

professionals has become possible in terms of increasing the autonomy of university education, enabling graduating departments to form unique educational products and programs created according to the needs of business, raise the professional level of the teaching staff, motivate students to improve themselves. This approach requires a systematic implementation, improvement and thematic expansion through constant evaluation of these processes. It offers great opportunities to ensure the release of the leading positions in the global educational and professional field and integration with the global scientific and educational society, carefully preserving national and corporate achievements, values and traditions elaborated at the departments and the university as a whole.

1.7. Strategic goals and perspectives for development of higher education system in context of European integration processes

For Ukraine European and Euro-Atlantic integration is an intended model of social development, the choice of life mode, a way to expand the range of opportunities, based on the principles of humanism and civil society. Global community connects humanism of new century with human erudition, competence, freedom of self-identity and the greatest realization of professionalism. This is particularly important and necessary for the Ukrainian society that has high ratings of higher education, which is a significant national competitive advantage. Thus, according to the World Economic Forum (WEF) in the international ranking of countries in terms of global competitiveness of 2012-2013 Ukraine occupies 47 place (among 144 countries) for the subindex "Higher education and training"⁸⁸. The higher education system of Ukraine has received high-evaluation in prominent international rating evaluation that includes leading global network of research universities "Universitas 21"⁸⁹. Basing on the analysis of international resource providing university education, the impact of higher education, international cooperation, as well as public policy and regulation in the field of higher education Ukraine got 25th place among 48 countries in the world ranking of national high schools⁸⁸. Educational changes in Ukraine take place in the context of general civilization transformations caused by the introduction of new educational technologies based on the use of modern computer technology and require new forms, methods and means of education at all levels, and the highest in priority. Qualitative indicators steadily expanding public access to the services of higher education in Ukraine is the presence

⁸⁸Чужиков В. Соціальні наслідки Євроінтеграції. України. Система вищої освіти: [Електронний ресурс] / В. Чужиков, Л. Антонюк. – Режим доступу: <http://library.fes.de/pdffiles/bueeros/ukraine/09543.pdf>.

⁸⁹U21 Rankings of National Higher Education Systems 2012. Universitas 21. Retrieved from: <http://www.universitas21.com>.

of positive long-term dynamics of students' entry in higher education institutions of different levels, the development of higher education institutions, seeking for financing of higher education, particularly by individuals. The study results of higher education, ensuring the competitiveness of higher education and adapting higher education to the requirements of European integration are shown in scientific studies of foreign and domestic scientists, among the following L. Antoniuk⁹⁰, I. Gryshchenko⁹¹, W. Lugovy⁹², O. Morhulets⁹³, T. Nefedova⁹¹, E. Stadny⁹⁰, I. Tarasenko⁹¹⁹⁴, E. Shcherbakova⁹⁵ etc. Many researchers focus on issues related to the analysis and diagnosis of innovative implementations in higher education taking place in practice reforms that caused European integration trends in Ukrainian politics. However, uniform criteria to study effects of internal and external factors of innovative changes needed for universities or required by the conditions of European integration has not been developed. This very aspect led the study, which aims to change the specification of the results of higher education in Ukraine, which currently society requires.

The purpose of this study is analysis of the development strategy of the European Union and the development of possible measures for the convergence of the education systems of Ukraine and the EU.

Improving public education is the most important factor in the development of society, especially in an economy based on high technology and science involved production. To implement the development strategy of Europe up to 2020, adopted in 2010⁹⁶, two key indicators of education were highlighted and their targets were defined⁹⁷:

⁹⁰Indicators.Eurostat. – Retrieved from: <http://ec.europa.eu/eurostat/web/education-and-training/eu-benchmarks/indicators>

⁹¹Грищенко І. М. Стратегічні пріоритети та форми інноваційного розвитку ВНЗ України в контексті забезпечення конкурентоспроможності / І. М. Грищенко, І. О.Тарасенко, Т.М. Нефедова // Економіка та держава. – 2015. – № 2. – С. 16–21

⁹²Національна доповідь про стан і перспективи розвитку освіти в Україні / Нац. акад. пед. наук України; Редкол.: В. Г. Кремень (голова), В. І. Луговий (заст. голови), А. М. Гуржій (заст. голови), О. Я. Савченко (заст. голови); За заг. ред. В. Г. Кременя. – К.: Педагогічна думка, 2016. – 448 с.

⁹³Моргулець О. Б. Сучасний стан та тенденції розвитку діяльності ВНЗ України / О. Б. Моргулець // Вісник ЖДТУ. – 2015. – № 3 (73). – С. 85–93

⁹⁴Вергун А. М. Напрями підвищення рівня фінансово-економічної безпеки вищих навчальних закладів освіти України / А. М. Вергун, І. О. Тарасенко // Вісник КНУТД. – 2014. – Тематичний випуск: матеріали ІV міжнар. наук.практ. конф. «Ефективність організаційно-економічного механізму інноваційного розвитку вищої освіти України». – С. 322–331.

⁹⁵Level of education in the EU-28 increases from generation to generation for 2012. – Retrieved from: http://demoscope.ru/weekly/2016/0669/barom01.php#_ftn1.

⁹⁶Europe 2020 in a nutshell.European Commission.Retrieved from: http://ec.europa.eu/europe2020/index_en.htm.

⁹⁷Smarter, greener, more inclusive? – Indicators to support the Europe 2020 strategy from Eurostat. Retrieved from: http://epp.eurostat.ec.europa.eu/cache/ITY_OFFPUB/KS-02-13-238/EN/KS-02-13-238-N.PDF.

- percentage of young people (18-24 years) who completes early education (with the level of education not higher than the second according to International standard classification of education⁹⁸), should not reach 10%;
- percentage of people of 30-34 years with higher education (ISCED level 5–8, 2011) should be at least 40%.

For international comparisons there is used the International Standard Classification of Education (ISCED). Nowadays there is used the classification adopted in 2011 (ISCED-2011), which would provide 9 levels of education:

- 0 – early childhood education;
- 1 – primary education;
- 2 – lower secondary education;
- 3 – the second stage of secondary education (general or vocational, including direct access to tertiary education);
- 4 – after secondary tertiary education (general or vocational, including direct access to tertiary education);
- 5 – short cycle of tertiary education;
- 6 – Baccalaureate or its equivalent;
- 7 – Master's degree or its equivalent;
- 8 – Doctorate or its equivalent.

Levels 5–8 belong to the tertiary level of education, which we will designate with more familiar term «higher education».

Previously there was used ISCED 1997 with the release of seven levels of education. The main differences are associated with the introduction of ISCED-2011 programs for children under 3 years, which were not classified in ISCED-1997 (level 0 meets the programs of pre-school education, ISCED 2011 they meet sublevel 2), and a more detailed classification levels of theoretical education (levels 5–7 of ISCED-2011 correspond to level 5 of ISCED-1997, level 8 of ISCED-2011 to level 6 of ISCED-1997). There are some changes in settings classifying education programs to levels 3 and 4, although the overall level of compliance between them is saved. In addition, there have been planned some targets in other education indicators important for implementation of the strategy "Europe 2020"⁹⁰:

- participation rate of people of 25–64 years in educational programs ("lifelong learning") should be increased up to 15%;
- economic employment of recent graduates (20–34 years) who completed training of 1–3 years should not be below 82%;
- at least 20% of graduates that will complement the training programs of higher education must be trained (including practice) abroad in the amount of at least

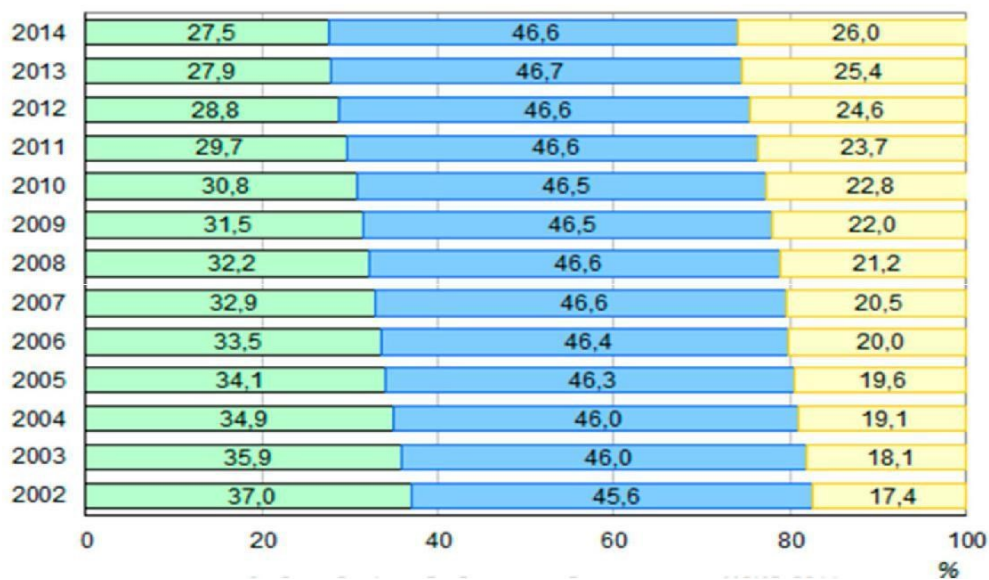
⁹⁸International standard classification of education ISCED 2011.UNESCO-UIS 2013.

15 credits (European credit transfer and accumulation system (ECTS)), or at least within three months;

- at least 6% of those aged 18 to 34 years with an initial vocational education should receive training (including practice) abroad for at least two weeks or less if it is confirmed by Euro pass;
- the proportion of young people (15 years) who makes little progress in reading literacy, mathematical and natural sciences literacy should be below 15%;
- general amount of children aged from 4 years to the age of early learning program mandatory pre-school education should be at least 95%.

The main information source to estimate the indicators values of the population education of the European Union (EU-28), in addition to the combined database of the education system UNESCO-OECD-Eurostat are sample surveys. First of all, the annual survey on employment (EU Labour Force Survey), and, moreover, every five years there are held sample surveys of education and training of the population aged 25–64 (Adult Education Survey), and survey on enterprises investment in training (Continuing Vocational training survey)⁹⁰.

According to Eurostat, educated population of the EU-28 as a whole, calculated for the period 2002–2014 years, has been steadily increasing. In 2002, the share of the population 15–64 years with low levels of education (ISCED 0–2 level in 2011) was 37.0%, while by 2014 it had fallen by almost 10 percentage points (Fig. 1.11).



0–2 levels

3–4 levels

5–8 levels

Fig. 1.11. Distribution of EU-28 population aged 15–64 by level of education under ISCED 2011⁹⁵

The proportion of the population 15–64 years with higher education (levels 5–8), by contrast, has increased by 8.6 percentage points. The share of population 15–64 years with secondary education has increased by 1 percentage point. Bottom line, if

in early 2000s on average every seventh inhabitant of the EU-28 aged 15 to 64 years had higher education, now the number is every fourth.

The share of people with higher education (ISCED level 5–8 in 2011) has been increasing in the EU-28, from generation to generation. Among young people 25–34 years it is significantly higher than among their parents' generation, and in recent years it has increased significantly faster, although growth was observed in all age groups (Fig. 1.12). The share of people with higher education among people aged 25–34 years increased by 12.8 percentage points (from 24.4% to 37.2%), and among people aged 35–44 years – by 12.3 percentage points (from 21.1% to 33.4%). Among the older age groups the increase of the proportion of persons with higher education was almost twice lower: by 6.7 percentage points among people 45–54 years (from 18.6% to 25.3%) and 6.8 percentage points among people 55–64 years (from 14.5% to 21.3%).

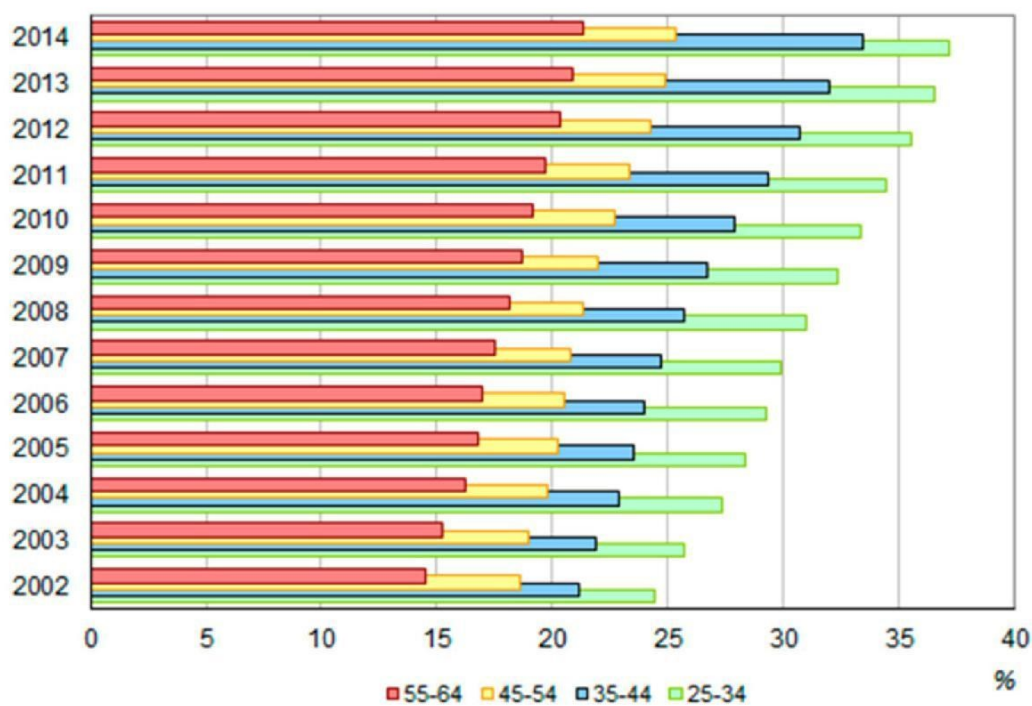


Fig. 1.12. The share of the population with higher education (ISCED levels 5–8, 2011) for certain age groups between 15 to 64, EU, 28%⁹⁵

In the age group 30–34 years, the proportion of persons with higher education increased by 14.3 percentage points, from 23.6% in 2002 to 37.9% in 2014. At this rate of growth to reach the target of 40% is quite achievable by 2020.

The proportion of persons with higher education grew much faster among women. If in 2002 the proportion of women 30–34 years with higher education was only slightly higher than among their peers (24.5% vs. 22.6%), by 2014 the differences between women and men increased by 4.6 times (42.3% vs. 33.6%).

According to the level of education the women in the EU-28 exceeded the target of Europe 2020 strategy in 2012 (40.2% of women 30–34 years old received higher education). The men yet have to "get" more than 6 percentage points the share of people with higher education among 30–34 p^{95,99}.

Increasing of the share of people with higher education among the population 30–34 years occurred in recent years in all EU-28. The growth in the last decade⁹⁹ ranged from 1.9 percentage points in Finland, where the proportion of people with higher education among people 30–34 years old in early 2000s exceeded 40%, to 22.4 percentage points in Lithuania, which according to this indicator now moved into first place in the EU-28 – 53.3% of people 30–34 years had higher education in 2014. If in 2004 the proportion of people with higher education in the age group of 30 to 34 years exceeded 40% in only three EU-28 (excluding Finland, Denmark and Cyprus), in 2014 – in 15. In Austria and Latvia the share of people with higher education in the age group 30–34 years is virtually the target value, accounting about 40%, and in 12 countries this indicator is below. The lowest rate is observed in Italy (23.9%) and Romania (25%).

In addition to the average EU-28 target value indicator (40%) there were developed also national targets whose values range from 26% in Italy to 66%. The national target values of people with higher education among people 30–34 years in 10 countries are less than 40% and in the UK it is not defined at all. In some countries, the national target values are exceeded.

If in EU-28 the average percentage of people 30–34 years with higher education for women was slightly higher than among men of the same age at the beginning of the 2000s, the countries of the Union were more varied. According to data for 2004, the share of people with higher education among 30–34 year olds was higher among men in 7 EU-28 (Austria, Great Britain, Germany, Luxembourg, the Czech Republic, Cyprus and Malta), and according to the 2014 – only in Germany⁹⁵.

As a result, the gender differences in the proportion of persons with higher education among 30–34 years increased in all EU-28 countries, except Finland, where they declined by more rapid increase in the proportion of people with higher education among men 30–34 years and in Germany, which fell by more rapid increase in the proportion of people with higher education among women 30–34 years, although it remained slightly lower than among men of the same age.

As a result of the transformation of higher education in Ukraine since its independence and diversification of funding sources, state funding has lost the status of a single one, government funding has undergone significant changes and there was created the private sector, which is constantly evolving and becoming an influential player in the education market. Worldwide the development of private education is

⁹⁹Methodology.Eurostat. – Retrieved from: <http://ec.europa.eu/eurostat/web/education-and-training/methodology>.

seen as a factor that promotes competition and improves the quality of education and, of course, the development of innovation in education.

Modern world trends of informatization development of education are:

- creation of a single educational space;
- active introduction of new tools and learning methods focused on the use of information technology; synthesis tools and techniques of traditional and computer-based training;
- creation of a system of anticipating education; of a new direction of the teacher – the development of information technology and software training and learning systems;
- formation of continuous learning as a universal form of activities aimed at continuous personal development throughout life.

The possible lines of convergence of education systems of Ukraine and the EU could be the following: closer cooperation between the Ministry of Education and Science of Ukraine with similar institutions in EU Member States. Active development of contacts with the European Commission, including the Directorate General of Education, Culture, Youth and multilingualism; gradual integration into the European educational space, providing implementation of joint plans, programs and standards; development of domestic universities with European partner universities, real withdrawal strategies for Ukrainian educational services in a competitive European market.

To ensure the competitiveness of higher education in the deepening of integration processes, as international experience shows, in our opinion, the development and implementation of national programs to improve the competitiveness of higher education is required. The basis for this development must be a systematic approach by providing financial, organizational, personnel, academic autonomy based on four main components: the competitive environment, resources, international cooperation and high performance.

Competitive environment means the optimization of higher education system through reduction of its numbers, consolidation of small universities in unified educational centers; smooth creation and development of science parks, areas of technological development and scientific and technical centers of national importance into the leading research universities and academic institutions. All the above will ensure the commercialization of new knowledge and technologies in the industry, to improve the investment attractiveness of universities in general and the opportunity to diversify their income.

As for the resources: © improving the system of budget financing of education institutions (expenditure on education should depend on the economic situation in the country) and ensuring its sufficient volumes through both legislative provisions and

through its adherence to mandatory standards corresponding annual growth of expenditures on state level in which a proportion of the value per student (public expenditure on higher education per student) will reach the respective European average by 2025; © tax benefits or exemptions funds provided by international organizations, foreign institutions and foreign investors to Ukrainian universities of 3–4 accreditation level for scientific research; © exemption performers of research under the grant received (or received funds) from international organizations, foreign universities, scientific and educational funds.

International Cooperation: Deepening the process of internationalization of the domestic higher education with adequate funding, organizational and regulatory support and binding agreement with education institutions and Ukrainian public to facilitate access of educators and researchers to the global educational and research resources, their access to international education market. It also includes operative connection of leading Ukrainian universities and academic research institutions in international scientific metric database of Scopus, Web of science. It should be mentioned as well international accreditation of twenty top universities with the help of public funding; stimulation of workers edition of publications in foreign languages and in certain foreign media that are represented in the major international scientific-metric database. One should not forget about simplifying the hiring of foreign experts and recognition of foreign higher education in Ukraine and Ukrainian documents on the acquisition of certain educational profession abroad, providing a transparent system of promotion and motivation of scientific and pedagogical innovate activities, social infrastructure development of higher education in Ukraine aimed at real economic and social security of the academic staff of the higher school, improving their social status and prestige of teaching and scientific professions conditions for professional development and creativity.

One of the major changes in the development of quality assurance is to understand the importance of the involvement of all key player, especially students. Standards and recommendations for quality assurance underscore the necessity to participate not only students, but also employers in assessing the quality of education. In our opinion, the role of employers in evaluating the quality of education will only increase. Harmonizing the system of quality control of educational services with common standards and recommendations of the European educational space, Ukraine needs to involve all key players in the evaluation of education quality.