skills.* The European Council adopted the eEurope – Information Society for All program in 2000 (European Union, 1999), and one of its seven flagship initiatives, the Digital Agenda for Europe, in 2010 within the framework of Europe 2020 strategy (European Commission, 2010). This has created an urgent need to develop digital skills among the general population. EU higher education institutions have become a platform for the active implementation and use of digital technologies and the development of digital skills in accordance with the European Digital Competence Framework for Citizens (DigComp) and its updated versions DigComp 2.0 and DigComp 2.1 (Vuorikari et al., 2016).

Second, the introduction of a competency-based approach to learning. At the beginning of the 21st century, dynamic technological changes resulted in an acute problem of providing the economy with qualified personnel and employment of a significant number of unemployed. Therefore, an important task that the EHEA faced was identifying the competencies in demand on the labour market and transitioning to a lifelong learning system to keep those skills up to date. The developed «European Reference Framework for Key Competences for Lifelong Learning» (2006) and the «European Qualifications Framework for Lifelong Learning» (2008) defined key modern competences: communication in the mother tongue, communication in a foreign language, mathematical competence and basic competences in science and technology, digital competence, learning ability, interpersonal, intercultural, social and civic competences, entrepreneurship and cultural self-expression (Natroshvili, 2020). Implementation of the competency approach in HES required modernization of the educational process, greater focus on the requirements of the labour market and the fostering practical

skills. In 2012, the EU modernized the strategic guidelines for the development of education and training in the document «Rethinking education: Investing in skills for better socio-economic outcomes» in the face of intensified economic competition and the demand for highly skilled workers on labour markets. The task of building skills for the 21st century was high on the agenda. These included transversal and basic skills – the ability to learn and think critically, mathematical and natural competencies, entrepreneurship, ICT competence, and communication in modern foreign languages, as well as professional skills (Kremen, 2016).

Third, the development of STEM education to support the neo-industrialization and development of Industry 4.0. The EU's need for industrial revival has set the task of staffing industrial development, as there is a shortage of technical personnel. The Royal Academy of Engineering announced that the British would have to train more than 100,000 STEM students by 2020 to meet the demand. According to research, Germany lacks 210,000 workers in mathematics, computer science, science and technology. Therefore, more than 10 European countries developed national strategies and initiatives in the field of development and popularization of STEM education (Germany, France, Italy, the Netherlands, Norway, Great Britain, Ireland, Spain and others). The development of STEM education is becoming one of the priorities of the European educational space.

Thus, at the present stage, the most important tasks of the EHEA are: ensuring broad access to higher education, improving the quality of education, developing digital skills, developing STEM education, transitioning to lifelong learning, and forming the competencies in-demand with the labour market that are aimed at quality of human capital, level and efficiency of employment.

The European Higher Education Area is actively developing through the implementation of international cooperation programmes like Tempus and Erasmus+, which are involving more and more partners from non-EU countries. *The Tempus programme* is an annual competitive external assistance programme of the European Union for the modernization of the higher education systems in the EU partner countries (Eastern Europe, Russia, Central Asia, the Western Balkans, North Africa and the Middle East) through cooperation between EU member states and partner countries. It was implemented from 1990 to 2013 and covered four stages (National Tempus / Erasmus+ Office in Ukraine, n.d.). *The Erasmus Mundus programme* (launched in 1987) aims to expand links between higher education institutions by concluding agreements between EU Member States for the exchange of students and teachers, and conducting joint projects in the field of education and research. Since 1987, more than 4,000 universities from 33 countries have participated in the programme. The EU *Erasmus+ educational programme* with a budget of 14.8 billion euros was implemented from 2014-2020, which included – Capacity Building in Higher Education (an ex-Tempus priority). It covers education, youth and sport, including existing EU lifelong learning, youth and sport programmes, and European cooperation programmes in higher education. In March 2021, new calls for the EU

Erasmus + Programme for 2021-2027 were announced with a budget of over 26 billion euros, promising more inclusive, digital and environmentally friendly approaches (Intellect Guide, n.d.).

The analysis of the institutional basis of European integration in the field of education shows that the European Higher Education Area is actively developing, adding both regulations and various forms of cooperation. It ensures unification and continuous modernization of higher education systems of Bologna process undersigned countries through broad cooperation and joint efforts in accordance with the requirements of knowledge-oriented and high-tech economy. EHEA researchers note the current progress in the development of the EU higher education system and at the same time note the existence of certain difficulties and debatable issues for its further development.

Integration of Ukraine into the European Higher Education Area and directions of improving the quality of its human capital

Since Ukraine gained independence, it has expressed a desire to join the system of European economic, scientific, technical, educational and cultural cooperation. This was facilitated by the TACIS program (Technical Assistance for the Commonwealth of Independent States) aimed post-Soviet countries, under which Ukraine has received technical assistance from the EU in various areas of economic activity since 1991, including education, science and technology. The development of European cooperation was also carried out within the Tempus programme, through which about 300 projects were implemented from 1993 to 2006 with the participation of partners from Ukraine (National Tempus / Erasmus+ Office in Ukraine, n.d.).

Legislation in the field of integration with the EU is gradually being drawn up in Ukraine. The Association Agreement between Ukraine, on the one hand, and the European Union, on the other hand, has become the most important step towards European integration in education. 431 Chapter 23 sets a course to intensify cooperation in the field of higher education, aimed at reforming and modernizing the HES, improving its quality and importance, and the convergence of higher education systems in the framework of the Bologna Process. The agreement facilitated the modernization of Ukrainian legislation in the field of education and its approximation to the EU standards. The Law of Ukraine «On Higher Education» adopted in 2014 contains the norms of the Bologna process and is aimed at high-quality training of competitive human capital for high-tech and innovative development of the country (Verkhovna Rada of Ukraine, 2014). According to the Law, the established National Agency for Quality Assurance in Higher Education

has been modelled after the European independent quality assurance agencies. Amendments to this law adopted in 2020 strengthen the European orientation of HES, as they introduce mandatory accreditation of curricula, reduce licensing of educational activities in HES, increase liability for non-compliance with academic integrity, provide for the use of EIE technologies to measure learning outcomes at the Bachelor's level, and contribute to the introduction of dual education. The Strategy for the Development of Higher Education for 2021-2031 prepared by MES specialists is also aimed at solving existing problems by organizing the conditions of integration into the European and world scientific and educational space, internationalizing the science and education and actively attracting foreign students to Ukraine (Ministry of Education and Science of Ukraine, 2021).

Ukrainian HEIs are interested in the development of international cooperation and their participation in European educational programmes for higher education institutions is gradually growing. Ukraine joined the EU Tempus Programme in 1993 and in over 1993-2013 about 140 universities and branch academies of sciences of Ukraine became participants of this Programme. During this period, 338 projects were funded with the participation of organizations from Ukraine; the budget of the programme in Ukraine amounted to about 85 million euros over 20 years (National Tempus / Erasmus+ Office in Ukraine, n.d.). The Erasmus + programme provides even greater opportunities. In 2019, with a budget of € 3.37 billion, Erasmus + supported more than 940,000 educational programmes abroad, funded around 111,500 organizations and around 25,500 projects (European Commission, n.d.).

Ukrainian universities are active participants of the EU Erasmus+ Programme in the field of higher education in international academic mobility, cooperation between universities and European HEIs, youth mobility, higher education capacity development, cooperation projects for innovation and exchange of successful practices, youth capacity development, strategic partnerships, reform support projects, Jean Monnet competitions and other areas. Erasmus+ National Office website data show a multi-vector palette of cooperation. Ukrainian universities are actively involved in academic mobility projects; in 2014-2020 almost 1.9 thousand projects worth 54 million euros were implemented. The number of participants from Ukraine amounted to 11.5 thousand people (Table 2). A significant number (17.3 thousand people) of Ukrainian representatives take part in mobility programmes for young people. Participation in projects related to studying / teaching in Master's and PhD programmes is much lower.

Projects in the field of higher education and participation of Ukrainian organizations:

- For the specified period, 48 projects of the international cooperation with the budget of 43 million euros were implemented in *Development of higher education capacity (KA211)*. 271 partners from Ukraine took part, including 106 HEIs, 4 of which were coordinators / grantees;

Table 2

Ukraine's participation in the Erasmus+ (2014-2020) in the field of mobility

EU Erasmus + Programme Key Actions (2014-2020)	Number of implemented projects	Amount of EU grants, thou euro	Participation of Ukraine	Number of participants from Ukraine
KA 1. Academic mobility. International (credit) mobility.	1 889	54 327	202 HEIs in partnership with the EU	11,532 teachers, undergraduate and graduate students
KA 1. Academic mobility. Erasmus Mundus international joint educational programmes – scholarships for studying / teaching for a Master's and PhD programmes			23 Ukrainian institutions, including 12 HEIs	281, of which masters -267; PhD students -14
KA 1. Mobility for Youth	153 volunteer projects (KA125) with 28 countries, and 3,346 youth mobility projects (KA105) with 31 countries		Volunteer and public organizations and 14 Ukrainian HEIs	17,293 youth and youth workers received funding to share experiences

Source: compiled by the author on the basis of Erasmus+ National Office (n.d.).

- *Alliances for Innovation (KA2)*: 1 project implemented, university from Ukraine was an associate partner;
- *Strategic partnerships (KA2) in education*: 6 strategic partnerships in higher education, 7 projects with a budget of 1015.6 thousand euros; 12 projects were implemented in the field of adult education, in which NGOs and two HEIs acted as partners;
- *Strategic Partnerships (KA2) in response to the challenges of COVID-19*: for Digital Education Readiness, implemented 2 projects with 2 HEIs as partners; for Creativity – 2 projects with 2 NGOs as partners;

- *Education Reform Support (KA3)*: 5 Peer to Peer & Networks Support projects implemented with the participation of the Ministry of Education and Science of Ukraine and ENIC / NARIC Ukraine;
- Jean Monnet projects: 121 projects were implemented with the participation of 57 implementing organizations from Ukraine, including 45 HEIs, 2 research institutes, and 10 public organizations from 2014 to 2020 (Erasmus+ National Office, n.d.).

At the same time, the integration of the Ukrainian HES into the European educational space is intensifying, the number of implemented projects, participants and the number of partnerships with universities from different countries is growing, and the geography of cooperation is expanding. Participation of the Ukrainian HES in various forms of international cooperation contributes to its gradual modernization and improvements in the quality of education. This is evidenced by Ukraine's advances in the rankings of the best universities in the world: in 2021 four universities from Ukraine were among the 1452 best institutions of higher education in the world (Ministry of Education and Science of Ukraine, 2021).

Despite the existing successes, there are problems and unrealized opportunities in the European integration, which relate to the fact that, firstly, not all Ukrainian HEIs participate in the European integration processes. As of 2010, about 80 universities did not participate in the implementation of mobility projects, and more than 100 HEIs did not participate in the implementation of projects to develop the higher education capacity. Secondly, only a small number of Ukrainian teachers and students receive grants for training and internships at European universities. For instance, 2,450 grants were received in 2020, including 1,259 teacher and 1,191 student grants, therefore, the experience gained by them cannot significantly affect the modernization of education in Ukraine. Thirdly, only a small number of submitted project applications from Ukrainian HEIs win competitions. For example, 130 applications were submitted for consideration in 2016 (Development of higher education capacity), and only 6 projects were approved; in 2018, 109 entries were submitted and 8 were accepted. At the same time, very few universities manage to become project coordinators (Erasmus+ National Office, n.d.). Thus, Ukraine does not use all the potential opportunities for integration into the EHEA, which negatively affects the quality of human capital. The level of qualifications and acquired competencies by Ukrainian HEI graduates remains lower than the European average, a significant proportion of young people from Ukraine go to study in EU countries, which leads to the loss of human capital.

Conclusions and Recommendations for Intensifying European Integration

At the present stage the European Higher Education Area is actively developing in the EU, in accordance with the needs of the knowledge economy; Ukraine is also involved in these processes. Ukraine has a strong system of higher education, most of which, due to the accumulation of significant shortcomings, does not provide high quality higher education, has low competitiveness in the domestic and foreign markets of higher education. Cooperation with European countries in the field of education will contribute to the modernization of the HES in Ukraine to align it with the modern achievements of higher education and the needs of society and the economy. Ukraine has the potential for such cooperation with its 281 universities, institutes, and academies, with about 1,300,000 students and 78.6,000 faculty members.

The conducted research showed that Ukrainian higher education institutions have been participating in various forms of cooperation with EU countries since 1993. The integration of the Ukrainian HES into the European educational space is intensifying, the number of implemented projects is growing, as is the number of participants in international projects and programmes. At the same time, there are several weaknesses: the share of Ukrainian participants in cooperation programmes remains small; the number of projects implemented with the participation of Ukrainian HEIs is growing slowly; not all HEIs are involved in the Erasmus+ programme.

This indicates a lack of activity, persistence and organizational capacity of Ukrainian universities in terms of integration into the EHEA. Many Ukrainian HEIs still lack experience in establishing channels of cooperation with potential European partners, lack the skills to prepare project applications that would meet the call requirements and focus on solving the most pressing problems of society. There is a problem of insufficient knowledge of foreign languages, especially English; financial support for the participation of Ukrainian HEIs in European educational projects is insufficient as well. This hinders the modernization of Ukraine's HES and improvements in the quality of training.

In order to ensure more active European integration in Ukraine in the field of higher education, the state must play a more active role in creating optimal conditions and incentives for international cooperation of HEIs, as well as for university management. There are three steps that should be taken at the state level.

First, ensuring the modernization of funding mechanisms for higher education institutions in order to significantly increase the level of their financial support, strengthen their financial and administrative autonomy in general and in the organization and participation in various forms of international cooperation.

Second, the Ministry of Education and Science of Ukraine should more actively stimulate the participation of HEIs in European cooperation programmes, provide organizational and methodological support to HEIs in concluding international agreements and submitting requests for participation in international educational projects.

Third, the list of specialties should be updated in accordance with the modern needs of both domestic and international labour markets and promising areas of economic and social development.

There are several actions that should be implemented at the institution level. The latest schemes of educational organization and learning technologies should receive wider implementation, modelled after widely used educational practices of European universities. Institutions must ensure a high level of teaching and learning of foreign languages, especially English; to spread the practice of teaching disciplines in a foreign language. Trainings for teachers and students on European integration and participation in European educational programmes should be conducted. The university educational programmes should be accredited by foreign agencies included in the European Quality Assurance Register (EQAR) more often, as this would help improve the quality and internationalization of higher education in Ukraine. The universities should spread the practice of introducing and implementing two degree programmes, which promotes the application of European experience and standards of higher education. HEIs should more actively establish partnerships with European universities, involve more foreign lecturers in teaching, spread the practice of academic mobility for both students and teachers. Students should be supported and encouraged to participate in student exchange programmes, double degree programmes, international summer or winter schools, conferences, workshops, individual grant programmes, etc. There should be a wider coverage of the educational and scientific achievements of higher educational institutions of Ukraine to attract potential partners and applicants from other countries.

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