

BORYS GRINCHENKO KYIV UNIVERSITY

**QUALITY
OF UNIVERSITY EDUCATION:
EDUCOLOGICAL DISCOURSE**

Collective monograph

Edited by Victor Ogneviuk

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The collective monograph analyzes the current problems of quality assurance in higher education, raises questions about the role and social function of modern universities in society. The educational foundations for the development of university education at the current stage have been highlighted, an analysis of the challenges the modern university community is facing has been carried out, and attention is focused on the digitalization of the educational space. The authors' team focuses on updating the legal framework and its compliance with the European standards of quality assurance in higher education. Besides, they raise issues of the European requirements implementation at the Ukrainian universities, as well as discuss the quality education impact on the labour market. The researchers pay significant attention to the culturological aspects of quality assurance in higher education: the university values, academic and information culture, and academic integrity.

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PREFACE

Dynamic changes in education, determined by civilizational changes and challenges, have caused impetus to producing and implementing innovative strategies in the university environment. The emergence of new trends characterizes the current state of play of higher education development. In particular, quality assurance in higher education is a crucial task and a top priority of the European Higher Education Area. Therefore, with regard to the current reform of national higher education, the issue of improving the quality of university education following European standards and values becomes crucially significant, whose solution affects the future of the next generations. The state and level of the education sector development in general and the university, in particular, is an indicator of social development of any country, and the quality of higher education affects not only the wellbeing of a particular person but also the present and future of society.

The quality of education depends on many factors, both external and internal. The impact of economic, political, legal, social, cultural, axiological, moral and ethical factors on higher education is evident. The study of modern education as a holistic social phenomenon, a systematic analysis of various aspects of the educational system development in general and the university in particular, a synergetic vision of improving its quality can be made possible with Educology – a scientific direction aimed at comprehensive interdisciplinary research in the field of education.

A collective monograph “Quality of University Education: Educological Discourse” covers a wide range of socio-cultural aspects of quality education, is the logical continuation of scientific research by scientists of the Educology Research Laboratory and academics of Borys Grinchenko Kyiv University.

The collective monograph focused on a comprehensive analysis of current issues facing the university is the authors' timely contribution to quality assurance in higher education.

The collective monograph "Quality of University Education: Educological Discourse" is based on rich theoretical, empirical and factual material, a representative source base and scientific tools. In the process of working on the monograph, the author's team embodied the idea of implementing an educological, interdisciplinary, integrative approach to studying the phenomenon of quality assurance in higher education, which would demonstrate the interaction of various fields of knowledge.

The monograph consists of three chapters, which substantiate the theoretical and methodological aspects of revealing modern trends in higher education and study socio-philosophical, socio-economic, socio-cultural aspects of quality assurance in higher education.

Chapter I is devoted to the social challenges facing national higher education and its quality. The authors raise the following research questions. First, what should be a modern Ukrainian university – the institution of nurturing the elite or raising the level of the masses? Second, how should the university rethink the philosophy of its activities in the new realities of the information revolution and exponential development? Third, how do the modern university functions change, its organizational structure, didactic methods, pedagogical technologies, the interaction between participants in the educational process in the context of higher education digitalization?

The author's visions of answers to these questions are based on a robust theoretical and factual basis, as well as scientific achievements and experience of providing digitally-based education online at Borys Grinchenko Kyiv University during the COVID-19 pandemic. The study of higher education

digital transformation is appropriate and timely because the realities of today show that the functioning of the digital university (digital campus) is not so much a popular innovation as a requirement of the time. Furthermore, digital literacy is one of the core competencies identified by the Council of the European Union in the European Reference Framework for Key Competences for Lifelong Learning (2006) and Recommendation on Key Competences for Lifelong Learning (2018).

Chapter II presents the impact of socio-economic factors on quality assurance in higher education. It also analyses the dynamics of updating the regulatory framework in higher education in Ukraine following European standards. It highlights the practical implementation experience of European requirements for quality assurance in Ukrainian universities. Besides, it emphasizes the relationship and interaction of quality assurance in higher education and the labour market in the national and global dimensions.

Chapter III presents the socio-cultural aspects of quality assurance in higher education. It provides an analysis of a culture of quality education development under the corporate, academic values of the university community. It also emphasizes the importance of academic integrity as a guideline for the sustainable development of higher education. Furthermore, the chapter reveals the role of information culture in quality assurance in higher education. It should be noted that the information culture is considered a vital value aspect of higher education quality, based on the institutional identity of each university, its own corporate culture, norms and traditions. However, although the information culture is now the priority, national scientists and educators do not often consider it.

Thus, the monograph summarises the socio-cultural factors of quality assurance in higher education at three levels: national (political, economic, social), internal (educational

system, university) and personal (participants in the educational process).

Moreover, the specific feature of the monograph is the Ukrainian-centric scientific achievements of the author's team. The leitmotif of the collective monograph is the idea that Ukraine has the resources and opportunities to adequately and professionally respond to the challenges of the time and offer the nationally oriented trajectory of university modernization regarding quality assurance. High-quality university education should serve to train competitive professionals for sustainable economic development and social progress in Ukraine.

Authors believe that the collective monograph "Quality of University Education: Educological Discourse" will be beneficial for researchers, educators and students, as well as managers, legislators, and policy-makers interested in improving quality assurance in higher education.

I. QUALITY OF UNIVERSITY EDUCATION: NATIONAL CHALLENGES

1.1. Modern university – institute for expressing the elite or increasing the level of the mass?

The mass character of higher education is a worldwide trend; expanding access to higher education is of great economic and social importance. Key documents of the European Higher Education Area define one of the main priorities the importance of improving access to higher education and movement towards an equal and inclusive society. Thus, in the Europe 2020 strategy, one of the main goals of the European Union is to increase the share of the population with higher education aged 30–34 to at least 40%.

Higher education in Ukraine is massive, the level of higher education coverage of the population of the traditional official education age is high – 82.7%, according to this indicator, Ukraine in the 2020 Global Innovation Index ranked 14th out of 131 countries. Ukraine is also one of the five world leaders in terms of the number of graduates with higher education diplomas per 100 thousand population (Global innovation index, 2020).

However, the educational resource has not been transformed into the economic growth of the state, since high-tech industries and intellectual services occupy a negligible share in the structure of GDP, the share of those employed in these areas does not grow, and the overwhelming part of the national profit is formed not at the expense of innovation or technological rent. Ukraine is characterized by a low level of capitalization of companies, the main value of which is formed by the intellectual component, weak and asymmetric integration of higher education institutions into the global educational and scientific space, a low level of involvement of participants in the

educational process in scientific and innovative activities, low and ineffective financial support, a mismatch in the qualifications of graduates market requirements of a modern information high-tech society (Strategy for the development of higher education in Ukraine for 2021–2031, 2021).

During the years of independence, the number of higher educational institutions in Ukraine has increased, which indicates an increase in the availability of education. There are different forms of belonging in the field of education, forms of education, financing mechanisms, the latest specialties. At the same time, Ukraine is gradually losing its position in the world market, primarily in the market for high-tech products, for which quality education is decisive. The scientific potential, the defence industry, machine, transport and aircraft construction, space technologies, where until recently Ukraine held significant positions in the world, have been lost or are rapidly being lost. The quality of education and the effectiveness of its financing have declined significantly. As the country with the largest proportion of the population with tertiary education, today Ukraine ranks last in Europe in terms of the share of science-intensive products in GNP, the level of medical care, corruption in government agencies, law enforcement and judicial bodies, life expectancy, child mortality, child and adult alcoholism, AIDS incidence, domestic crime, road deaths, emigration capable population (earnings), human trafficking, sexual slavery, drug use. This is a qualitative assessment of the decisive influence of the ineffectiveness of education on social and economic life.

The presence of one of the most painful crisis components is obvious – the crisis of the quality and efficiency of education and its impact on the development of the economy, the use of drugs. This is a qualitative assessment of the decisive influence of the ineffectiveness of education on social and economic life. The presence of one of the most painful crisis components is

obvious – the crisis of the quality and efficiency of education and its impact on the development of the economy.

In the 2019–2020 academic year, 281 higher education institutions were operating in Ukraine that has the right to implement educational programs at bachelor's and master's levels. 1266.1 thousand students studied there. In 2019, 250.1 thousand students were admitted to universities, and 333.6 thousand graduated. Thus, the 2019 graduation exceeded the enrollment by 83.5 thousand (State Statistics Service of Ukraine, 2020). Now, on average, there are 4.5 thousand students per Ukrainian university, which testifies to the irrationality of the network. Fragmentation and dispersion, resource (personnel, financial, information, infrastructural) deconcentration, excessive duplication, profile inadequacy, research weakness of the Ukrainian higher education network is the reason for its low competitiveness (Lugovyj, 2020).

The excessive network of universities in Ukraine has become a heavy burden on society, which casts doubt on the possibility of ensuring the development of universities and their positive impact on social transformations. In the process of changes in the network of higher education institutions, the issue of vacating premises and land will certainly arise, which in the conditions of Ukraine poses a potential corruption threat. Preventing the implementation of corruption schemes will depend on the quality of legislation and the support of this process by the executive branch, its openness to public control. Power institutions must determine the development priorities of the state and its regions and include universities in the reform processes that contribute to the country's transition to sustainable human development.

Of course, the reasons for this state of affairs lie not only in the miscalculations of the state innovation policy, the demand for or ignorance by the economic sector of the education

factor but above all in its quality. Significant coverage of young people with education is of great social importance, primarily because young people are engaged in important activities, such employment is especially valuable in the context of a crisis, a decline in production, and an increase in unemployment. Another positive of the wide coverage of young people in education is their involvement in the field of intellectual activity and culture, which generally contributes to the expansion of the cultural space of society. But at the same time, it is necessary to be aware that the growth in the level of youth enrollment in higher education in Ukraine does not correlate with the quality and, most likely, is the diploma of young people (Educology: Origins of Scientific Direction, 2012, p. 23).

At the same time, it should be understood that the mass character of higher education is a worldwide trend. And if earlier the selection of talented young people was carried out at the level of admission to study in higher education, now it has moved to the level of enrollment in master's programs. Even if young people simply enroll in higher education (there is such a practice in many countries, I mean universities that present themselves as open), this is most likely to be regarded in a positive sense, because young people strive for education and join the culture in its a broader sense. The task of society should be to supplement the educational aspirations of young people with indicators of its quality. However, one should bear in mind another problem generated by the commercialization of education, when it does not matter for an educational institution how a student studies, if only he paid money for his stay in it. This tendency is extremely dangerous, it undermines the foundations of the development of society, misleads it, since it has nothing to do with the growth of the educational level.

A high level of education is an important condition not only for the provision of modern production with personnel

but also for the potential determination of the possibilities for the development of science, scientific research, scientific production. In all developed countries, the main problem of scientific and technological progress is the efficiency of investment activities. Underfunding education and science slow down the development of production. Countries that economize on education and science are doomed to social and economic lagging behind. The prioritization should be as follows: education – science – economics. This approach should ensure the rational use of human capital.

Modern higher education in Ukraine needs deep transformations because the problem of the quality of training in higher educational institutions remains unresolved. With one of the highest rates of population enrollment in higher education in Europe, our state remains technologically backward.

This is not surprising, because the cost per student of higher education in Ukraine is significantly less than in developed countries. Although in the percentage they are relatively high (34.5%), at the level of countries with advanced higher education (in Germany – 33.6%, in Poland – 25.4%, in the UK – 38%), however, due to the low-level GDP per capita in Ukraine is insufficient: in 2016, they amounted to 0.86 thousand dollars. The USA, while in Great Britain – 16.9 thousand dollars, in Germany – 14.25 thousand dollars, in Poland – 3.1 thousand dollars (Strategy for the development of higher education in Ukraine for 2021–2031, 2021).

Consequently, the infrastructure of higher engineering and natural education of Ukrainian universities is extremely outdated, and in most cases, it cannot prepare a competitive specialist. In general, the problem lies in the lack of demand from the labour market for such specialists, which confirms the orientation of the economy towards non-competitive, low-intellectual products. The growth of human capital also largely

depends on the growth in the number and quality of training of doctors and candidates of sciences. The expansion of the network of postgraduate and doctoral studies, an increase in the number of specialists trained in them have a positive impact on the human resources of higher education. The development of a system for training highly qualified personnel through a network of postgraduate and doctoral studies will contribute to the reproduction and build-up of the intellectual potential of Ukraine. And although recent years have been characterized by a steady upward trend in the contingent of postgraduate and doctoral students in educational institutions, the current socio-economic conditions do not always meet the growing needs for highly qualified personnel. The lack of a proper selective approach to the selection of candidates for postgraduate studies led to a high percentage of dropouts from postgraduate studies in the learning process. In general, the training of scientists in the field of humanities prevails in Ukraine. Thus, in 2021 according to the estimates of the Ministry of Education and Science of Ukraine, among the top 10 bachelor's specialities by the number of applications submitted, only 2 (Computer Science and Software Engineering) relate to engineering and natural education; all others (Philology; Law; Management; Secondary education; Journalism; Psychology; Marketing; Economics) – humanitarian (The admission campaign takes place in the usual way, 2021).

Labour-intensive and costly training of the scientific and technical elite is going through a crisis, which negatively affects the level of competitiveness of the Ukrainian economy. The demographic crisis has a negative impact on the education sector. In recent decades, alarming demographic processes have been observed in Ukraine: a decrease in the birth rate, an aging population, an increase in the proportion of dependent groups in it, instability of marriages, an increase in illegitimate

births, and the number of families without a father. The decrease in the number of graduates since 2014 (in 2013/2014 received a certificate of obtaining a complete general secondary education 304 thousand graduates; in 2020/2021 – 222 thousand) was also influenced by the fact that the information of the State Statistics Service of Ukraine is given without taking into account temporarily occupied territory of the Autonomous Republic of Crimea (Institutions of general secondary education, 2021). How will this turn out for the education system?

The consequences of the demographic crisis for higher education institutions are ambiguous. Considering that in 2020/21 the number of students enrolled in the Western Higher Education Area (277.1 thousand) was only 55 thousand higher than the number of school graduates (222 thousand), then in the coming years, higher education will face difficult tests (Admission campaign, 2021). Consequently, there may be several scenarios for the development of higher education. Taking into account modern realities, certain traditions, and Ukrainian specifics of higher education, the most probable is the prospect of an uncontrollable and protracted process of struggle for a place in the sun with all possible variations of subjective influence. The modern practice of distributing state orders between institutions of higher education completely depends on subjective factors, and not social needs and performance indicators of institutions, is a confirmation of such a forecast.

However, it should be understood that in addition to providing modern high-tech production with personnel, universities carry out an important social mission – the training of the intellectual elite of society, which is distinguished by the ability to perform not only professional but also important social functions, pronounced civic and social qualities, breadth of thinking, social responsibility for being active in their field of activity, understanding the meaning and consequences of

their work for sustainable human development and the ability to respond to global economic, environmental, social, political challenges, as well as leadership – serving an idea, a common cause, a person, society, the ability to disseminate relevant norms and values in society; become an agent of change.

The most desirable scenario for the development of higher education, in my opinion, maybe the legislative regulation of the process of reorganizing higher education, reducing their number and supporting competitive university centers with a concentration of leading scientific and scientific-pedagogical personnel, modern scientific laboratories, and updated material and technical resources. This approach will expand the training opportunities for foreign students, as well as training and retraining of the adult population. Higher education, under certain conditions, primarily due to the latest scientific developments and their implementation, can become the engine of the innovative development of society. But such a scenario requires a fundamentally new educational policy, based on the philosophy that quality and competitive education always increases the total intelligence of the nation and the gross national product.

The transformation of the Ukrainian university over the next decade, which will contribute to its transition to a qualitatively new level of academic life or death, will be overcoming the contradiction between growing demands of society and institutional inability to satisfy these demands; technological challenges of exponential development and limited opportunities to stay in the innovation trend; a change in the paradigm of socio-economic relations and the ability not only to find adequate answers but also to develop new meanings of being (Ogneviuk, 2018).

In order to avoid its death, the university must abandon the conservative structure and make a transition to flexible

organizational models that can quickly respond to the needs of society, in particular, the national and international labour markets, implement innovative projects, and after achieving the set goals, transform again, taking into account new tasks and priorities. The hierarchy of departments, research laboratories, and university centres should be supplemented (and partly replaced) by a flexible model of temporary innovative, scientific, creative teams capable of producing new knowledge, technologies or implementing educational programs and giving way to more effective organizational models of interaction.

The university needs an internal mental revolution, in combination with which an increase in material interest will have a synergistic effect aimed at its development. To implement a mental revolution at the university, it is necessary to give space to attract successful people with higher education, achievements in various fields, and communicative talent to work with students, regardless of whether they are burdened with academic degrees and titles. The combination of the efforts of a new generation with the experience of "aboriginal" higher education will contribute to a new quality of university activities. This cannot be achieved without retraining university staff, introducing programs to adapt to changes, a new educational space, implementation of effective programs for personal and professional development, and prevention of professional burnout. Certain organizational steps need to help teachers in familiarizing themselves with the requirements of generation Z students, which in their psychophysiological characteristics significantly differs from previous generations: they grew up next to electronic devices, but due to the huge amount of information from the Internet, they cannot concentrate on one task for a long time and do not accept large texts; the clip thinking of students, who are accustomed to quickly switch from one news to another on the Internet, perceives the surrounding

reality as a sequence of unrelated phenomena, and not as a system, therefore, the brain does not have time to build a logical chain, the information received is quickly forgotten, the coefficient of assimilation of knowledge decreases. In addition, generation Z has positive abilities: the ability to quickly navigate in the midst of an invasion of information, the ability to multitask, an unconventional perception of the world, which means, the makings for the development of creativity. Thus, modern teachers should know and take into account in the educational process the psychophysiological, cognitive, and value-motivational qualities of generation Z students, rethink the strategies of interaction with students from a mentor to a facilitator, use innovative, active teaching methods, use new technological means, electronic devices, services, etc. applications that young people often master faster and better than teachers. Consequently, universities should develop professional development programs for scientific and pedagogical workers aimed at acquiring new and improving the already acquired professional competencies by teachers, corresponding to modern trends in teaching and learning in higher education.

This applies not only to scientific and pedagogical workers but also to specialists involved in the management of the university. This can be helped by the rotation of management personnel, the national mobility of university professors, and, above all, doctors of science, professors, as well as the official recognition of their work in two universities for licensing and accreditation procedures.

The most developed countries of the world receive about 40% of the gross national product exclusively through investments in the educational level of the population. Investments in the education system are becoming the most effective, taking into account the overall development strategy of the country.

A generalization of 20 different estimates of the return on expenditure on secondary education shows that these values vary from 8 to 20%. Consequently, in the structure of the gross national product, 25–70% can be the return on investment in education. Each unit of expenditure invested in education, as a rule, gives at least four units of profit, expressed in monetary terms.

It is education and science that can ensure the innovative advancement of society, and in this sense, education becomes innovative, that is, it is constantly in the process of changing methods, educational technologies, and content in accordance with the needs of a transformational society. The ways of activity inherent in education, methods of solving problems, a creative approach contribute to the transition of the whole society to an innovative model of development. Thanks to this, the duration of general education has increased in many countries of the world.

In a developed society, education should ensure the optimal, efficient use of human resources. In these conditions, first of all, a high level of technical knowledge is required. In industrialized countries, there are on average 85 engineers and technicians per 1000 inhabitants, in particular in Sweden – 261, in Norway – 231, in Switzerland – 202. With the backwardness of universities, the quality of such training is reduced, which negatively affects the technological competitiveness of the economy.

A modern worker must master a whole series of new technological operations in order, if necessary, to ensure the stability and continuity of the enterprise. So, at Ford plants, 97% of those hired after 1991 have a higher education. At the same time, potential workers take exams in English, mathematics, and communication skills. In Ukraine, not only has industrial production declined but there is also an interest of employers in the training of highly qualified workers.

Today, since the 21st century is the century of information technologies, the ability to use them is one of the important indicators of education. This should be facilitated by informatization and computerization of education.

The exponential development and the resulting growth of information flows also require the transformation of universities. The information boom not only increased the value of information but turned it into a strategic resource for development. According to a report by analyst firm IDC Data Age 2025, the volume of all data worldwide will be 163 zettabytes by 2025, up from 33 zettabytes in 2018, 10 times the total data as of 2016 (Reinsel et al, 2018).

Universities are also actively producing information flows because more than 7 billion pages of scientific articles and 60 thousand book titles are published annually in the world (Smertenko & Solntsev, 2018). Every 18 months the volume of digital information doubles, and the number of obstacles to access to this information decreases even faster. But it should be noted that approximately 95% of this stream is unstructured data, that is, information that has no socially significant value.

Given such an insane rate of growth of information, the university must reconsider its role in its critical comprehension, production, systematization, dissemination, use as an object of scientific research and educational content. New challenges for universities were set by the COVID-19 pandemic: all over the world they switched to distance learning and in crisis, conditions were forced to update and master not only new digital technologies but also new didactic methods, pedagogical technologies, ways of interaction between participants in the educational process, methods monitoring the educational achievements of students. Such a forced acceleration of the digitalization of higher education has exacerbated the issues of transforming the goals facing higher education – for the translation of

knowledge and their assimilation by students before their critical comprehension, mastering various practices for the development and creative application of knowledge in changing conditions. Critical thinking determines the independent and responsible actions of a person, encourages the formulation of sound conclusions and assessments and decision-making, contributes to his constant self-improvement. The emergence of the system of changes in the global information society, the emergence of a smart economy in the era of digitalization of the economy, barriers and risks of its development, requiring advanced knowledge and actions, the ability to work in more than one professional position, maintaining self-control in conditions of uncertainty up to complete chaos and absolute obscurity, the ability to extrapolate ideas from one sphere to another (Saukh, 2021). Achieving new goals will become possible subject to the transformation of the educational process, its goals, objectives, methods, and technologies, as well as the ways of interaction between all its participants in order to achieve certain common results. It is obvious to everyone that the wide availability of knowledge also changes the essence of the educational process, which implies mastering the synergy of their influence on reality.

Exponential technologies, as a rule, go beyond the framework of scientific and educational institutions, and the educational process must also overcome institutional limitations that require the university to develop educational platforms that are relevant and open to the general public, and widely use digital distance learning technologies. Universities have already begun to offer open educational resources to society, which will contribute to the availability and dissemination of scientific knowledge, raise the level of education, open up opportunities for contacts with a large number of teachers, thinkers, intellectuals from different countries, and continents.

This opportunity immensely expands the horizons of education and opens up immense opportunities for everyone who wants to learn.

In addition, the introduction of exclusively digital technologies in education can turn the educational process into a “technology” and neutralize the value of interpersonal relationships between a teacher and a student. At the same time, modern technologies provide us with more opportunities for communicating with family and friends at a distance, acquiring new knowledge, regardless of location, at any time convenient for us. Digital technologies make the learning process mobile, differentiated and individualized. At the same time, technologies do not replace the teacher but complement him. The proliferation of digital technologies is making the digital skills of citizens key among other skills. Yes, “digitalization” and cross-platform are currently the main trends in the general labour market (Digital Agenda for Ukraine – 2020). This provides the creation of the latest legislative initiatives, configurations in the structure and management of the institution, transformation of corporate values. The University produces a modern concept of its activities with a focus on the modern challenges of society. This historic development will be facilitated by the use of cloud services.

Currently, cloud services are widely used all over the world, because their advantages are obvious – they can be used by all Internet users. Cloud technologies greatly simplify the storage of information, its use, and access to it. However, this raises a number of new questions: what information will be stored in the clouds? How are we and today’s children ready to critically comprehend and be competent in using huge amounts of information? How can we get rid of information waste? How can we teach a person to objectively assess the quality of information? These questions need answers from the university and the training of specialists who will become providers in

the world of information – as an objective reality created by a person, which he cannot cope with without appropriate training.

Digital technologies are transforming genetics into information science – the rapidly developing genomics around the world. So, the Beijing BGI Institute of Genomics, which I had the opportunity to visit in 2018, only in 2010 received a government loan in the amount of \$ 1.58 billion for research. The 47 laboratories of this institute employ 5,000 people who have one task: to sequence the genomes of the largest number of organisms – from extinct hominins to rice and the giant panda. Following the successful completion of the pilot project, plans have been announced to sequence 10,000 genomes of plants and microorganisms, which will undoubtedly bring a wealth of data that could revolutionize genomics (China time, 2018).

The use of computer programs in genetics that easily mix and match genetic codes opens up prospects for the development of bioengineering. Already today it is possible not only to “read” a person’s diseases in his genetic code but also to “cut out” a defective gene and replace it with a healthy one. Experiments are underway to grow healthy human organs for transplantation instead of sick ones. In 2009, an artificial hand with tactile sensations was invented, in 2010, scientists created a retinal implant that could potentially restore vision to the blind, and developed an artificial heart, which was already implanted in the first patients in 2021. The creation of a “human brain-machine” interface that will allow people with spinal cord injuries, as well as people with brain damage, to lead a fulfilling life is progressing successfully in 2020.

However, these scientific advances also bring new challenges to society and the university community. Is humanity ready for the responsible use of advances in genomics? Will it not lose “reverence for life” (A. Schweitzer), which will lead to consequences that will be worse than the use of atomic energy for

military purposes? Is it completely ensured that it is impossible to control a person due to the implantation of chips into his body? Legal questions also arise: how will the legal categories of legal capacity, human rights, and freedoms change in the case of a combination of biological and technological? Consequently, universities as a social institution must respond to challenges and contribute to the birth of a new philosophy, law, ethics that will prepare a person for life in a new reality filled not only with the advantages of digital technologies,

The combination of the physical, biological, and digital worlds will also require changes in the training of specialists, primarily in the content of educational programs. The latest technologies give rise to new professions that combine biology, genetics, mathematics, physics, medicine, information science, and software design for medical equipment. Hence the conclusion that the future of university education, in particular, lies in the plane of interdisciplinary educational programs and interdisciplinary research. As noted by the Order of the Ministry of Education and Science of Ukraine "On the approval of requirements for interdisciplinary educational (scientific) programs" (2021), the development of such programs in Ukraine will open new professional and academic rights for future professionals and help increase the competitiveness of the national higher education. Of course, this applies not only to the combination of biological and information sciences but other interdisciplinary fields. This is Educology – the scientific direction of the integrated study of the sphere of education – aimed at studying modern education as an integral social phenomenon, factors influencing its development and determining the influence of education on the advancement of modern civilization as a civilization of education and science, a civilization of a person of a new evolutionary level – an educated person (*Homo educates*) (Educology: Origins of

Scientific Direction, 2012, p. 161). It is the synergy of educational sciences such as philosophy of education, history of education, educational policy, educational law, education management, the economics of education, sociology of education, cultural studies of education that makes it possible to comprehend the patterns, trends, and priorities of modern education.

So, in order to successfully work in a new reality, to perform the social function of reproduction and development of the society itself, a university must subordinate its activities to new tasks, challenges, opportunities, and goals, self-develop, self-organize, renew and change. Moreover, the university should become the institution of the future to anticipate social changes and prepare people for life in a new reality.

Thus, the university changes require the following steps to be done:

- legislative initiatives to consolidate in the legal field of transformational processes of transformation of universities into institutions of advanced, innovative, open, socially responsible education; cooperation with executive authorities, local government, and the world academic community;
- attracting renewed universities to socio-economic transformations based on innovative technologies and philosophy of responsibility;
- the transition from the fragmentation of scientific knowledge to interdisciplinary research and the creation of educational programs for training specialists on an integrated basis;
- constant technological renewal of universities by the development of modern science and technology;
- creation of the latest philosophy, law, ethics, meanings of being for a new reality – a combination of physical, biological, digital reality.

These steps will ensure the development of a modern

university as a social institution that performs an important social function of reproducing society, training a socially responsible intellectual elite of society, capable of ensuring the technological, economic, and social advancement of the country. It is this development of Ukraine that will ensure the movement towards an equal and integral society and a rise in the level of the masses.

1.2. Educological basis of university development

The rapid development of Ukrainian society is characterized by abrupt changes not only in the spheres of politics, economics, production but above all in the social sphere (cultural, value). In response to these challenges, Ukraine is undergoing continuous reform of the national higher education system, based on the understanding of world achievements, their active use, while taking into account and preserving the best domestic experience. To a large extent, these reforms are reflected in university education, which, on the conviction of Skulish (2009), absorbed the advanced domestic experience in training high-quality specialists.

The uniqueness of the university as a socio-cultural and intellectual phenomenon is due to the organic unity of three aspects of its activities: professional, cultural, research. These components, acting as elements of a single whole, are the determining factors in the essential understanding of the intellectual idea and concept of the university.

The intellectual potential is an integral feature, first of all, of those universities that personify the national symbols of countries. These are, for example, Harvard University in the USA, Charles University in the Czech Republic, Sorbonne University in France, Oxford and Cambridge in England, Taras Shevchenko National University of Kyiv in Ukraine (Pavko, 2012).

The problems of the development of universities, their historical mission have always attracted the attention of scientists, politicians, educational practitioners, and the general public. Outstanding scientists of the past were not only ideologists but also direct organizers of university education. Among them are W. Humboldt, K. Jaspers, H. G. Gadamer, E. Spektorsky and others.

Throughout history, universities have played a leading role in the socio-economic and intellectual development of mankind, in the formation of the human capital of each state. Outstanding scientific discoveries of recent centuries are directly related to the activities of universities and their graduates.

The market economy, globalization, technological development, in particular, the digitalization of society, demographic changes pose serious challenges for universities. Recent developments with the COVID-19 pandemic have tightened the challenges to university education.

On the one hand, universities should provide, from a scientific standpoint, adequate answers to the needs of society. On the other hand, the universities themselves need improvement, transformation, and modernization in accordance with new realities, digital transformation of education and science.

The form of the educational process and the technology of research activities have also undergone significant changes. New forms of organizing higher education have emerged, in particular distance education, using digital technologies, which is undoubtedly a positive phenomenon in university education. At the same time, there are problems that need to be addressed.

According to the national glossary of higher education, the university is the main type of higher education institution, which most fully expresses and realizes the mission, vision, goals, objectives, and functions of higher education. At the same time, as the leading intellectual centres of society,

universities on the basis of autonomy, academic freedom, carrying out educational, research, innovative activities, are the main factors of social progress, and various rankings are carried out to determine world-class universities (National Education Glossary: Higher Education, 2011, 64). That is, the university should be a leader in higher education, provide high quality and high values of graduates as the elite of the nation. That is why only a quantitative increase in the potential of higher education not only did not contribute to an increase in its quality but led to deterioration in certain areas of vocational training in higher education.

Hadamer (1988, p. 50) noted that the concept of education (*Bildung*), which by that time took possession of the minds, was probably the greatest opinion of the 18th century, and it was this that designated the element in which the humanities of the 19th century existed. The outstanding German philosopher clearly emphasizes the importance of education, referring the concept of it to the «leading humanistic concepts»: nowadays education «is closely related to the concept of culture and ultimately denotes a specific human way of transforming natural inclinations and capabilities». And, what is very important, “the victory of the word “education” over “form” seems to be no coincidence because “education” (*Bildung*) conceals an “image” (*Bild*)”. Buhrov (2014) concludes that then the idea of “human education” proceeds from even an implicit, but existing “image of a person”. In other words, the traditional European philosophy of education is precisely philosophy and precisely education as *Bildung*, therefore it is based on the anthropological content of philosophy as the ultimate theoretical justification of human existence in the world.

Education is not a separate sphere of human social life but is nothing more than the “creation” of the person himself. It is worth noting that today the concept of “education” has expanded

its content. Education is viewed as a process of external influence on the individual's assimilation of generalized objective, social experience, norms, values, etc.; special area of social life; a unique system, a kind of socio-cultural phenomenon; the essential characteristics of an ethnos, society, human civilization, methods of its self-preservation and development; process, that is, the integral unity of training, education and development, self-development of the individual; preservation of cultural norms with a focus on the future state of culture; a socio-cultural institution that promotes economic, social, cultural functioning and the improvement of society; result, that is, the level of general culture and education of people. Thus, education is understood broadly, defined as different contexts, which can be summarized as follows: education – value (state, social, personal); the system of various educational institutions and educational institutions; special process; multilevel result; sociocultural phenomenon; social institution influencing the state of consciousness of society (Sysoieva, 2012, p. 23).

What is the essence of university education, the model of the university, as the embodiment of its idea, at the beginning of the XXI century? First, starting from the enduring function of the university, arising from its name (the universe), and taking into account the main trends in the methodology of modern scientific knowledge, first of all, the interdisciplinary synthesis of knowledge, the (classical) university should be assigned the function of a repository of "thoughts about thought" (Aristotle), knowledge about knowledge, research theory of theories. In practical terms, this means the need to provide students with fundamental education, basic and general orientation knowledge not only in the traditional humanities and natural sciences, but also in history, theory, methodology, and philosophy of science. Secondly, the scientific and technological revolution, the processes of globalization transform the classical

model of the university into a "multiversity", which, along with the traditional ones, performs a number of new functions – innovative, social (Filipenko, 2011, p. 19).

As Kurbatov (2011) notes, fundamental knowledge, their quality is a characteristic feature of university education. Knowledge is intellectual capital, which differs from natural, labour, and monetary resources in that by transferring (or selling) it, the creator himself does not lose this information; he develops and increases this intellectual capital. It is at this stage that knowledge turns into fundamentally unfinished technologies for shaping the future, in fact, closing both the economic and social systems of post-industrial society. The most important new quality in the learning society is the ability to learn how to learn.

The processes of globalization, digitalization, modern technology and technology simplify access to knowledge, ensure its free circulation, and therefore affect university education. The response of the higher education system to the challenges of our time has been the emergence and development of new forms of university activity, more adequately corresponding to the realities. The university models that are best suited to the realities of the present are the research university, the entrepreneurial university, and the world-class university.

It should be emphasized that classical universities occupy a special place in the organization of innovative activity. Classical universities are the most important source of innovation since it is there that most of the fundamental research and science-intensive applied developments are carried out. Secondly, innovation and technology transfer today is a reality of the modern relationship between university science and industry and business structures (Bielov, 2011, p. 26).

Consequently, a modern university should be a world-class centre of education and science, where fundamental and applied

research, as well as science-intensive technological developments (including in the field of information technology), are closely related to the training of highly qualified specialists; in addition, he should make a significant contribution to the development of the scientific, technological and economic potential of Ukraine.

In addition, a modern university has a mission to form the elite of society. Education, which unites the fate of a single individual with the fate of culture and civilization as a whole, is becoming an integral attribute and symbol of the modern era. In the world of instability and risks, a serious threat is a tendency to the destruction of the human in man (before the post-human), when, as noted by the French economist, a writer, and a businessman J. Attali, a person's identifier turns out to be his electronic card. In these conditions the role of education is actualized, which in the course of historical development has formed as a civilizational mechanism for mobilizing society's resources, renewing culture, and all social life. It is with her that the response to the "challenges" of the modern era is associated, conditioning the urgency and reflection of the content of education, for the understanding of which it is important to turn to the awareness of what it is in the context of life, culture, civilization (Utiuzh, 2009).

One of the first links between civilization and education was traced by E. Toffler, who, for each of the three waves of world civilization, distinguished the specificity of production, translation, and assimilation of knowledge, that is, the specificity of education; he analyzes the tendency of changes in understanding and approach to education – from the production and conditions of specialized knowledge and technologies to synthesizing new knowledge from different fields of activity in an open educational space. The philosophical basis and technological influence on the deep-seated processes of culture formation and the formation of the mental characteristics of a

person and society, the human-making functions of education, which have a civilizational scale (Utiuzh, 2009).

That is why the education system should have the character of advanced development, rely on the arsenal of fundamental sciences, seeking the necessary balance between professional and fundamental training. Its main task is the formation of an internal need for self-development throughout life. One of the main components of the university training of a specialist, as noted by Akimova (2012), there is the formation of subject-specific human abilities, which, in turn, correspond to the current system of the social division of labour.

The principle of humanization of higher education is closely related to the principle of fundamentalization. They are united by the special status of the university as an institution, which is appropriately organized and administratively subordinate – the status of an environment for the socialization of youth, which functions in a specific historical social environment. The combination of these two principles of university functioning creates the necessary conditions for the most effective use of the age of higher education – adolescence or “youth of maturity” by Vyhotskyi (1985). Meanwhile, it is necessary to delimit the concept of the humanization of education and humanism. The latter is necessary, however, inadequate conditions of the humanization process. Humanitarization presupposes an increase in the role and proportion of humanitarian disciplines in the educational process, while humanism – to a greater extent affects the moral aspect of relationships in the educational process (mutual respect, the cult of social responsibility, human dignity, and human values).

The next principle of functioning of higher education is academic autonomy, which, in turn, implies the implementation of the principles of academic freedom, tradition, and responsibility. Freedom of the university, according to Akimova

(2012), is its welcoming basis, which, in general, gave birth to this social phenomenon.

Innovative education presupposes learning in the process of creating new knowledge – through the integration of fundamental science, the educational process, and production. In this aspect, the system of innovative education should be open to a modern scientific and modern economy. It is an innovative education that acts as a process and result of such educational activities that stimulate the introduction of innovative changes in the existing culture and social environment.

Informatization plays a significant role in the fundamentalization of education, which creates the possibility of rapid processing of information and consciousness on the basis of new high-quality information. This, in turn, serves as the basis for improving the quality of intellectual activity. The intensification and saturation of the human information field in a post-industrial society leads to a change in the functions of education. When solving this problem, serious transformations of the goals and technologies of educational activities are required.

Training and research in new fields of knowledge require the integration of the content of a range of disciplines that were previously considered independent and unrelated to each other. The result is interdisciplinary and multidisciplinary programs. As Stepko (2013) notes, new forms of knowledge generation require not only the reconfiguration of university departments and faculties but also the reorganization of research and training of specialists focused on solving complex interdisciplinary problems and developing science-intensive technologies.

Classical universities are the basis of a modern institution of higher education and forms of development of cooperation in the EHEA (Valimaa & Hoffman, 2008). The fundamental qualitative features of such institutions of higher education are, in particular, a high, one might say, elite level of training of

specialists, based on a solid methodological basis, the possibility of students acquiring not just basic, but fundamental knowledge from various fields of science with an optimal combination of natural and humanitarian academic disciplines, the ability to form and disseminate age-related moral and cultural values, the predominance of the share of fundamental, creative research in scientific work. In addition, the classical university is the main source of replenishment of scientific and pedagogical personnel for the higher education system and acts as a generator of changes in the field of educational organization. These are the hallmarks of classical university education.

In recent years, for universities, especially classical ones, the problems of interaction with the labour market have become aggravated. Recognizing that the value and product of universities are outside the marketplace, especially the moral and intellectual implications of research and teaching and educational and cultural influences and that universities cannot be turned into sites for the production of marketable «products», we must not forget that cooperation between the world of education and the world of work must offer both new sources of funding and a higher level of adequacy of modern higher education. Unfortunately, in Ukraine, universities, and enterprises do not fully realize the potential of such cooperation.

Scientific activity remains an important area of activity of universities. Traditionally, universities were considered to be the centre for combining professional training with the scientific activity of students. This was facilitated by the successful integration of educational and research activities. This trend is not only not fading away but is developing even more in modern conditions. There is an active deployment of scientific research on various problems, technology parks are being created on the basis of large universities, a new type of university – research – has appeared and established itself.

A research university is a well-established modern form of integrating education and science. In the structure of most foreign universities, there are technology transfer centres, departments of intellectual property, licensing or patenting. The names are different, but the essence remains the same: the transfer of the university's developments to consumers with the convenience of the university.

The current trends in the higher education development in Ukraine (Skulish, 2009) need a precise analysis, i.e. search and implementation of advanced world experience in the activities of universities in other countries in the higher education system; excessive diversification of student training at universities; improvement of the stepwise training of university graduates; strengthening the cooperation of educational activities between universities with the simultaneous formation of their own concept of training specialists; development of new forms of management; expanding the tasks of higher education; quantitative growth of the contingent of students; transformation of the content of education in accordance with the requirements of the present, the labour market; integration of education, science, and industry; humanization and humanitarization of higher special education; search for new sources of funding.

Despite certain differences, the countries of the European region are united in their desire to slow down excessive differentiation in the field of higher education. Therefore, the priority areas of activity of higher education are fundamental training, an organic combination of theoretical and practical training in major disciplines, professional and creative training of future specialists based on their involvement in research work; formation, development of motivation, and readiness of an individual for continuous education throughout life based on compliance with the criterion of competent professional activity.

The modern Western European state continues to strive to overcome the growing crisis in science and education, turn universities into a kind of production of the intellectual elite and modernize the scientific and educational base of universities in accordance with market requirements. An important characteristic of modern public policy in Germany there is a clear distribution of roles between the state and universities. The government takes on the role of strategic steward of the global goals of the institutions. The latter are given full autonomy in the choice of means for solving practical problems. In other words, the state becomes the customer of scientific and educational programs, and the university becomes a kind of executing enterprise in the service sector (Hryhoruk & Pylypenko, 2011).

The experience of Finland in higher education reform draws attention. The 2009 Law on Universities legislated the autonomy of higher education institutions, in particular a new legal status (universities became legal entities under public law or private foundations) and financial autonomy (the new status of universities is an independent financial institution, although on average 65% of their budget come from government funding, which is dependent on indicators of quality assurance, teaching, and research excellence subject to government audit).

The Law on Universities also defined changes in the organizational autonomy of universities: a two-tier management structure – the Governing Board, which includes 40% of external members, and the Academic Board; the new status of the rector as a general director elected by the University Council. However, in accordance with the reform, management decision-making is concentrated in the hands of individual leaders (rector and deans as powerful actors); staffs (both academic and administrative) have fewer opportunities to benefit from participation in decision-making, teachers have lost their civil servant status (Kohtamäki & Balbachevsky, 2018).

The post-industrial knowledge-based economy sets a triune task for the university, including training specialists, conducting scientific research, commercializing the results of research activities, and making a real contribution to the socio-economic development of the region and country. Technology transfer in some countries (USA, Finland) has been elevated by law to the status of the third mission of universities, failure to fulfil which entails punishment in the form of depriving universities of the rights to the intellectual property created by them.

Along with teaching and research, universities have a third mission technology – transfer (Sovershenna, 2010).

In different countries, regardless of how the German (Humboldtian), English (Newman), American or French (Napoleonic) systems are combined in their models of university education, the role of the university is also based on such basic elements as teaching, research, education values and the provision of services to the public environment. In particular, the strengthening of this functional connection is manifested in the growth in the world's leading universities of expenditures on research, information, and communication support of the educational and research process.

Another manifestation of the tendency to link the link between science and education in classical universities is the creation on them the basis, according to the existing legislative and regulatory framework, science parks designed to promote the practical implementation of scientific developments in the economy and public life by combining the efforts and scientific potential of university and academic science with financial institutions, industrial enterprises, etc. Therefore, today, a sustainable interdisciplinary approach to higher education has been formed as a response of universities to pressing economic, social, and environmental problems of society (Herasymov & Spaskyi, 2011).

The multiparametric nature of the system presents significant difficulty for the development of adequate models and especially for their parametrization. On the other hand, it is inevitable to ensure the adequacy of the model. Suffice it in this regard to mention the multidimensional complexity of the anthropological structure of man, which is the most important component of the subject of university training.

Thus, it should be noted that an increase in interdisciplinary emphasis, a decrease in funding for university education and science, as the most important parameters that determine the entropy of such a complex model system, without taking into account its harmonious fit into a combination of other parameters that affect the quality of the system as a whole, can lead it out of an equilibrium balanced state and significantly deviates the dynamics of the evolution of the system from the rational-efficient one. The transition of a system between qualitatively different states belongs to the category of critical processes, during which some parameters change rather slowly. Therefore, a sharp change in individual parameters, without taking into account the relationships in the system of factors that determine the state of the system (related to the prerogative of the chosen model), does not give the expected effect on its optimization. Signs of this scenario, are observed in particular in modern conditions with the build-up of special components of university training in interdisciplinary areas to the detriment of fundamental, general scientific, both natural-scientific and humanitarian training (Herasymov & Spaskyi, 2011).

It is worth noting that the development of interdisciplinary research is a strategic goal of the European Higher Education Area. Thus, the Rome Ministerial Communiqué 2020 highlighted inter- and multidisciplinary approaches in the development of new and innovative teaching methods.

Nowadays it is essential to analyze educational phenomena and processes, in particular the problems of professional training of specialists, at the interdisciplinary, multidisciplinary, and transdisciplinary levels, identify the dominants of the development of education, factors affecting the functioning of the educational system, its subsystems, as well as the mechanisms of HEIs interaction and collaboration, developing in Ukraine as a direction of integrated research in educational science – Educology.

It can be argued that educology creates methodological conditions for the development of comparative professional pedagogy, which makes it possible to study the development of university education in other countries of the world, namely (Sysoieva, 2018):

- any phenomenon of professional education can be studied in a wide context field using methods of other sciences in accordance with the purpose of the study;
- the equivalence of the selected countries for research is ensured through the analysis of socioeconomic and cultural-historical factors affecting the development of the sphere of education and reflected in all its subsystems and components;
- increasing the likelihood of comparative research influences conclusions for educational policy, reforming and modernizing educational systems and their subsystems;
- the prognostic function of comparative research is realized, especially in that part, which explains the possibility of transferring educational innovations and models of one country to another, taking into account its tradition, culture, history, etc.;
- the preconditions are created for the formation of the theory of education, the theory of the school, its variational models and factors of influence that promote their implementation on different socio-economic, cultural and historical grounds;

- it is possible to systematically consider factors influencing the development of education as a process and result.

The latter position is of fundamental importance since when conducting comparative studies, in particular professional pedagogy, it is necessary to take into account external influences on educational systems, phenomena, and processes that are determined by economic, historical, national, demographic, state-political, and social characteristics in the country. Economic factors determine the material capabilities of the state budget, which can be directed to the development of education, the quantitative and qualitative demand for graduates. Historical and national factors are closely related to the specifics and nature of society, its history, and culture. These factors are most clearly manifested with changes in education, the implementation of educational reforms as a historically conditioned orientation of national traditions. The process of expanding access to education, introducing changes in education, educational reforms, and setting goals for education are closely related to demographic factors. Factors conditioned by the political system directly influence the formation and content of the educational policy. Social factors are associated with the structure of society, its changes, as well as the impact of these changes on the education system.

Consequently, educology as a scientific direction that integrates the sciences of education (economics of education, sociology of education, cultural studies of education, history of education, educational policy, etc.) makes it possible to take into account the above factors in studies of comparative pedagogy, including professional one.

The development of a digital society, the rapid growth of information flows, almost unlimited access to them, the digitalization of education poses new challenges for university education. The institution of higher education ceases to be

the only source of knowledge; ICT tools offer more flexible educational offerings for students, provide more educational opportunities both inside and outside the classroom. These benefits of digital education were especially evident during the COVID-19 pandemic when educational institutions around the world were forced to move to distance learning via the Internet.

So, digitalization changes the goal of university education: from equipping students with the knowledge, it is transformed into the development of their critical thinking, creativity, and communication. Thus, the World Economic Forum in Davos (2020) published The Future of Jobs Report 2020, in which it traditionally presented the top 10 relevant skills for the next decade. By 2025, employers will demand analytical thinking and innovativeness from subordinates; active learning and learning strategies; solving complex problems; critical thinking and analysis; creativity, originality, and initiative; leadership and social influence.

The development of these skills among applicants for higher education is not only a goal, but also an educational tool, since open and easily accessible resources need to check the quality, relevance, reliability, and validity of open and accessible information. In the context of digitalization of education, the role of the teacher is changing: from a mentor and translator of knowledge, she is transformed into a facilitator, moderator, tutor, coach.

Thus, as Ogneviuk (2018) notes, digitalization of the educational industry requires universities to develop a new philosophy of their activities, rethink value principles, goals, short-term and long-term tasks to ensure their institutional development for the sake of better-serving people and society

in the historical conditions of the information revolution and exponential development, updating didactic methods, pedagogical technologies, methods interaction between participants in the educational process.

1.3 Transforming the modern university to digital: challenges of the present

The rapid pace of development of the digital economy, which enters all spheres of life in modern society, encourages systemic technological breakthroughs and the development of new ways of processing information. Globally, digitalization is a concept of economic activity based on digital technologies implemented in various spheres of life and production in all countries (Zhashkenova, et al., 2021).

The reform of university education in accordance with the requirements of the European Higher Education Area focused on ensuring the high quality of higher education, determines the increased attention to the mechanisms and tools of quality assurance, in particular the creation of the industry of innovative technologies and learning tools that correspond to the world scientific and technological level, and the digitalization of all processes in the higher education system

An analysis of digital readiness, i.e., digital maturity, according to Kane, Palmer, Phillips, Kiron, & Buckley, 2020 (Digital Transformation is Strategy, Not Technology), a global study by Deloitte, a leading global provider of audit, consulting, financial, risk and related advisory services, in collaboration with the Massachusetts Institute of Technology, indicates a moderate, and in some respects the low level of educational readiness for digital rethinking (Table 1.1).

Table 1.1

Readiness of social spheres for digital rethinking

Top 5		Digital technology has enabled workers to work more effectively with:			The digital qualities of the organisation				
Lower 5									
Segment	Digital maturity	Customers	Partners	Employees	A clear strategy	Transformation strategy	Available skills	Encouragement by the manager	Leadership skills
IT and technology	6,23	Green	Green	Green	Green	Green	Green	Green	Green
Telecommunications	5,89	Green	Green	Green	Green	Green	Green	Green	Green
Media, entertainment	5,49	Green	Green	Green	Green	Green	Green	Green	Green
Professional service	5,39	Green	Green	Green	Green	Green	Green	Green	Green
Transport, tourism	5,18	Green	Green	Green	Green	Green	Green	Green	Green
Asset management	5,18	Yellow	Green	Green	Green	Green	Green	Green	Green
Banking	5,14	Green	Green	Yellow	Green	Green	Green	Green	Green
Retail	5,03	Green	Yellow	Green	Green	Green	Yellow	Green	Green
Auto	5,01	Green	Yellow	Green	Green	Green	Yellow	Yellow	Green
Pharmacy	5,00	Green	Green	Green	Green	Green	Green	Green	Green
Consumer goods	4,90	Green	Green	Yellow	Green	Green	Yellow	Green	Yellow
Insurance	4,80	Yellow	Yellow	Green	Green	Green	Green	Green	Green
Education	4,71	Green	Green	Green	Yellow	Green	Green	Green	Yellow
Oil and gas	4,68	Yellow	Green	Green	Green	Yellow	Green	Yellow	Green
Medical services	4,67	Green	Yellow	Yellow	Green	Green	Yellow	Yellow	Green
Production	4,54	Yellow	Yellow	Green	Green	Yellow	Green	Yellow	Yellow
Public sector	4,51	Yellow	Green	Green	Green	Yellow	Green	Yellow	Yellow
Construction, real estate	4,50	Green	Green	Green	Yellow	Yellow	Green	Green	Yellow

The unpreparedness of education for digital transformation, according to the study, is indicated by the lack of a clear strategy and low digital skills of the leadership staff of educational institutions.

Digital transformation is actually the process of using modern digital technology to create new or modify existing business processes, cultures, and experiences to meet labour market demands (Vaughan, 2021). Transformation means that digital tools provide new types of innovations, involving the replacement of process elements to achieve goals, rather than simply improving and maintaining traditional methods. Digital transformation is a major challenge and opportunity for the development of institutions, including educational institutions. When planning a digital transformation, one must consider the changes they face as workers adapt to adopting and using unfamiliar technologies.

Digital transformation is quite complex and finding the right strategy can be one of the biggest obstacles to its implementation. The strategy should point the way to digital maturity, the tasks to be realized rather than the use of technology, because technology changes and adapts over time, and it is likely to change in a few years. Digital strategies should not focus on the capabilities of the Internet, the main goal should be to bridge the gap between the online and offline worlds. To achieve this goal, skills must change and adopt a collaborative culture, and leaders must choose the tools to develop new skills and not be afraid to take the risk of implementing them. Only with a complete change in the institution's organizational structure can the benefits of digitalization be realized: creating opportunities for collaboration, expanding service delivery, and changing the way we work.

In projecting digital transformation in education, we will operate with the definition that it is "a series of profound and

coordinated changes in culture, workforce and technology that provide new educational and operational models, transforming the institution's operations, strategic directions and value proposition" (Brooks & McCormack, 2020). In the published report "Fostering Digital Transformation in Higher Education", the authors presented a model for digital transformation (Figure 1.1).

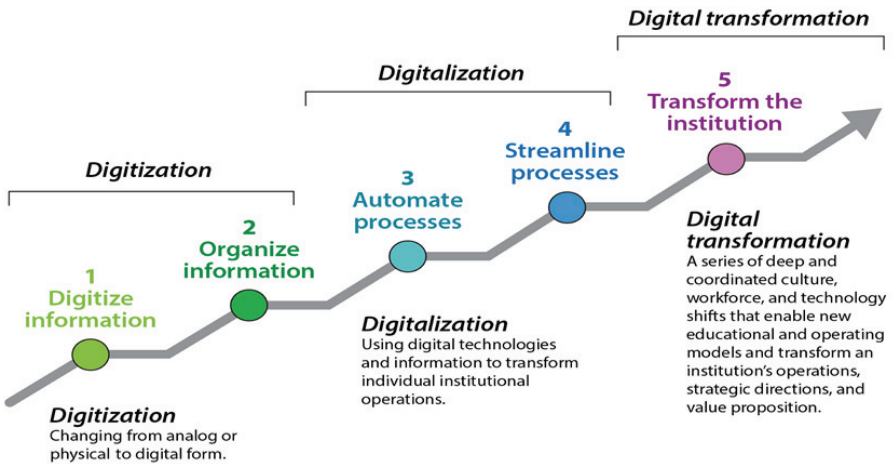


Figure 1.1. Digital transformation model by C. Brooks and M. McCormack

K. Brooks and McCormack point out that digital transformation is possible only after the previous two stages – digitization of information, including digitization of materials (1) and their sequencing (2), and digitalization of processes, which includes their automation (3) and optimization (4).

The education and training system is increasingly becoming part of the digital transformation and can take advantage of its benefits and opportunities. However, the risks of digital transformation need to be effectively managed, including the risk of the urban and rural digital divide, where some applicants may gain more knowledge than others. Digital transformation

in education is driven by advances in Internet capabilities, the widespread use of mobile devices, and digital applications. At the same time, there remains a need for individual flexibility and an ever-increasing demand for digital skills (European Commission, 2021). The global COVID-19 pandemic, which has greatly impacted education and training, has accelerated digital change in education and forced universities to invest more in implementing digital solutions. Digital technologies are now being given the upper hand, but the success of digital transformation programs requires the involvement of stakeholders from all departments who can offer valuable insight into the needs of applicants. However, interest in and support for digital transformation is perceived differently by different institutional groups (Figure 1.2).

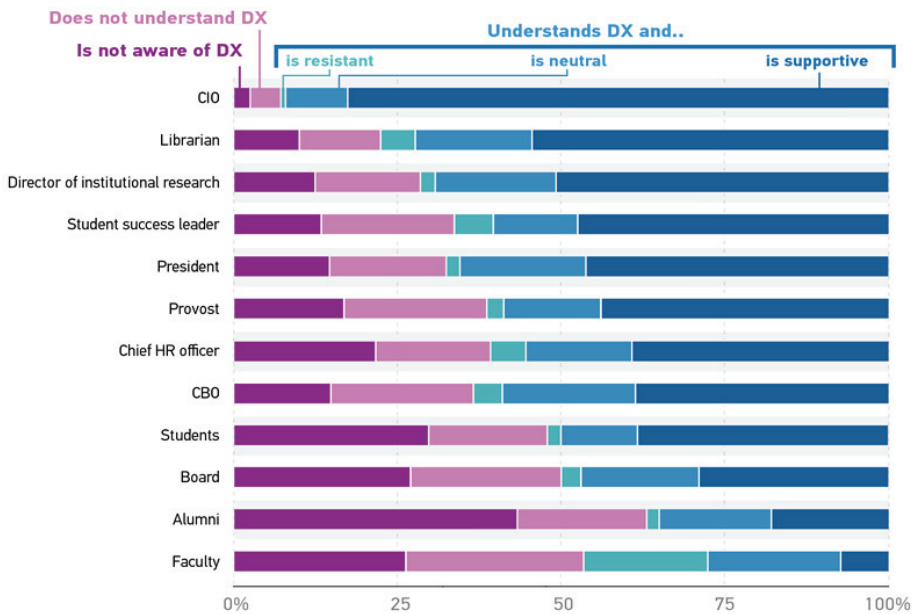


Figure 1.2. Understanding and support of digital transformation by different institutional groups (Brooks & McCormack, 2020)

This perception of digital transformation, according to the researchers, negates attempts to transform the university and can lead to the suspension of its development and low evaluation of potential applicants and employers. To avoid such a path, a strong outreach campaign among employees and students on the benefits of digital transformation, as well as the understanding and support of managers from all departments, is necessary.

The main challenges, according to the study, “Transformation. Higher Education – The Digital University” (PricewaterhouseCoopers LLP, 2020) that face higher education today are identified as:

- a digital threat to traditional teaching methods – the 500+ year model of higher education is being threatened by new approaches to teaching and learning, not to mention increased access to online courses;

- expectations of ever-changing and evolving students: Students are customers who bring their own expectations to the university. They are digitally aware; many of them have an advanced idea of how universities will work directly with them, and what results they can expect in response to their investment. Universities need to provide these expectations;

- requirements for personalized and flexible learning – as a digital generation, students expect to be taught and learn in ways that match their preferences and at a pace that suits them. Approaches to learning and course content must become increasingly personalized and tailored to individual needs. The expectation that “one size fits all degrees” devalues the social role of the university;

- an increased focus on graduate perspectives – students increasingly see university study as a means of securing future employment rather than simply an opportunity to learn and grow. Therefore, the value proposition of universities will change with the role of digital technology in supporting employment;

- Internet alternatives – the rapid shift to online learning, the continued popularity of Massive Open Online Courses (MOOCs) and universities offering distance learning opportunities to students means that students at all universities are forced to learn and work in new ways;

- increasing digital literacy – the increasing use of digital technology in universities is placing new demands and expectations on students, academics, and staff. Universities need to fully understand the impact of digital literacy in their organization and consider what interventions are needed. Some students, academics and staff are well equipped and have gained the necessary skills, knowledge and experience to keep up with the rapid use of digital equipment, while others risk being left behind.

The only solution that will solve these problems is to transform the university into a modern digital university that balances business understanding with technological innovation and student understanding to meet their educational needs (PricewaterhouseCoopers LLP, 2020). Some of the key approaches that can contribute to positive outcomes include predicting what students want and expect; rethinking and simplifying services to meet student’s educational needs regardless of organizational structure; organizing richer and deeper communication by reducing small cardboard tasks provided by faculty; new student and employee understanding of access to key data through a single point of connection; rapid identification of needs through the use of artificial intelligence, automation, blockchain, advanced real-time analytics.

At the same time, transforming to a digital university requires basic organization-wide requirements, particularly having a strong management component that manages the transformation process and engages all units, since the work of one or more units without involving all will not lead to positive

results. After all, digital transformation affects the entire university, every division of the university, not just those that deal with IT infrastructure. Most university professors think that digital is all about technology, but that's a false statement. Sure, technology plays an important role, but it's shaping the digital experience, you might say – a tool that facilitates digital adoption. The problem of these teachers is that they do not take into account the characteristics of the new generation of students, their needs and requirements, are not willing to adapt their teaching methods to modern requirements and to master and use new tools, increase digital literacy and confidently apply digital technologies and devices.

At the same time, according to a study by the European Joint Center, 95% of educators surveyed believe that the global COVID-19 pandemic is a turning point for digital transformation in education, 62% of respondents believe that they have improved their digital skills during the crisis, over 50% note, who plan to take steps to further improve their digital skills, understanding the need for digital transformation, and only 38% of respondents are willing to support (European Commission, 2021). According to research, as of 2021, only 13% of universities are engaged in digital transformation, 38% are studying and 32% are developing a digital transformation strategy (Grajek, 2021).

With the right approach to digital transformation, a university can become an innovative educational institution with its own digital profile. We believe it is necessary to consider that digital transformation is not only the introduction of digital solutions, it is cultural and organizational changes of the university, which is due to increased competition, the need to adapt to the target audience and the implementation of effective interaction of departments (Figure 1.3).

The above factors, in our opinion, are the main ones, because most students today belong to the digital generation,

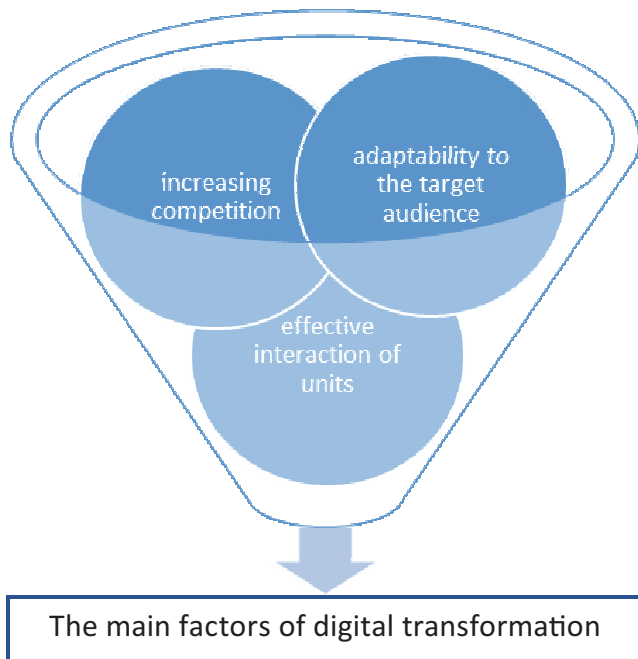


Figure 1.3. Factors of digital transformation

which uses new technologies not only in the professional sphere but also in everyday life: for communication, socialization, etc. Therefore, universities need to adapt to them, to make learning more attractive using digital technologies, which will help to attract more applicants. At the same time, competition among universities will increase, as preference will be given to those institutions that implement new technologies and are willing to radically change the educational system. And the transition, in turn, to a new educational model will require high efficiency in the interaction of the university's structural units.

When planning the digital transformation of a university, it is necessary to take into account certain priority areas in the updated initiative of the European Union to support sustainable and effective adaptation of the education system in the digital

era (European Commission, 2021) – Action Plan for Digital Education (2021–2027) (Figure 1.4).

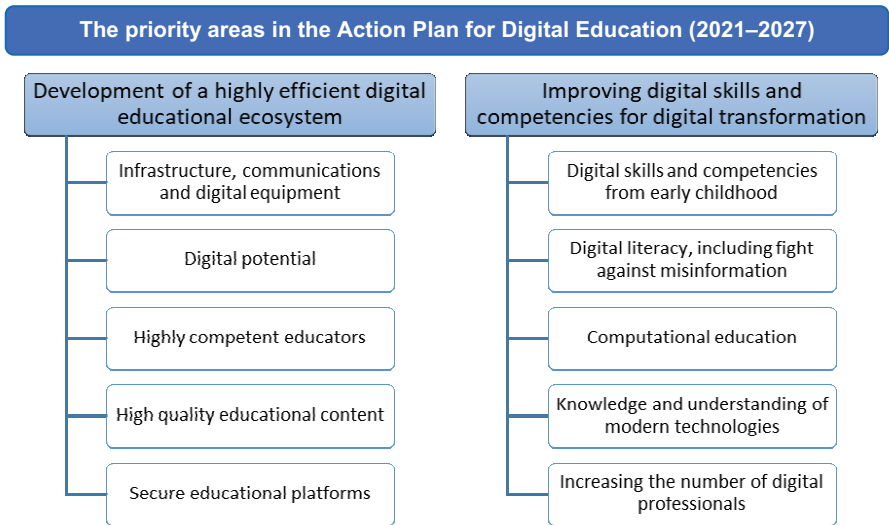


Figure 1.4. Priority areas in the Digital Education Action Plan (2021–2027)

A highly effective digital education ecosystem is possible with appropriate infrastructure, connectivity, and digital equipment; effective planning and development of digital capacity using modern organizational capabilities; confident educators with high digital competencies; high-quality learning content with applicant-friendly tools; and secure educational platforms that consider e-privacy rules and ethical standards (European Commission, 2021).

To enhance the digital skills and competencies needed for digital transformation, basic digital skills and competencies must be developed from early childhood; digital literacy mastery must include knowledge of recognizing misinformation; computational education and the necessary sufficient knowledge and understanding of technologies such as artificial

intelligence (AI), green ICT, social robotics, etc., which require big data development; mastery of progressive digital skills to increase the number of digital professionals.

In addition, for a successful digital transformation, it is necessary to identify specific goals to be achieved by the university. Among the main goals, we single out enhancing the student experience, improving competitiveness, creating a culture of decision-making based on big data, and optimizing resources (Figure 1.5).

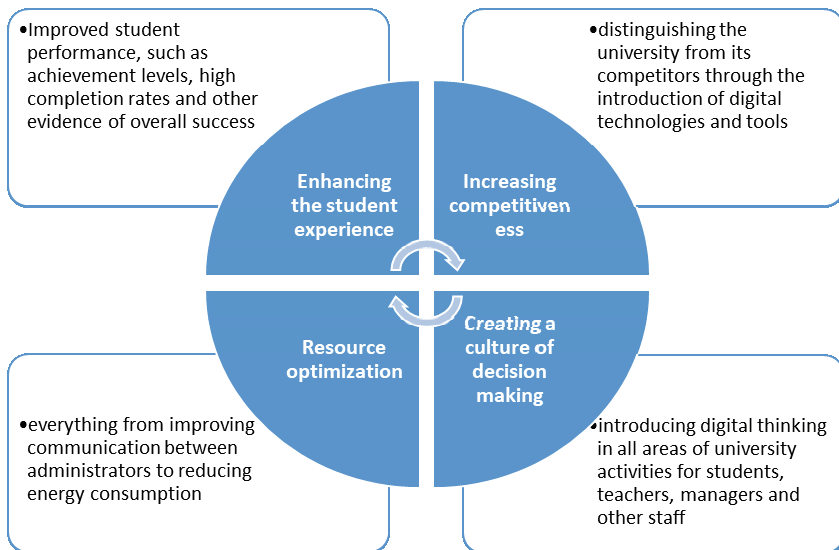


Figure 1.5. The goals of university digital transformation

Successful digital transformation projects will require universities to procure new software and platforms to meet current needs and to allow them to evolve over time as student needs and expectations change. University digital leaders need to adapt quickly to new student expectations in order to increase enrollment, actively engage students and faculty, foster professional development for employees, and most

importantly, apply a digital approach so that educational services are focused on student demands (Figure 1.6).

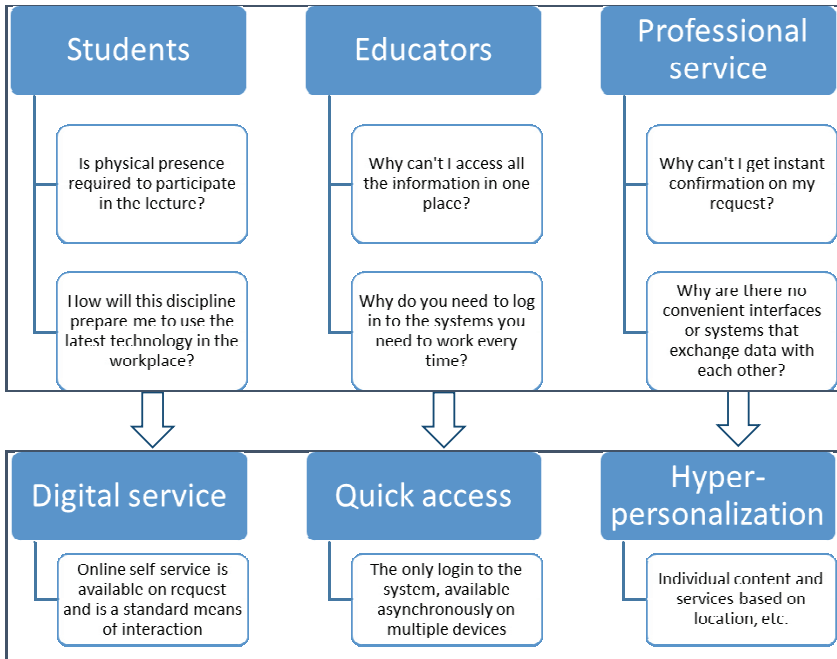


Figure 1.6. Impact of expectations on digital services

Thus, the question arises: what kind of university is a digital university? Or is it a university in which digital technologies are implemented in educational activities or in which educational activities have completely moved to virtual reality? Guided by the European experience, we define the digital university as an integrated ecosystem of education, adapted to the goals and processes of the university with the possibility of scaling and a comprehensive and integrated approach to the electronic management of the university. In a digital university, all educational processes are carried out using digital tools. It can even be like an “offline” university, but it should not be confused with an online university in which all interactions take place in a

virtual environment of the Internet (Marin, 2021). The analysis of studies on the construction of the digital university allows us to identify the key levels for modelling the digital university (Figure 1.7).

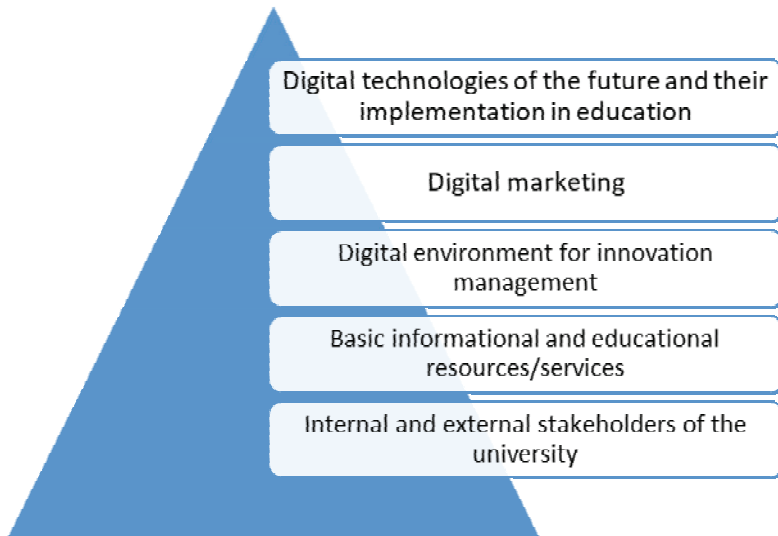


Figure 1.7. Key levels of the digital university

And the level, reflected in the model, is the main and represents students, employees, partners, graduates, applicants, in fact, the stakeholders of the university. Level II is designed to create a single space for interaction. Level III reflects the innovative component of the university and provides a comfortable environment for research activity, which positively affects the image. Level IV provides the organization of interaction using digital tools between all participants in the educational process, building personal educational trajectories, various monitoring activities, the availability of visualized analytics for rapid decision-making, etc. Level V – the level of active implementation of new technologies in the activities of the university.

Considering the tier structure of a digital university, we can state that the larger the set of various educational resources and systems used in the university activities, the more difficult it will be to develop information technology of digital transformation to create a holistic educational ecosystem. According to the research Concentric information technology of the organization of digital transformation of educational activities of higher education institutions (Zaspa, 2021), when approaching the construction of a digital university, it is necessary to observe the conceptual model of information technology of digital transformation, which presents the main components of the educational ecosystem: regulatory and reference information, functional information base, information management technologies, technologies for solving functional problems and technologies to ensure the activities of HEIs (Figure 1.8).

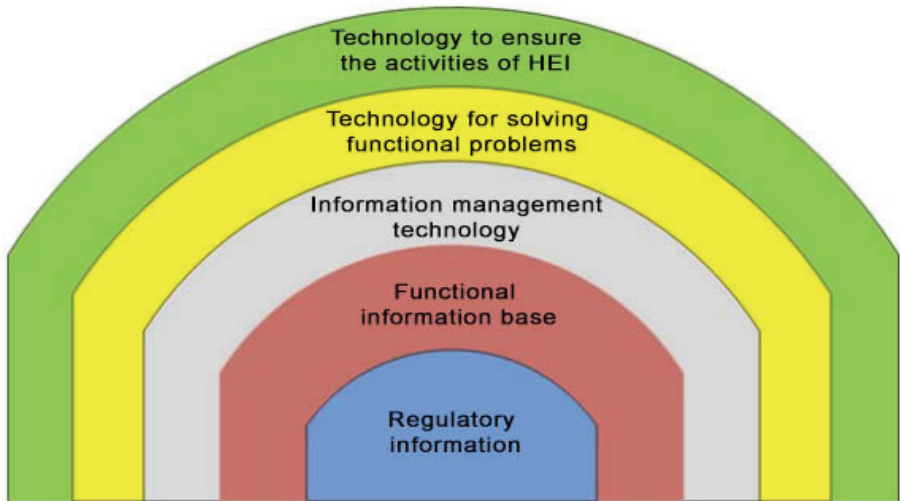


Figure 1.8. The model of concentric information technology of university digital transformation (by Teslia & Zaspa, 2020)

Considering the above, we analyzed the educational processes and information systems of Borys Grinchenko Kyiv

University for the implementation of digital transformation. The university has sufficiently developed IT-infrastructure, which includes developed electronic systems such as: an e-learning system with personal teacher and student offices; E-portfolio system of teachers with the formation of annual ratings of professional activity; a base of registers of university activities; registry of the university regulatory framework; base of masterworks with plagiarism check; institutional repository containing archives of scientific and methodological developments of scientific and pedagogical workers. The educational ecosystem of Borys Grinchenko Kyiv University is a modern holistic information and telecommunication infrastructure with an integrated management system that integrates all electronic information and educational systems of the university, provides conditions for continuous improvement of the quality of education and research, makes the university competitive through the use of modern digital technologies personified, in particular by addressing the following strategic objectives (Borys Grinchenko Kyiv University, 2020):

- improvement of quality and transparency of educational activity by means of providing the educational-methodical base with modern digital technologies, development of an informational-educational environment of the university, wide implementation of digital technologies in electronic and distant education; active use of digital technologies in all spheres of university activity;

- development of an institutional repository, modernization of the system of checking scientific works for plagiarism, constant updating of the system of electronic journals and conferences, promotion of scientific profiles of university employees;

- improving the efficiency of university management through the gradual introduction of electronic document management using modern cloud technologies and the

introduction of a business intelligence system that will provide managers at all levels with instant information about the state of affairs in all areas of the university and will facilitate the adoption of quick, correct decisions;

- increasing the level of digital competence of employees by implementing an adaptive system for the development of digital competence and internal certification of e-learning resources, implementing a personal development trajectory in the Digital Cabinet of e-learning system, providing multilevel training and continuous professional development;

- qualitative representation of the university in the global information space through the development of university educational electronic resources, including English-language versions of websites, increasing the performance of international webometric ratings, transparency rating; improvement of e-portfolio system of teachers and continuous modernization of the rating system of the university;

- migration to cloud technologies, which will ensure mobility and relevance of educational resources and use their own mobile devices (the power of mobile and computer devices, in this case, does not matter – they become secondary, the availability of high-speed Internet is fundamental);

- development of corporate computer network to extranet level, sufficient for effective functioning of the software and technological tools and providing all applicants for higher education and employees with unified personalized access to internal and external digital resources of the university;

- development of the university's cyber security system;

- development of the university digital campus to create a unified system for the participants of the educational process with a distribution level of access, available personal offices to provide flexible personalized access and building their own development trajectory.

The result of the digital transformation of the university in the created educational ecosystem will be modernized system of e-learning, high quality e-learning courses providing teaching of all disciplines in educational and professional and educational-scientific programs; plagiarism check of electronic content created using modern digital technologies; structured databases of video lectures, video seminars, webinars; transparency and openness of educational activities; a platform of open online courses for lifelong learning; access to the international network eduroam; improvement of the University's performance in Scopus ranking; digital competence level of teachers not lower than "Expert (B2)" according to the adopted Corporate Digital Competence Standard; adaptive professional development system with choice of own growth trajectory; instant visualized analytical system with display of real picture on specific types of activities. That is, the digital transformation will concern all areas of the university's activities – the organisation of the educational process, research activities, management and marketing processes, infrastructure development and a safe digital space (Figure 1.9).

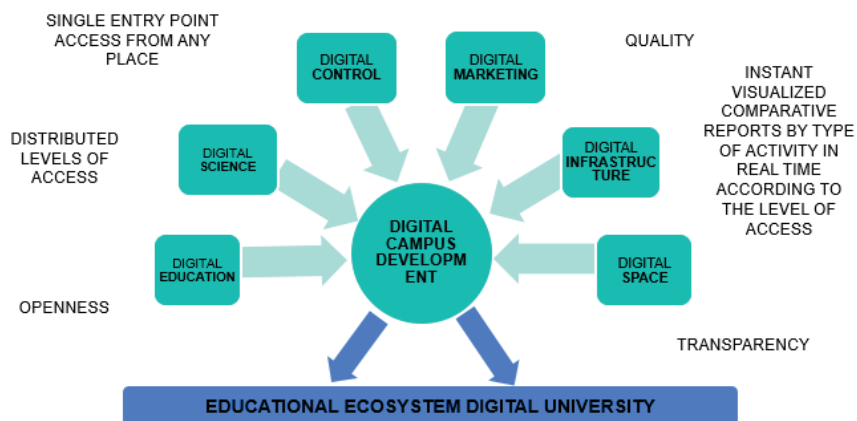


Figure 1.9. Digital transformation of Borys Grinchenko Kyiv University

According to the model of digital transformation, the university is at the second stage – the stage of digitalization, that is, the stage of using digital technology and information to transform individual institutional solutions into a unified educational ecosystem. An analysis of international best practices and solutions found that the needs of the university are best met by Classter’s (2020) solution (Figure 1.10), which is fully integrated with existing fragmented solutions, provides the creation of new in-demand, including management solutions and allows them all to integrate into a single whole ecosystem (Buinytska et al, 2020).

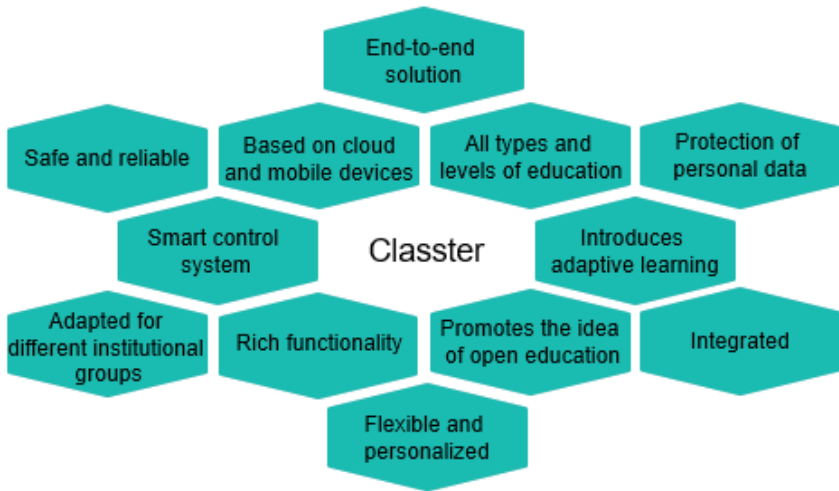


Figure 1.10. Benefits of Classter’s solution

Implementing the 3rd stage of digital transformation at the university is probably the most difficult task. After all, it needs a joint effort from everyone - employees, administration, students. It is necessary not only to make technical adjustments but to completely change the approach to learning and teaching. Organizing online learning, using e-learning courses does not mean that the educational process takes place in a

digital university. Traditional approaches to learning should be changed, supplemented by new methods – from live lecturers, including those invited from other countries to the use of virtual reality technologies, taking into account the psychological characteristics of generations. And this requires constant self-development and mastery of new digital technologies by teachers. At the same time, preference should be given to students' academic performance, direct involvement in the learning process, increasing their practical experience using digital technologies and incentive to learn through personalized digital services, which will contribute to a positive image of the university and increase the number of the contingent.

In general, we consider the main obstacles to the digital transformation of universities to be:

- insufficient inter-institutional planning and coordination,
- lack of understanding of the potential benefits of transformation,
- lack of motivation to use new technologies,
- reluctance to rethink the model and content of classes, to master innovative teaching methods,
- lack of understanding of the need to collaborate with “new” students, taking into account the peculiarities of their generation,
- difficulty in simultaneously developing existing tools and techniques and introducing new ones,
- the overall cost and availability of transformation,
- the aging IT infrastructure and lack of experience in working with digital companies,
- lack of trust in digital technologies, concerns about their reliability, sustainability, security, including data privacy protection.

Therefore, for a successful digital transformation, IT departments, human resources, departments responsible for

the educational process, scientific activities, and managers at all levels must work together. IT departments need to monitor and consult on technological innovations at the university, improve the way administrative departments use digital technologies, develop programs and training to develop faculty digital competence, provide access to digital systems and resources to master new technologies, optimize the use of cloud solutions, and ensure the speed and availability of systems.

Human Resources and employee development departments need to work to develop a comprehensive program of professional development and employee training for new digital technologies. Managers at various levels need to justify the need for digital transformation, promote innovative training methods, and implement motivational activities.

Departments involved in the educational process should stimulate changes in the content of classes, offer a variety of models of classes to implement practice-oriented and personalized learning with maximum use of digital technology and taking into account the perception of educational materials by different generations of students, improve the regulatory documents governing the work of teachers, their coordination of load by type of activity in the conditions of digital transformation.

Scientific departments need to comprehend and provide the search for the optimal combination of scientific, teaching and student activities using digital tools and services, to recommend the use of modern systems for the implementation of research. Only prompt decision-making and the flexibility of managers at all levels will facilitate the introduction of new research opportunities, the use of modern, effective teaching methods, improved learning outcomes, and a better image of the universities. Adhering to and following current trends will help to remove obstacles to transformation and make the university digital, distinctive, attractive and competitive.

Thus, today, university digitalization is a key factor in improving the quality system of higher education, as it affects the efficiency of educational, scientific, and managerial processes and ensures the appropriate level of educational services. Digital technologies in the university are not just a tool, but an environment that opens up new opportunities: digitalization provides a number of direct and indirect benefits, in particular optimal use of time for more effective formation of general and professional competencies in higher education students, continuing education, the ability to design a personal learning and development trajectory.

This study confirmed the relevance of the transformation of the classical university into a digital one, and the creation of a unified digital educational ecosystem with a modified model of the educational process to organize personalized learning will ensure the quality of higher education.

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II. SOCIO-ECONOMIC ASPECTS OF QUALITY OF EDUCATION AT UNIVERSITY

2.1. Legislative innovations in ensuring the higher education quality in Ukraine: effective changes or the illusion of reforms?

The problem of ensuring the education quality in general and the higher education quality in particular is one of the key problems in the world educational discourse for a long time. Attention to this issue is determined by the strengthening of global challenges facing the world economy at the present stage, deepening interaction between the market of educational services and the labour market, increasing threats and challenges facing the national economy in recent years, and most of all – the development of “Industry 4.0”, the use of new generation technologies, exacerbation of demographic and social problems, etc.

The issue of ensuring the education quality is not new in social and scientific discourse. As far back as the 1960s, the education quality became widely discussed due to the awareness of the crisis in the education branch. Harvey and Green (1993, p. 9–34) British researchers, well-known experts in the field of higher education were among the first who raised the issue of determining the quality of higher education and its conceptual content. According to the scientists, the content of the quality category can be considered as: 1) *the characteristic of uniqueness* (Quality as exceptional): exceeding the established standards; exclusivity or uniqueness; identity or something that does not require standardization; 2) *characteristic of perfection or consistency* (Quality as perfection or consistency): the absence of any defects; perfection and exclusivity; no need to repeat in order to improve (get the desired (expected or programmed)

result from the first time; 3) *characteristic of the ability to provide the result* (Quality as fitness for purpose): quality as a result of achieving the goal or the goal itself; quality as characteristic of the efficiency level of from a final consumer point of view; 4) *characteristic the parity of expenses and the received result* (Quality as value for money): quality as an indicator of efficiency levels and expediency; 5) *characteristic of certain changes* (Quality as transformation): quality as a result of changes and implementation of existing rights and opportunities.

Basing on the analysis of differential among themselves concepts of "quality", Harvey and Green (1993) identified its separate interrelated categories: *exclusivity, impeccability, expediency, ability to transform, the optimal value for money*. This means that different conceptual approaches are possible when developing quality assessment criteria, reflecting the subjective attitude of stakeholders.

Harvey and Green (1993) also pointed out that at certain historical stages the issue of the education quality was not as relevant as it is today. It was based on public confidence in the existing educational institutions and was taken for granted. They identified the factors influencing the education quality, namely – "requirements of the partners interested in the activities of higher education institutions: the state, employers, students, research and teaching staff; the quality of the academic field to be assessed; historical period in the development of higher education" (p. 10).

It should be noted that in defining the concept "education quality" there is no unanimity. Thus, the International Organization for Standardization ISO defines the concept "education quality" as a set of the educational process properties that give it the ability to meet the educational needs of consumers (both direct: students and indirect employers, society, state, etc.) (Quality management systems ISO 9000:2005 (basics and vocabulary),

2005). For a long time, the most experts represented a wide range of “quality of education” definitions, based on the standard DSTU ISO 9000: 2007 (DSTU ISO 9000: 2007: Quality management systems (Basic provisions and glossary), 2008). However, this standard makes it impossible to answer the key question: whose requirements must be met? The answer is important taken into account that in the field of higher education there are many interest groups that have significantly different requirements for learning outcomes. We follow the Batechko’s (2017) opinion that the education quality is “a complex system that combines the organizational structure, methods, processes and resources necessary for the functioning of the education system with the purpose of its compliance with social norms and state educational standards” (p. 5).

Thus, the components of the higher education quality should be considered: quality of the teaching process and scientific and pedagogical staff; quality of the education management mechanism; quality of educational programs and student training; quality of scientific research; quality of material-technical and information support, etc.

In Ukraine, attention to the problem of ensuring the higher education quality at the state level has been focused since the early 1990s. The issue of education quality was raised in conceptual state documents: State National Program “Education” (Ukraine XXI century) (1993), National Doctrine of Education Development (2002), National Strategy for Education in Ukraine until 2021 (2013), Strategy for Higher Education in Ukraine for 2021–2031 (2020), as well as certain Orders of the Cabinet of Ministers of Ukraine, the Ministry of Education and Science of Ukraine, Decrees of the President of Ukraine and other regulations. In particular, the task of developing legislation in the field of education as outlined by the National Doctrine of Education Development (2002), which defined the system of

conceptual ideas and views on the strategy and main directions of education development until 2025 (National Doctrine of Education Development, 2002).

However, in spite of the consistent state declarations of attention to higher education in doctrinal and strategic documents, its quality didn't happen to become the national priority during the period of independence. And a comprehensive system of quality assurance in higher education, unfortunately, before the adoption of a new version of the Law of Ukraine "On Higher Education" in 2014 was not created. The existing systems of licensing and accreditation, an inspection of higher education institutions from the outside and rector's control within the institutions, both independently and as a whole, were not able to provide a systematic impact on all processes of organizing educational activities and its content. They were only a temporary and ineffective substitute for the quality assurance system of higher education and did not affect its improvement.

Until recently, the system of licensing and accreditation served as one of the main tools of public administration in the field of education, but it did not stimulate the improvement of the higher education quality. As well as the state inspection of educational institutions, which was aimed at identifying deviations from the purely formal and often contradictory requirements for the activities of educational institutions without taking into account the real context of their activities. The most common form of internal university assessment of education quality was the Rector control, the purpose of which was a short-term mobilization of internal academic community resources and preparation for external control. In essence, it was a kind of surrogate model of quality assurance in higher education, the signs of which were: the creation of new generations of educational standards (which means maintaining the old principles of assessing the education quality); mandatory

requirement to comply with standards; regulation of the education content; predominant focus on formal indicators.

The functions of external criteria for ensuring the education quality were formally fulfilled by the standards of higher education, licensing conditions for the provision of educational services in higher education, Requirements for accreditation of specialities at the relevant educational and qualification levels, certain requirements of other regulations. However, these documents did not meet the European quality standards for higher education, which aimed to create a common system of values, expectations and best practices on quality and its provision by various institutions and agencies throughout the European Higher Education Area.

In Ukraine (as in most post-Soviet countries) the priority was the state interests, which dominated the public, which led to the predominance of state authorities in the system of higher education quality inspection and evaluation. The predominance the management establishment of public and corporate interests is not always being correlated with the real needs of other stakeholders.

Prior to the adoption of the Law "On Higher Education" in 2014, the doctrinal and strategic documents developed in Ukraine in the field of higher education could not be compared with similar documents of both national and international scale. They were not focused on verifying their implementation; there was no practice of monitoring the implementation of plans, programs, doctrines and strategies, as well as summarizing the intermediate and final results. Generations of such documents changed too often, and no succession was observed between them.

The analysis of compliance the Ukrainian practice components of education quality assurance (till 2014) with the European Standards and recommendations was carried out

by Finikov and Sharov (2015, p. 53) who consider that existing contradictions were determined by the long absence of consistent state policy in the field of education quality through its declaring was carried out constantly. Therefore, the relevant aspirations of individual universities could not be realized.

In the process of reforming the education sector of Ukraine, a number of measures were taken to improve the regulatory framework in the field of education and education quality assurance, including the adoption of the Law of Ukraine "On Higher Education", the Law of Ukraine "On Education". However, the issue of further formation and improvement of quality assurance legal regulation in Ukraine in accordance with European standards, which is one of the priorities of both higher authorities in the field of education and higher education institutions in view of the existing problems, has not lost its relevance and challenges.

Thus, the Strategy for the Development of Higher Education for 2021–2031 indicates a number of existing problems in the higher education system of Ukraine that affect its quality: inconsistency of content and quality of higher education with current needs of society and national economy, inconsistency of training structure with current and future needs labour market; inconsistency of HEI graduates' skills with the needs of employers; low intensity of interaction with science and business; lack of funding and unsatisfactory financial support for higher education; insufficient level of autonomy, inefficient management of higher education; deterioration of staffing of higher education institutions (hereinafter – HEI); distortions in the formation of HEI students contingent; weak integration of higher education in Ukraine into the world and European educational and scientific area (Strategy for the development of higher education for 2021–2031, 2020).

The Law of Ukraine "On Education" (2017) provides for a

number of positive innovations, including the improvement the concept of education quality (paragraph 29 of Article 1) with amendments to the Law of Ukraine “On Higher Education” and adjustment in it the concept of higher education quality (Article 1, part 1, item 23). Thus, the Law of Ukraine “On Education” defines the quality of education as compliance of learning outcomes with the requirements established by law, the relevant standard of education and/or the contract for the provision of educational services. The quality of educational activities means the level of organization, provision and implementation of the educational process that ensures the acquisition of quality education and meets the requirements established by law and/or the agreement on the provision of educational services.

The concretization of whose and what requirements must be met in the implementation of the educational process is contained in Article 1, Part 1, Clause 23 of the Law of Ukraine “On Higher Education” (2014) which states that the quality of higher education is compliance with the conditions of educational activities and learning outcomes to the requirements of legislation and standards of higher education, professional and/or international standards (if any), as well as the needs of stakeholders and society, which is provided through the implementation of internal and external quality assurance procedures.

The Law of Ukraine “On Higher Education” (2014) *for the first time in the Ukrainian higher education practice regulated the national quality assurance system* that meets the Standards and Recommendations on Quality Assurance in the EHEA. The law created conditions for the introduction of a fundamentally new model of measurable, comparable, credible and competitive quality of higher education based on a competency approach and a culture of continuous improvement of higher education on the basis of independence, objectivity and transparency,

trust and subsidiary, partnership and collegial responsibility. Conceptually new tools and concepts were introduced into the practical activities of higher education. The tools include the National Qualifications Framework, the European Credit Transfer and Accumulation System, the classification of levels, fields of knowledge and specialties of higher education, standards of educational activities and standards of higher education, licensing (educational activities) and accreditation (educational programs), internal and external quality assurance and quality assurance systems of the National Agency for Higher Education Quality Assurance and independent institutions for evaluation and quality assurance of higher education. The new concepts in the educational environment have become “educational programs”, “degrees” (as qualifications), “competencies”, “learning outcomes”, “credits” (Lugovyi & Talanova, 2015, p. 38).

In particular, the new Law of Ukraine “On Higher Education” (2014) the main purpose of higher education is to prepare competitive human capital for high-tech and innovative development of the country, self-realization of the individual, meeting the needs of society, labour market and the state in qualified professionals. Since its adoption in 2014 and until now, the Law has withstood 39 versions, which, on the one hand, indicates a constant process of improvement, and on the other – creates risks of instability of legislation in the field of higher education.

The normative and legal basis for the preparation of modern documents governing the quality of higher education were: the Constitution of Ukraine, the Laws of Ukraine “On Higher Education”, “On Education”, “On Scientific and Scientific-Technical Activities”, the Decree of the President of Ukraine, Decree of the President of Ukraine “On the goals of sustainable development of Ukraine until 2030” (September 30, 2019, №722/2019) and

other normative legal acts, international treaties of Ukraine concluded in accordance with the procedure established by law.

Recently, a number of important government decrees have been adopted that harmonize Ukrainian educational legislation with European standards. Thus, certain changes were made to the National Qualifications Framework approved by the Resolution of the Cabinet of Ministers of Ukraine of November 23, 2011 № 1341. The Resolution of the Cabinet of Ministers of Ukraine "On Amendments to the Addendum to the Resolution of the Cabinet of Ministers of Ukraine of November 23, 2011, № 1341" of June 25, 2020, № 519 entered into force.

The new version of this annexe states that the National Qualifications Framework is designed for use by public authorities and local governments, institutions and organizations, educational institutions, employers and other legal entities and individuals. In addition, the "Description of Qualification Level" is set out in a new edition.

After the adoption of the Law of Ukraine "On Higher Education", amendments were made to the Regulations on Accreditation of Higher Education Institutions and Specialties in Higher Education Institutions and Higher Vocational Schools, approved by the Resolution of the Cabinet of Ministers of Ukraine of August 9, 2001, № 978, License Terms educational activities approved by the resolution of the Cabinet of Ministers of December 30, 2015, № 1187. In 2019, the order of the Ministry of Education and Science of July 1, 2019, № 977 approved a new Regulation on the accreditation of educational programs, which provide training the higher education applicants.

The new List of knowledge branches and specialties in which higher education students are trained was approved by the Resolution of the Cabinet of Ministers of Ukraine of April 29, 2015, № 266. This list of specialties in the process of educational

activity is updated and is in a state of improvement (anticipation of new specialities, change of specialities, knowledge branches). The public discussion highlighted the imperfection of this document and the need to finalize it taking into account the made proposals.

In January 2016, a new Procedure for approval of decisions on awarding academic titles in accordance with the Resolution of the Cabinet of Ministers of Ukraine of August 19, 2015, № 656 came into force. This normative act determines the mechanism of approval by the Ministry of Education and Science attestation board the decisions on awarding academic titles of professor, associate professor and senior researcher by academic councils of higher education institutions or academic councils of scientific institutions.

The Resolution of the Cabinet of Ministers of Ukraine of May 31, 2017, № 373 it was approved the Procedure for development and approval of professional standards, for which there were prepared Guidelines for the development of standards of higher education, approved by the order of the Ministry of Education and Science of Ukraine of June 1, 2017, № 600 (currently in force in the wording of the Order of the Ministry of Education and Science of Ukraine dated December 21, 2017 № 1648).

The indisputable innovation was the adoption of the professional standard of a higher education teacher, approved by the order of the Ministry of Development, Economy, Trade and Agriculture of Ukraine № 610 from 23.03.2021 "On approval of the professional standard for the group of professions "Teachers of higher education". However, the discussions on this document do not subside in the educational community.

The international context of higher education legislation is determined first, by the basic principles of the Bologna Process, enshrined in the Grand Charter of Universities and the terms of the Association Agreement between Ukraine and

the European Union. In particular, at the Bologna Summit in 2005 in Bergen there were adopted Standards and Guidelines for Quality Assurance in the European Higher Education Area (ESG). This document contains standards and recommendations for institutions and agencies for quality assurance in higher education, which enables the formation of a quality assurance system at the European and national levels.

An updated version of the ESG was approved at the Ministerial Conference held in Yerevan on May 15, 2015. It is more understandable, correlates with teaching and learning processes in the context of internal quality assurance, and is consistent with other instruments of the Bologna Process, including with qualifications frameworks and learning outcomes (Standards and Guidelines for Quality Assurance in the European Higher Education Area, 2015). An important document is the Paris Communiqué of 2018 EHEA (Paris Communiqué, 2018).

In accordance with the principles enshrined in ESG and DSTU ISO 9001: 2015 “Quality Management Systems”, as well as in accordance with Part 1. Art. 16 of the Law of Ukraine “On Higher Education” (2014), the components of the quality assurance system of higher education are 1) systems of providing higher education institutions with the quality of educational activities and the quality of higher education (*internal quality assurance system*); 2) *systems of external* quality assurance of educational activities of higher education institutions and quality of higher education; 3) quality assurance systems of *the National Agency for Quality Assurance in Higher Education and independent institutions for evaluation and quality assurance of higher education*. The Law of Ukraine “On Education” (Part 2, Article 41) did not make any adjustments to the components of education quality assurance systems, as the Law of Ukraine “On Higher Education” clearly and fully formulated these components.

The Law of Ukraine “On Higher Education” states that one of

the components for ensuring the quality of higher education is university autonomy, which is an indisputable innovation in the field of education. However, in practice, the declared autonomy faces a powerful state bureaucratic machine and ultimately remains in a “truncated” version.

Procedures and measures of *the system of internal higher education quality* assurance (system of providing by higher education institutions the quality of educational activities and the quality of higher education) are defined in Art.16 of the Law of Ukraine “On Higher Education”. It should be noted that despite the fact that the Law of Ukraine “On Higher Education” defines the requirement for internal quality assurance system in HEI and lists the main procedures and measures used by HEI in its activities for internal quality assurance, this normative act does not define an exhaustive list of procedures and measures for the implementation of the internal quality assurance system, which provides Higher Education institutions independently determine additional procedures and measures, taking into account the legally established university autonomy.

Significant attention is now paid to anti-plagiarism norms and responsibility for them (for example, mandatory publication of scientific papers). Thus, in accordance with Part 2, Art. 16 p. 8 of the Ukraine Law “On Higher Education”, the internal quality assurance system provides, in particular, ensures the effective system for preventing and detecting academic plagiarism in HEI employees’ scientific works and applicants for higher education.

The involvement of Ukrainian universities in European Higher Education Area also determines the transparency and formalization of the process of quality assurance in higher education, which involves the creation of an appropriate structural unit. In fact, the new Law “On Higher Education” makes it mandatory for higher education institutions to build the local quality management systems. In the vast majority

of national higher education institutions, such structural units have been established. University autonomy allows for independent determination of the functions and tasks of these units. However, the analysis of local regulations presented on universities official websites shows different approaches to understanding the tasks and functional responsibilities of these departments' employees. The lack of tried and tested effective mechanisms and tools for quality assurance in national practice makes it impossible for these institutions to be highly effective. The opposition to negative phenomena (plagiarism, bribery, performance of qualification works to order, conspiracies of teachers with undemanding graduates) are being complicated by objective as well as the subjective factors. The reason for this is the lack of zero tolerance in society for violating the principles of academic integrity. And without this it is impossible to ensure high quality of higher education.

In accordance with Part 6 of Article 10 of the Law of Ukraine "On Higher Education" (2014) standards of higher education for each specialty are developed by the central executive body in the field of education and science, taking into account the proposals of sectoral government agencies, which include higher education institutions and industry associations, employers' organizations and approves them in consultation with the National Agency for Higher Education Quality Assurance.

In addition, the Ministry of Education and Science of Ukraine in according to Part 6, Art. 13 of this Law forms the Scientific and Methodological Council, which with the participation of the National Agency for Higher Education Quality Assurance develops methodology, guidelines for the development of educational standards and standards of higher education, as well as scientific and methodological commissions that develop educational standards and higher education standards (the Law of Ukraine "On Higher Education", 2014).

In pursuance of the provision of this Law, the Ministry of Education and Science of Ukraine has developed and approved Guidelines for the development of standards of higher education (the order of the Ukraine Ministry of Education and Science from 01.06.2016 № 600 (as amended by the order of the Ukraine Ministry of Education and Science from 21 December 2017 № 1648). We consider it is appropriate to draw attention in the Guidelines to the importance of taking into account the requests (needs) of external customers: employers, professional associations, graduates, etc. for educational and/or vocational training of students and the formation of competencies that maximize employability.

As of November 1, 2021, it has been already approved 2021, 197 standards of higher education (107 standards of bachelor's degree, 92 – master's degree) based on a competency approach and on professional requirements set by the Bologna Process documents of the European and the European Commission's International Project "Harmonization of Educational Structures in Europe".

We believe that the assessment of education quality is possible only in the presence of quality standards. For a long time in Ukraine for many areas and specialties, there were no standards at all. And the existing standards partly did not meet the requirements of either students or employers. For example, in some areas and rapidly evolving specialties (Computer Science, Software Engineering, Computer Engineering, Information Systems and Technologies, Radio Information Technology, and Digital Marketing), the duration of the updating educational standards cycle is longer than the life cycle of labour market requirements for employees' competencies.

In our view, the establishment by the state of standards that assess the professional competence of graduates should be accompanied by the obligation of the state to employ HEI

graduates in accordance with their professional competence and in accordance with these standards. The logical question: is the Ukrainian state ready to make such commitments today? And is it possible (appropriate) in market economy at all? The probable answer (no) makes it impossible to justify the restrictions imposed by the state on the choice of higher education content by the students.

It should be noted that the Law of Ukraine "On Higher Education" (2014) (Part 3 of Article 41) expands the list of procedures and measures taken to ensure the quality of educational activities and higher education quality (internal quality assurance system) compared to the list provided by the Law of Ukraine "On Higher Education" (Part 2 of Article 16). Thus, the Law of Ukraine "On Education" (2017) additionally defines the following procedures and measures: 1) the criteria, rules and procedures for evaluating the pedagogical (scientific and pedagogical) activities of pedagogical and scientific and pedagogical workers; 2) the criteria, rules and procedures for evaluating the management activities of managers of educational institutions are published.

According to the plan, this should provide additional measures for monitoring management activities at all levels, including heads of departments and research of gains and unused reserves in the management system. On the one hand, it highlights the need for the Ministry of Education and Science of Ukraine to provide methodological assistance to higher education institutions in the formation of such criteria, rules and procedures for evaluating management activities, as well as approval and promulgation of these procedures by higher education institutions. On the other hand, the probability of providing truthful, objective information indicating problems and unused reserves in the management system of higher education institutions seems to us unlikely.

Article 16 of the Law of Ukraine "On Higher Education" also defines the components and procedures *the external system of higher education institutions activities on educational quality assurance, the quality of higher education* and the functions of the National Agency for Quality Assurance in Higher Education and independent institutions. Note that the policy of quality assurance of education in Ukraine, taking into account European standards, is enshrined in the Law of Ukraine "On Education" and provides for active participation of students, businesses, national and public organizations in its formation and procedures.

The Law of Ukraine "On Education" (2017) stipulates that licensing of educational activities and accreditation of educational programs should become one of the main tools, procedures and measures to ensure and improve the quality of education in accordance with European standards and international experience in higher education and ensure the quality of higher education. However, the European integration provisions of the Law "On Education" and the Ukrainian realities of passing these procedures testify to certain conflicts due to both objective and subjective reasons.

Based on the standards of the EHEA, the Law of Ukraine "On Higher Education", other regulations governing the quality of higher education, as well as taking into account changes in the Law of Ukraine "On Education" and using the conceptual and categorical apparatus, we analyze regulations for each standard.

Exploring the legislative innovations in the field of university education to ensure the quality of higher education in the period from 2014 up to the present, given the impossibility of covering the entire list of regulations within one section, we will focus on the main legal documents that directly relate to quality assurance in higher education (the Laws of Ukraine "On Higher

Education", "On Education"), and only we will briefly touch on those that have an indirect effect, but to some extent determine the processes or procedures.

In accordance with the requirements of each the EHEA standards, the analysis of the external regulatory framework mandatory required for the implementation of the HEI and local regulations is proposed, which may have different variants of names in each Ukrainian university, as this issue is within the autonomy of HEIs.

According to ESG 2015, Part I "Standards and Recommendations for Internal Quality Assurance", p. 1.1. "Quality Assurance Policy" at the national level, in addition to conceptual, strategic documents that defined the directions of reforms (Strategy for reforming higher education in Ukraine until 2020, Strategy for the development of higher education for 2021-2031) and the Laws of Ukraine "On Higher Education", "On Education", "On Licensing of Economic Activities" a number of government decisions were adopted: Resolution of the Cabinet of Ministers of December 30, 2015 № 1187 "On approval of licensing conditions for educational activities of educational institutions"; resolution of the Cabinet of Ministers of December 23, 2015 № 1117 "On approval of the form of the educational program accreditation certificate, the procedure for registration, re-registration, issuance, storage and accounting of such certificates"; Resolution of the Cabinet of Ministers of August 19, 2015 № 634 "On approval of the Standard agreement on the provision of educational services between a higher education institution and an individual (legal entity)" and others.

A number of normative documents were adopted by the Ministry of Education and Science of Ukraine: Order of the Ministry of Education and Science of 06.11.2015 № 1151 "On the peculiarities of introducing the list of branches of knowledge

and specialties for which training of higher education applicants is carried out, approved by the Cabinet of Ministers of 20.04.2015 № 266"; Order of the Ministry of Education and Science of Ukraine of 24.10.2017 № 1 / 9-565 "On ensuring academic virtue in higher education institutions"; Order of the Ministry of Education and Science of Ukraine of 25.10.2018 № 1150 "On approval of Methodological recommendations for registration of the higher education institutions statutes which belong to the sphere of the Ukraine Ministry of Education and Science management"; Order of the Ministry of Education and Science of 11.07.2019 № 977 "On approval of the Regulations on educational programs accreditation for which the training of higher education applicants is carried out", Order of the Ministry of Education and Science of 16.01.2020 № 54 "On approval of the Procedure for monitoring the education quality"; Order of the Ministry of Education and Science of 26.12.2019 № 1634 "On some issues of certification in 2020" and others. The recommendations of the National Agency for Quality Assurance in Higher Education (CEENQA) regarding the introduction of an internal quality assurance system are a significant help for universities.

In accordance with the published national regulations, the universities have prepared a number of local regulations in accordance with ESG 2015, the names of which may vary: a strategy for HEI development; action plan (road map) to ensure the quality of educational activities and higher education for the relevant academic years; provision on the internal system of ensuring the quality of educational activities and the higher education in HEI; regulations on the structural unit for ensuring the quality of education in HEI; provisions on the educational process organization; provisions on the development of educational programs (guarantor, project team); provisions

on elective courses; provisions on ensuring academic virtue in higher education institutions; the procedure for monitoring the higher education quality.

According to item 1.2 "Development and approval of programs" ESG 2015 in Ukraine at the governmental level a resolution of the Cabinet of Ministers of 29.04.2015 № 266 "On approval of the list of areas of knowledge and specialties in which the training of higher education applicants is carried" was adopted.

In pursuance of the Order of the Ministry of Education and Science of Ukraine dated 16.09.2014 № 1048 "Approval of the Action Plan of the Ministry of Education and Science on implementation of the Law of Ukraine "On Higher Education" (2014) a number of regulations were prepared: Order of the Ministry of Education and Science of Ukraine dated 01.06.2016 № 600 "On introduction and commissioning of Methodical recommendations on the development of standards of higher education" (as amended by the order of the Ministry of Education and Science of Ukraine of 21.12.2017 № 1648); letter of the Ministry of Education and Science of Ukraine of 28.04.2017 № 1/9-239 "Exemplary sample of the educational and professional program for the first (bachelor's) and second (master's) levels"; order of the Ministry of Education and Science of Ukraine of 24.10.2017 № 1/9-565 "On providing academic virtue in higher education institutions"; Order of the Ministry of Education and Science of 16.02.2018 № 160 "On approval the forms of documents for the training of specialists in higher education institutions"; Order of the Ministry of Education and Science of 11.07.2019 № 977 "On approval of the Regulations on the educational programs accreditation, which are used to train the applicants for higher education".

A number of documents prepared by the CEENQA were of a

recommendatory nature: Recommendations on the application of criteria for assessing the educational program quality (approved on November 17, 2020); Procedure for approval of draft higher education standards by the National Agency for Quality Assurance in Higher Education; Recommendations for the application of the Criteria for evaluating the quality of the educational program; Letter on providing educational programs with exemplary accreditation; Recommendations for higher education institutions on the development and implementation of a university system to ensure academic virtue.

In the universities of Ukraine during 2015–2021, local regulations were developed and updated in accordance with changes in legislation, in accordance with the requirements of paragraph 1.2 of Part 1 of the ESG 2015. Almost all HEIs of Ukraine have Regulations on the procedure for development, implementation, monitoring and periodic review of educational programs of HEIs; Regulations on guarantors and project groups of educational programs; the decision of the Academic Council (or the order of the rector) of HEIs on the approval of a model agreement on cooperation with employers; Procedure (regulations) on the creation of specializations in higher education; The Procedure of development and implementation of their own educational and innovative activity programs and other local normative documents.

In accordance with the requirements of paragraph 1.3 “Student-centered teaching, learning and assessment” of the ESG 2015 in Ukraine there were adopted a number of government regulations on scholarships, soft loans for higher education, social protection of higher education, and academic mobility. The novelty was the promulgation of the Ministry of Education and Science of Ukraine order of 24.10.2017 № 1/9-565 “On ensuring academic virtue in higher education institutions”.

The document on the academic movement of higher education applicants, regulated by the order of the Ministry of Education and Science of Ukraine № 54 of 18.01.2018 “On approval of the Regulations on the procedure for expulsion, interruption, renewal and transfer of students in higher education, as well as granting them academic leave” has undergone significant changes.

All state legislative innovations are reflected in local regulations: Regulations on the organization of the educational process in HEIs; Regulations on the procedure for assessing the knowledge (success) of students; Regulations on the procedure for preparation and defence of master’s (bachelor’s qualification) works; Regulations on the organization of student practice; Regulations on monitoring the quality of education in HEIs; Regulations on selective testing of students’ residual knowledge level; Regulations on the procedure for submitting and reviewing students’ complaints, Regulations on ensuring academic virtue by research and teaching staff and of higher education seekers; Regulations on the scientific society of students, graduate students, doctoral students and young scientists; Regulations on student self-government; Regulations on the student ombudsman; The procedure for ensuring the students free choice of academic disciplines; Regulations on the students transfer to vacant places of the state order; Regulations on awarding employees, doctoral students, graduate students for scientific achievements; Regulations on academic mobility of participants in the educational process and other local regulations.

Students’ enrollment, training, recognition of qualifications and certification, specified in paragraph 1.4 Parts I of the ESG 2015, are regulated at the national level by a number of resolutions of the Ukraine Cabinet Ministers (in particular, the resolution of 31.03.2015 № 193 “On documents on higher education (scientific degrees) of the state standard”) and orders of the Ministry of

Education and Science of Ukraine: the order of 16.02.2018 “On approval of documents forms for specialists training in higher education institutions”; Order from 18.05.2018 № 502 “On approval of Amendments to the Procedure of certification for recognition of qualifications, learning outcomes and periods of study in higher education, obtained in the temporarily occupied territory of Ukraine after February 20, 2014”; order of 19.05.2016 № 537 “On approval of the Procedure of certification for recognition of qualifications, learning outcomes and periods of study in higher education, obtained in the temporarily occupied territory of Ukraine after February 20, 2014”; by the order of the Ministry of Education and Science of Ukraine of 05.05.2015 № 504 “Some issues of recognition of foreign documents on education in Ukraine”.

In the universities of Ukraine, in accordance with European standards and external regulations, this requirement is regulated by local regulations: Rules of admission to a higher education institution for the relevant year; Regulations on the recognition of previous training results; Regulations on the procedure for expulsion, interruption of studies, renewal and transfer of persons studying at higher educational institutions, as well as granting them academic leave; Regulations on academic mobility of higher education seekers; Regulations on the examination commission of HEIs; procedure of order and preparation on higher education documents; Regulations on the evaluation of higher education seekers; Procedure for recognition of higher education degrees obtained in foreign higher education institutions; Agreements on joint educational programs with other free educational institutions (including foreign ones), Decisions of the Academic Council on approval of the joint diploma form and other local regulations.

Standards for teaching staff are specified in paragraph 1.5 Parts I of the ESG 2015. Staffing requirements for higher

education seekers training in Ukraine are specified in the Licensing Conditions for Educational Institutions Educational Activities, approved by the resolution of the Cabinet of Ministers of Ukraine of 30.12.2015 № 1187.

The procedures for filling vacancies, awarding academic titles, advanced training and professional requirements for university teachers are regulated by the relevant government decrees and orders of the Ministry of Education and Science of Ukraine: order of 05.10.2015 № 1005 "On approval of the Recommendations for competitive selection when filling vacancies of research and teaching staff and concluding employment agreements (contracts) with them"; order of 14.01.2016 № 13 "On approval of the Procedure for awarding academic titles to scientific and scientific-pedagogical workers"; Order of 03.09.2019 № 1220 "On publication of the dissertations results for the degree of doctor and candidate of sciences"; Resolution of the Cabinet of Ministers № 800 of 21.08.2019 "Some issues of professional development of pedagogical and scientific-pedagogical staff (as amended according to the Resolution of the Cabinet of Ministers of Ukraine № 1133 of December 27, 2019)"; Order of the Ministry of Education and Science of Ukraine of 15.01.2018 № 36 "On approval of the Standard educational program for organizing and conducting the teachers' training by institutions of postgraduate pedagogical education"; Order of the Ministry of Education and Science of 11.07.2019 № 77 "On approval of the Regulations on educational programs accreditation, which provide higher education applicants training".

Internal regulations governing the requirements for the teaching staff of HEI are presented in universities by the following documents: The procedure for competitive selection to fill vacant positions of research and teaching staff in HEI; The procedure for assigning by HEI scientific titles to scientific and scientific-pedagogical employee, as well as the procedure

for depriving scientific titles; Regulations on the procedure for periodic evaluation (rating) of scientific and pedagogical employees professional activity; Regulations on the types of pedagogical and scientific-pedagogical employees educational activity in accordance with their positions; Regulations on academic mobility of scientific and pedagogical employees of HEIs; Regulations on ensuring academic virtue by academic staff, HEIs and higher education applicants; Regulations on professional development of pedagogical, scientific and scientific-pedagogical employees; Regulations on the recognition of foreign documents on higher education, scientific degrees and academic titles during hiring the pedagogical, scientific, scientific-pedagogical and other employees; Regulations on awarding employees, doctoral students, graduate students for scientific achievements and other local regulations.

Educational resources and students support (in accordance with paragraph 1.6. Part I of the ESG 2015) are to some extent reflected in already mentioned regulations at the national level. Universities have developed local documents such as Regulations on educational and methodological support of the educational process; Regulations on HEI library; Regulations on students' practice organization; Regulations on curators of academic groups (tutors); Regulations on the department; Regulations on academic mobility of the; Regulations on the promotion of employment of graduates of HEI; The procedure for awarding social scholarships.

Note that the personality-oriented paradigm of higher education is based on student-centeredness and an individual approach to higher education. The student is now a full-fledged subject of the educational process, not just a third party.

Information Management (p. 1.7), *Public Information* (p. 1.8.), as components of ESG 2015, are regulated at the national level by the Laws of Ukraine "On Information", "On Access to Public

Information”, Resolution of the Cabinet of Ministers of 13.07.2011 № 752 “On establishing of the Unified State Electronic Database of Education” and a number of the Ministry of Education and Science of Ukraine orders, in particular from 19.02.2015 № 166 “Some issues of disclosure of information about higher education institutions activity”; from 14.07.2015 № 758 “On publication of dissertations and responses of official opponents”; from 23.09.2019 № 1220 “On publishing the results of dissertations for the degree of doctor and candidate of sciences”.

HEIs post their own normative documents on the official websites(charter,budget,stafflist,regulationsontheorganization of the educational process, regulations on the Academic Council and its decisions, regulations on the admissions committee, rules of admission to the HEI in the academic year) and other information related to the activities of the university. As a rule, the disclosure of information is regulated in universities by local regulations such as the Regulation (procedure) for the submission of public information on the web resources of HEIs and the media; Regulations on free web resources of HEI; the Procedure for ensuring publicity of information about the educational programs, degrees of higher education and qualifications.

It should be noted that today the official website of any university is not only a source of information, but also an advertising platform, which is a requirement of the time and, since 2014, undoubtedly a novelty for Ukrainian realities.

According to ESG 2015, items 1.9 “*Current monitoring and periodic review of programs*” and 1.10 “*Cyclical external support*” are regulated by the order of the Ministry of Education and Science of 11.07.2019 № 977 “On approval of the Regulations on accreditation of educational programs, which provide training of higher education applicants”. The CEENQA recommendations on the application of the criteria for evaluating the educational program quality (approved on November 17, 2020) are

appropriate and important. Almost all HEIs have developed a number of documents to meet these requirements (for example, the Regulations on monitoring and periodic review of educational programs); decisions of the Academic Council of HEIs on initiating the external evaluation the procedure of higher education quality are adopted; Agreements are concluded between HEIs and an independent agency for quality assurance of higher education on the external evaluation procedure of the educational program quality.

Thus, the comparative analysis of normative documents of the national and local levels of the internal quality assurance system of higher education shows that there is a constant process of normative-legal documentation formation according to the European standards. Although normative documents may have different names and wording in each HEI, their content and focus reflect the basic principles of quality assurance in higher education, according to ESG 2015. These legal documents HEI post on official websites, which is a mandatory requirement and innovation for implementation of educational activities and educational programs accreditation.

In addition to the current regulations, at the stage of public discussion or adoption are: draft standards of higher education in the relevant specialty; Regulations on the dual form of higher and professional pre-higher education; the concept of reforming economic activity in the field of higher education, the bill "On adult education" and others. It is time to develop and approve at the legislative level the procedure for recognizing learning outcomes obtained through non-formal informal education in the formal education system.

The compliance of the national regulatory framework for the *system of higher education external quality assurance* with European standards of quality assurance in higher education is presented in Table 2.1.

Table 2.1

Regulatory and legal support of higher education external quality assurance in Ukraine in accordance with the ESG 2015

ESG 2015 standard	Regulatory support EXTERNAL	Regulatory support INTERNAL
2.1. Accounting the internal quality assurance	<p>1. Standards and recommendations for quality assurance in the European Higher Education Area (ESG 2015);</p> <p>2. National standard of Ukraine "Quality Management Systems. Requirements", DSTU ISO 9001: 2015;</p> <p>3. Law of Ukraine "On Higher Education";</p> <p>4. Resolution of the Cabinet of Ministers of 30.12.2015 № 1187 "On approval of the License conditions for educational activities of educational institutions";</p>	<p>Regulations on the Council for Quality Assurance in Education</p>
2.2. Development of appropriate methodologies	<p>5. Resolution of the Cabinet of Ministers of 27.07.2016 № 567 "Some issues on the activity of the National Agency for Quality Assurance in Higher Education";</p> <p>6. Resolution of the Cabinet of Ministers of 27.07.2016 № 531 "On Amendments to the Statute of the National Agency for Quality Assurance in Higher Education";</p> <p>7. Resolution of the Cabinet of Ministers of December 27, 2018, № 1130 Amendments to the resolution of the Cabinet of Ministers of April 15, 2015, № 244 "On the establishment of the National Agency for Quality Assurance in Higher Education";</p> <p>8. Order of the Cabinet of Ministers of 27.12. 2018 № 1063-r "On approval of the composition of the National Agency for Quality Assurance in Higher Education";</p>	

Continuation of Table 2.1

	<p>9. Order of the Ministry of Education and Science of 11.07.2019 № 977 “On approval of the Regulations on educational programs accreditation, according to which the training of higher education applicants is carried out”;</p> <p>10. Recommendations of CEENQA for HEI on the development of academic virtue systems;</p> <p>11. Recommendations of CEENQA on the application of the Criteria for evaluating the quality of the educational program;</p> <p>12. Letter of CEENQA regarding the provision the exemplary accreditation to educational programs.</p>	
<p>2.3. Implementation of processes</p>	<p>1. Law of Ukraine “On Higher Education”;</p> <p>2. Law of Ukraine “On Education”;</p> <p>3. Law of Ukraine “On licensing of economic activities”;</p> <p>4. Resolution of the Cabinet of Ministers of Ukraine of 30.12.2015 № 1187 “On approval of the License conditions for educational activities of educational institutions”;</p> <p>5. Resolution of the Cabinet of Ministers of 29.04.2015 № 266 (with subsequent changes) on approval of the List of knowledge branches and specialities according which the training of higher education seekers is carried out (the specified normative legal act came into force on September 1, 2015);</p> <p>6. Resolution of the Cabinet of Ministers of Ukraine of April 15, 2015, № 244 “On establishing of the National Agency for Quality Assurance in Higher Education”;</p>	<p>1. Methodical recommendations for the formation of a license case.</p> <p>2. Methodical recommendations for the preparation of a self-assessment report on the educational program.</p>
<p>2.4. Independent (external) experts:</p>	<p>(Continued from previous row)</p>	
<p>2.5. Criteria for conclusions</p>	<p>(Continued from previous row)</p>	<p>1. Reports of self-assessment of HEI on educational programs;</p>

Continuation of Table 2.1

	<p>7. Resolution of the Cabinet of Ministers of 31.01. 2018 № 41-r "On approval of the Competition Commission for the selection of the National Agency for Quality Assurance in Higher Education members";</p> <p>8. Order of the Ministry of Education and Science of 21.06.2016 № 700 "Some issues of the National Agency for quality assurance of higher education activity";</p> <p>9. Order of the Ministry of Education and Science dated 11.07.2019 № 977 "On approval of the Regulations on educational programs accreditation, according to which the training of higher education applicants is carried out".</p> <p>10. Regulations of CEENQA: <i>Draft Regulations</i> on educational programs accreditation according to which the training of higher education applicants is carried out (submitted to the Ministry of Education and Science for approval on June 10, 2021); <i>Provisions</i> on determining the criteria for approval of the List of foreign accreditation agencies or quality assurance agencies of higher education that issue accreditation certificates recognized in Ukraine; <i>Regulations</i> on branch expert councils of the National Agency for Quality Assurance in Higher Education; <i>Regulations</i> on the Advisory Board of the National Agency for Quality Assurance in Higher Education;</p>	<p>2. Expert opinions on the results of the educational program accreditation.</p>
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Continuation of Table 2.1

	<p>11. Recommendations of CEENQA: <i>Recommendations for the introduction of an internal quality assurance system;</i> <i>HEI recommendations on the development of ensuring academic virtue systems;</i> <i>Recommendations of HRI on the development of ensuring academic virtue systems;</i> <i>Recommendations for the application of the Criteria for evaluating the quality of the educational program. (Approved on November 17, 2020).</i></p>	
2.6. Reporting:	<p>1. Law of Ukraine “On Education”; 2. Regulatory documents relating to licensing and accreditation of HEI; 3. Order of the Ministry of Education and Science of Ukraine of 11.07.2019 № 977 “On approval of the Regulations on educational programs accreditation, according to which the training of higher education applicants is carried out”.</p>	<p>1. HEI’s Reports on self-assessment of educational programs; 2. Expert opinions on the results of the educational program accreditation.</p>
2.7. Filing complaints and appeals		

In the field of external quality assurance of higher education, the issue of developing and approving the regulations on conducting an open competition to CEENQA and forming the composition of the agency on a competitive basis was raised. The urgent issues today are 1) development of methodological materials for providing practical assistance to higher education institutions; 2) preparation of normative documents that will determine the conditions and principles of cooperation CEENQA, independent institutions for evaluation and quality assurance

of higher education with European and international structures and networks for quality assurance in higher education; 3) approval of a normative legal act that regulates the formation and periodic updating of higher education standards in the relevant speciality; 4) development and approval of criteria and procedure for self-accreditation of educational programs of HEIs.

Quality assurance standards in the European Higher Education Area (ESG, 2015) set certain requirements for independent quality assurance agencies. Table 2.2 shows the compliance of the national legal framework with these standards.

Table 2.2

Regulatory and legal support of the quality assurance
in higher education in Ukraine in accordance with ESG 2015
regarding the quality assurance agency

ESG-2015 standard	Regulatory support EXTERNAL
3.1. Activities, policies and quality assurance processes	1. Law of Ukraine "On Higher Education"; 2. Law of Ukraine "On Education"; 3. Resolution of the Cabinet of Ministers of Ukraine of 15.04.2015 № 244 "On establishing of the National Agency for Quality Assurance in Higher Education"; 4. Charter CEENQA;
3.2. Official status	
3.3. Independence	
3.4. Thematic analysis	5. Law of Ukraine of 14.06.2016 № 1415-VIII "On Amendments to the Law of Ukraine "On Higher Education" (clarification of the legal conditions for the formation and operation of the Agency) 1. CEENQA reports for 2019, 2020 2. CEENQA self-assessment report for 2021

Continuation of Table 2.2

3.5. Resources	<ol style="list-style-type: none"> 1. Law of Ukraine "On Higher Education"; 2. Law of Ukraine "On Education"; 3. Resolution of the Cabinet of Ministers of Ukraine on «Some issues of the CEENQA activity» from 27.07.2016; 4. <i>Charter CEENQA. articles</i> 5. <i>CEENQA reports for 2019, 2020</i> 6. <i>CEENQA self-assessment report for 2021</i>
3.6. Internal quality assurance and professional behaviour	<ol style="list-style-type: none"> 1. Law of Ukraine "On Education"; 2. Law of Ukraine "On Higher Education".

Thus, the analysis of normative documents of national and local levels gives grounds for the following **conclusions**:

1. Documents that served as surrogates of external quality assurance standards until 2014 did not meet the established ESG framework in structure, focus and target setting, which showed, however, that Ukraine did not have a comprehensive, consistent with European recommendations education quality assurance system.

2. Regulatory and legal assurance of the quality of higher education in Ukraine in accordance with the standards of the EHEA is in the process of formation. The preparation of normative documents goes through the stage of development, public discussion and approval taking into account the reasonable proposals, which, of course, is a novelty in educational practice. At the same time, these documents are constantly updated, they are amended, clarified and changed, which indicates the dynamics of the process of creating relevant to the needs of today's regulatory framework.

3. The prevailing statism in the Ukrainian socio-humanitarian sciences in issues of educational reforms is

gradually being replaced by matters of educational reforms is gradually being replaced by the understanding that any innovations must be correlated with public demand and agreed with stakeholders. As a result, the illusion that education in general and higher education, in particular, can carry out reforms on its own, relying only on internal resources, neglecting external resource support, is shattered.

4. The developed normative-legal documents concern, for the most part, the internal system of quality assurance of higher education. At the same time, the creation of an external quality assurance system is already inevitable, but the attitude to it in the educational community is ambiguous. The challenges and threats facing the national higher education system determine the optimization of higher education institution management, which is an important factor in achieving the desired results in the implementation of quality assessment programs.

5. The majority of regulations meet European quality standards of higher education (both national and local university). However, in practice, we see only adaptation to new realities of life, requirements and standards. The lack of effective reforms in socio-economic and political life also affects the educational sphere: it is impossible to successfully reform a single system in a social organism if all other systems are in a turbulent and sometimes painful state of reforming without obvious positive results.

6. The solution of these problems determines the joint efforts of the state, society, science, business and participants in the educational process to achieve the strategic goals of reforming the higher education system and compliance with quality standards of the European Higher Education Area. The formation of adequate to the Ukrainian realities of the regulatory framework to ensure the quality of higher education is primarily one of the main factors that will ensure the implementation of

human rights to quality education and one of the main factors in training a qualified professional competitive in the labour market.

2.2. The quality of university education in Ukraine: does it meet the European requirements?

The integration of Ukraine's higher education system into the European Higher Education Area (EHEA), provided the preservation and development of achievements and progressive traditions of the national higher education, is recognized as one of the principles of the state policy in the sphere of higher education in the Law of Ukraine "On Higher Education" (2014).

Ukrainian researchers (Ogneviuk & Sysoieva, 2021) proceed from the fact that the concept of education has changed significantly in recent years. Understanding the essence of education and its role has transformed from the interpretation of education as a normalized process aimed at transmitting socially significant and cultural-historical experience to the next generations; to understanding the concept of education as a value, a system of educational institutions, a process, and a multi-level result which affects the formation of the consciousness of society. Changes in the understanding of the concept of education are reflected in the essence of the concepts of the "quality of education". Thus, we consider the quality of education as a set of properties and characteristics of the educational process and its result which satisfies the educational needs of all subjects of the educational process (learning persons, students, their parents, teachers, employers, managers, etc.), the state and society as a whole (Ogneviuk & Sysoieva, 2021).

The problem of higher education quality assurance in the

EHEA member countries is one of the main areas that has become relevant from the very beginning of the Bologna process and the creation of the EHEA, and it remains a priority over the past years. This is confirmed by a number of adopted or updated strategic documents for the development of higher education at the European level, which determine the ways to improve the quality of university education. So, in 2017, the European Commission identified priority areas for the development of higher education (Communiqué on updating the program for the development of higher education, 2017), which provides for:

- synchronization of skills formed by the higher education system with the needs of the labor market;
- transforming higher education into more accessible and more comprehensive; the increase of its social contribution;
- increasing the innovative capacity of higher education;
- increasing the efficiency and effectiveness of higher education (Lokshyna, 2018, p. 128).

The Paris Communiqué (2018) places special emphasis on the following aspects that will help to improve the quality of education in the EHEA:

- ensuring academic freedom and integrity, institutional autonomy, participation of students and staff in higher education management and social responsibility of higher education;
- the key importance of quality assurance in the development of mutual trust, as well as increasing mobility and fair recognition of qualifications and studies periods throughout the European Higher Education Area;
- high-quality teaching to promote high-quality education, interaction between education, research and innovation;
- the use of digital and blended education with an appropriate quality assurance for the improvement of lifelong

learning and flexible training, development of digital skills and competencies, improvement of educational research data analysis and forecasting, elimination of regulatory barriers to the provision of open and digital education;

- institutional, national and European initiatives for teachers' pedagogical training and continuous professional development (Sysoieva, 2020).

Based on the results of Paris Meeting (2018), during this period a separate thematic expert group C on quality assurance (TPG C in QA) was established within the BFUG (the *Bologna* Follow-up Group) whose aim was to study the state of compliance of procedures for higher education quality assurance in the EHEA countries.

The key tasks of this group were outlined as follows:

- determining the level of compliance of the legal framework of the EHEA countries to the ESG;

- identifying the effectiveness of internal quality assurance mechanisms, including the use of monitoring results in the decision-making process and the development of quality culture in the teaching and learning process;

- determining the degree of involvement of stakeholders in internal and external quality assurance of education (students, teachers, employers);

- the study of the development of cross-border quality assurance in the EHEA and adherence to the European approaches to quality assurance of joint programs of the EHEA universities (Bologna Implementation Coordination Group, 2021).

During 2018–2020, the expert group focused on *three key commitments* crucial to strengthening and maintaining the education quality and cooperation within the EHEA:

- the functioning of a tricycle system of higher education

compatible with the general framework of the EHEA qualifications and the degrees of the first and second cycles based on the ECTS,

- compliance of the higher education systems of the EHEA countries with the Lisbon Convention on the Recognition of Qualifications,

- higher education quality assurance in accordance with the “Standards and Guidelines for Quality Assurance in the European Higher Education Area” (Paris Communiqué, 2018).

In 2020, summing up the work of the expert group during the Ministerial Conference in Rome (2020), the progress made in the development of quality assurance systems in accordance with the ESG was recognized and the priorities of the European Higher Education Area were promoted to ensure the European education quality until 2030, namely:

1. Ensuring the development of core values in the EHEA through cooperation and dialogue as a basis for quality teaching, learning and research. The fundamental values should be considered – first of all, the institutional autonomy of universities, academic freedom and academic integrity, transparency, public responsibility for higher education and public responsibility of higher education itself.

2. Strengthening of social inclusion and access to quality education for individuals of all social groups, in particular through digital technologies implemented in the educational process. Individuals with diverse socio-economic and cultural backgrounds, cultural, vocational training and education should have the capacity and tools to obtain quality education.

3. Introduction of innovations in teaching, learning and research, as well as exchange of positive innovative practices at the national and international levels. In particular, it is about flexibility and openness of learning trajectories, which should be ensured by introducing small and flexible components / constituents of learning that will provide the opportunity to obtain micro-qualifications and will be recognized throughout

the EHEA. An important role is given to the interdisciplinary approach in teaching, learning and implementation of research, which ensures the development of a creative personality able to do critical thinking (Rome Communiqué, 2020).

It is important to note that commitments have also been made to remove the remaining obstacles to the development of quality assurance systems in higher education, namely:

- to ensure the cross-border operation of quality assurance agencies registered in the EQAR;
- to expand the possibilities of implementing the European approach to quality assurance of joint educational programs, i.e. to adhere to the same quality assurance standards in both national higher education and cross-border higher education;
- to support and implement innovations in higher education to improve its quality on the basis of ESG (an enhancement-oriented use of the ESG).

At the same time, a special role in the implementation of the planned provisions by 2030 in the EHEA is seen in the orientation of higher education to fundamental values, social dimension, organization of microcredit training, distance education and cooperation within the alliances of higher educational institutions.

In June 2021, the BFUG Expert Group for Quality Assurance in Higher Education monitored the implementation of those provisions that were mentioned in the Rome Communiqué as the ones necessitating refinement in the next decade. The results of the study showed that all the EHEA countries participating in the survey (23 countries, including Slovakia, France, Latvia, Luxembourg, Italy, Finland, the Czech Republic, Austria and others) identify the following priorities in their educational policy (Figure 2.1): 1) cross-border assurance of education quality; 2) improvement of education quality on the basis of the ESG; 3) development of the internal system of higher

education quality assurance; 4) compliance with the European requirements for accreditation of joint educational programs; 5) adaptation of the regulatory framework to the ESG (Initial Questionnaire – Results, 2021).

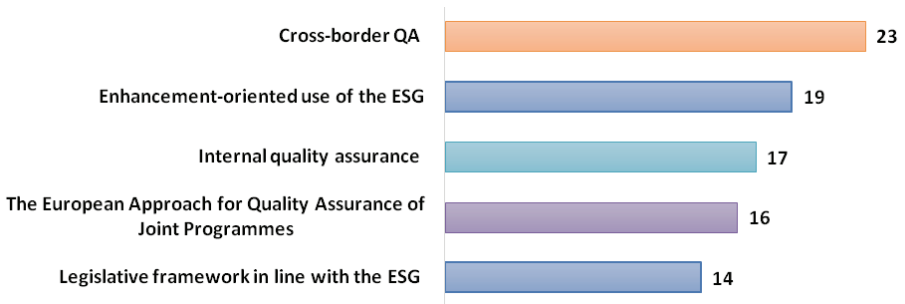


Figure 2.1. Priority areas of educational policy of the EHEA countries

Source: Initial Questionnaire – Results. Thematic Peer Group C on Quality Assurance, 2021

Let us consider the priorities of the educational policy of the EHEA countries in the context of higher education quality assurance for the period up to 2030, in particular, in comparison with existing practices in Ukraine. The first three priorities highlighted by the majority of the countries participating in the BFUG Expert Group’s research are: 1) cross-border quality assurance in higher education; 2) improvement of education quality based on the ESG by introducing innovations in teaching and research; 3) development of the internal system of higher education quality assurance.

1. *Cross-border assurance of education quality* within the EHEA as one of the priorities of the European countries’ educational policy involves the review (evaluation, audit, accreditation) of higher education institutions or educational programs in one EHEA country, carried out by the Agency for Quality Assurance

of another country (Recognising International Quality Assurance Activity, 2014). Higher education institutions have the right to work with an appropriate quality assurance agency that meets their needs best, can help to strengthen the institution's own responsibility for quality, to engage institutional actors more efficiently and to promote self-reflection (Cross-Border Quality Assurance in the EHEA, 2021).

International cooperation between the European quality assurance agencies has grown significantly last years. International cooperation between agencies includes such forms as involvement of foreign experts in certain disciplines into the evaluation process or including them into expert commissions for accreditation; inclusion of foreign colleagues or experts into the governing body or steering committee of a country's agency; the use of existing international standards and criteria in the assessment and accreditation and the use of internationally developed indicators of education for bachelor's and master's degrees. As quality assessment evolves, there is a shift from "conformity assessment" to improvement strategies (Babyn, 2011).

The practice of recognition of the European agencies for higher education quality assurance by other EHEA countries is well known nowadays. Thus, according to the statistics from the European Quality Assurance Register for Higher Education (EQAR), 19 EHEA countries recognize agencies registered in the EQAR as part of the external quality assurance of the national higher education, to which Ukraine belongs (Cross-Border Quality Assurance in the EHEA, 2021). In addition, there are some countries that recognize the results of the evaluation of educational programs by foreign agencies, which are based on national requirements (Estonia, the Netherlands, the Czech Republic and others) or do not recognize them at all (UK, Spain, Norway and others) (Table 2.3).

Table 2.3

**Recognition of international agencies for quality assurance
in higher education by the EHEA countries**

Level of recognition	Country
Recognising EQAR-registered agencies as part of the national external QA requirements	Armenia, Austria, Belgium, Bulgaria, Cyprus, Finland, Germany, Hungary, Kazakhstan, Latvia, Liechtenstein, Lithuania, Luxembourg, Moldova, Poland, Romania, Slovakia, Switzerland, Ukraine
Recognising foreign agencies based on their own framework/requirements	Albania, Czech Republic, Denmark, Estonia, France, Georgia, Greece, Malta, Montenegro, Netherlands, Portugal, Turkey
Not recognising foreign agencies as part of the national external QA requirements	Andorra, Azerbaijan, Belarus, Bosnia and Herzegovina, Croatia, Holy See, Iceland, Ireland, North Macedonia, Norway, Serbia, Slovenia, Spain, Sweden, United Kingdom

Ukraine has a list of foreign accreditation agencies and higher education quality assurance agencies that issue certificates of accreditation of educational programs recognized in Ukraine. The order of the Cabinet of Ministers of Ukraine “On approval of the list of foreign accreditation agencies and quality assurance agencies that issue certificates of accreditation of educational programs recognized in Ukraine” (July 10, 2019 № 554-r) identified 40 agencies of this kind from different European countries (Austria, Lithuania, Latvia, Spain, Portugal, Germany, Finland, France, etc.) (Order of the Cabinet of Ministers of Ukraine, 2019). In Ukraine, the practice of accreditation by international organizations is not generally accepted and only some universities use the services of the above agencies. Thus, in the period from 2016 to 2021, more than 35 educational training programs for applicants at various levels of higher education were accredited at Ukrainian

universities by international agencies of Latvia, Germany, France and Croatia (Accreditation at international agencies, 2021).

An important role in the development of higher education quality assurance system at the national and international levels is given to the implementation of thorough and objective examination during the accreditation procedure of educational programs. In this context, the focus is on the new challenges which the European educational community faces, namely: recruiting and involving international peer review experts; improving the efficiency of involving employers and students, including foreign ones, into the evaluation procedure; training and selection of experts (Initial Questionnaire – Results, 2021).

There are two models of training experts in the field of education, including experts in higher education quality assurance in the EHEA countries. The essence of the first model lies in obtaining additional professional education at a university at the master's level or in an educational program which certifies the qualification improvement. The second model involves training of experts from among the experienced teachers through a system of seminars, workshops, conferences, which are held at regular intervals (2–3 times a year) on the basis of institutions that support the development of education, such as quality assurance and education research, quality assurance agencies: for example, in Europe – the European Association for Quality Assurance in Higher Education (ENQA – a supranational institute that provides quality education and expertise, exchange of experience and integration of national quality management systems), the Institute of Quality Assurance in the UK, the State Pedagogical Institute Rhineland-Palatinate in Germany (it trains education consultants for sustainable development of education) and others (Trygub, 2017).

Ukraine has experience in training experts in education quality assurance which is provided by the National Agency for

Higher Education Quality Assurance through conducting special trainings and obtaining the appropriate certificate, and training experts in the field of education implemented within the educational program at Borys Grinchenko Kyiv University. Such training is carried out within the framework of the specialization “Expert examination in the field of education” of the educational program “Management of an educational institution” (specialty “Management”) at the second (Master’s) level of higher education. The idea of interdisciplinary integration of branches of scientific knowledge reflecting the functions of other spheres of social development related to education, was chosen as a system-forming principle of the program implementation. The content of experts’ training is reflected in the complex of academic disciplines: “The essence and content of expert activities in the field of education”, “Legal and regulatory framework for expert activities of educational institutions”, “Examination of documentation support for the activities of an educational institution”, “Quality of education, educational innovation and expert maintenance their provision”, “Educometry” and other (Sysoieva, 2020).

Thus, cross-border quality assurance in higher education is gradually developing in the EHEA countries, including Ukraine. EQAR-recognized foreign higher education quality assurance agencies and their experts are involved into the process of external evaluation of education quality assurance, as well as in the exchange of experience among experts of the European agencies regarding quality assurance procedures. Given the importance of the role of the expert in quality assurance procedures, in the EHEA countries special emphasis is placed on their recruitment and training. In this context, Ukraine implements European models of training experts in the field of education, in particular training of experts in ensuring higher education quality.

2. The *improvement of education quality based on ESG through introduction of innovation in teaching and research* is also a priority for education policy in the European countries. This implies, first of all, the existence of a plan at an educational institution for monitoring and improvement of educational programs quality. In addition, the procedures established by the plan should ensure a continuous process of quality improvement.

The implementation of modern approaches to the organization of teaching, learning and research plays a crucial role in the implementation of this provision. The European documents (Rome Communiqué, 2020) emphasize the efficiency of implementing *an interdisciplinary approach* in the educational process of universities for its improvement. For example, in the document of the Association of European Universities "Universities without walls. Version 2030" dated February 2021, a considerable attention is paid to interdisciplinarity in the educational process at modern universities. The main idea of the document is to encourage universities to a dialogue between different disciplines and interdisciplinary research. It stresses that such promotion of interdisciplinarity should not only deal with educational process, but it should also solve social problems through university missions. According to the members of the association, interdisciplinary approaches should contribute to: taking interdisciplinarity into account in academic assessments and awards; inclusion of issues related to interdisciplinary education into institutional accreditation; ensuring interdisciplinary teaching through teachers' professional development and supporting the interaction of teachers of different disciplines in joint work (Universities without walls. A vision 2030. February 2021, p. 8, 12).

Interdisciplinary learning can improve the mastery of certain disciplines but not displace them. Since then, the main teachers' task has been to select such connections between

disciplines that can provoke higher-order thinking, rejecting weak connections that can provoke cognitive dissonance. Interdisciplinary research creates a more innovative and stimulating educational environment and introduces new ways of thinking and acting, defining each person's knowledge and competencies. According to J. Christensen et al. (2021), long-term interdisciplinary and collaborative research can enhance and increase critical thinking and creative awareness among researchers by promoting more holistic, sustainable and effective research-based learning in higher education.

In Ukraine, an example of the implementation of interdisciplinary approach at Borys Grinchenko Kyiv University is the introduction of "Educology" course in the educational process and its application as a research field. We emphasize that this course is a striking example of the synergistic development of interdisciplinary interactions, combining individual, partial aspects of research in a broad, holistic direction. Educology studies and examines the multifaceted links between an education system and the economic, social, legal, cultural, and managerial systems of society. Interdisciplinary links help to solve one of the main problems of the current education system, in particular in the humanities – the contradiction between destructive, fragmentary teaching and learning and the need for their synthesis and comprehensive application in practice (Ogneviuk, Protsenko, Melnychenko, 2021, p. 7).

It is necessary to stress that educology provides a future specialist in the field of education with understanding of the essence of financing education, economic mechanisms of its development, regulatory support of its activities, competitiveness, criteria and mechanisms for assessing education quality, etc. Such an interdisciplinary approach in the process of future specialists' professional training allows them to expand their scientific outlook and raise the level

of methodological culture, promotes awareness of topical problems in the field of education and the search for ways to resolve them, focusing attention on the contradictions that arise in accordance with the specific conditions of the educational process and practical life situations (Working program of "Educology", 2020, p. 7).

Among the innovations that will contribute to quality training at higher educational institutions throughout life, we should highlight *the introduction of micro-qualifications* which should be accessible to all citizens of European countries since 2030 already. An innovative European approach to the organization of micro-credit programs of studies will make it possible for universities to offer and make available such courses in different forms of studying (traditional, online or blended) to more people across Europe.

The development of the European approach to micro-credits is a joint program of Commissioner M. Gabriel, responsible for innovation, research, culture, education and youth, and Commissioner N. Schmidt, responsible for jobs and social rights. This joint initiative was announced in the European Skills Agenda, published on July 1, 2020, as one of the 12 main actions aimed at maintaining quality, transparency and use of micro-credit across the EU (Commission Communication, 2020).

The introduction of micro-qualifications in the EHEA will provide the citizens of the European countries with a possibility to begin or continue their educational path at any stage of their lives, to improve educational skills in accordance with the rapid changes in modern society and the labor market. Training at short-term courses should be based on and thematically related to human experience. The developed standardized descriptors of such training (e.g., professional profiles, skills systems, etc.) will ensure similar understanding and recognition of learning outcomes by employers, educational institutions, regardless of

industry and geographical affiliation. As a result, microcredit training programs will play an important role in promoting and implementing lifelong learning for different segments of population (A European approach to micro-credentials, 2020; p. 9). It is assumed that microcredits must meet all the standards of higher education quality assurance in the EHEA countries, which are designed for traditional educational programs.

The experience in implementing short-term educational programs or certification programs in Ukraine is presented at many universities of the country in various fields of knowledge and specialities. Certification programs are implemented at universities as a profiling component or supplement to educational programs implemented at the university to meet the educational needs of applicants for higher education, extension of their professional competencies, as a form of more flexible response to current labor market needs. Universities within their autonomy can implement certification programs or minor programs, which can be implemented through the selective component of individual curricula of the applicants for higher education (Methodological recommendations, 2019). Such practice provides opportunities for the formation of individual educational trajectories of applicants for higher education, which is noted in the process of external evaluation of a particular educational program by experts of the National Agency for Higher Education Quality Assurance in Ukraine.

Thus, improving the quality of higher education based on the implementation of innovations into the educational process does not involve only the availability of a plan and procedures that ensure a continuous process of improving educational programs quality, but also the direct introduction of innovative approaches to teaching and research.

3. The priority of the development of higher education until 2030 is *the development of the internal system of higher education*

quality assurance. This implies the availability of effective internal quality assurance mechanisms, including the use of quality assurance monitoring results in the decision-making process, and a developed culture of quality. According to a study conducted by the BFUG Expert Group on Quality Assurance in Higher Education in 2021, it was determined that 17% of the total number of respondents from 23 European countries noted that the internal quality assurance system of higher education was included in normative documents – strategies or University Action Plan (e.g. Norway, Cyprus, Finland). This proves that the development of the internal system of higher education quality assurance in the EHEA countries is a long-term process and it requires constant attention from the administration and key stakeholders (Initial Questionnaire – Results, 2021).

In Ukraine, research of the level of development of the internal system of higher education quality assurance at the country's universities was conducted by the National Agency for Higher Education Quality Assurance in 2020. A survey of representatives of 183 higher educational institutions in Ukraine (out of 455 existing ones) was conducted regarding the existence of an internal system of higher education quality assurance. The results of the research, published in the annual report of the agency (Annual Report NAHEQA of Ukraine, 2021), showed that the vast majority of free educational institutions believed that they had a system of internal assurance of education quality – 125 (68.3%) out of 183 stated its existence and 58 stated the availability of its separate elements (Figure 2.2).

It should be noted that no institution has reported about the absence of such a system or some of its elements. A number of institutions have acknowledged that they do not have a full-fledged system, but only some of its components. We see the fact that at least some of the domestic universities are aware that such system is a much more complex entity than they thought

before. According to T. Finikov's research, the key periods in the formation of the internal system of higher education quality assurance in Ukraine are the period 2011–2015 (40.3% of free economic zones formed and implemented the system in this period) and 2016–2017 (31.4% of higher educational institutions introduced such a system) (Finikov, 2018, p. 12).

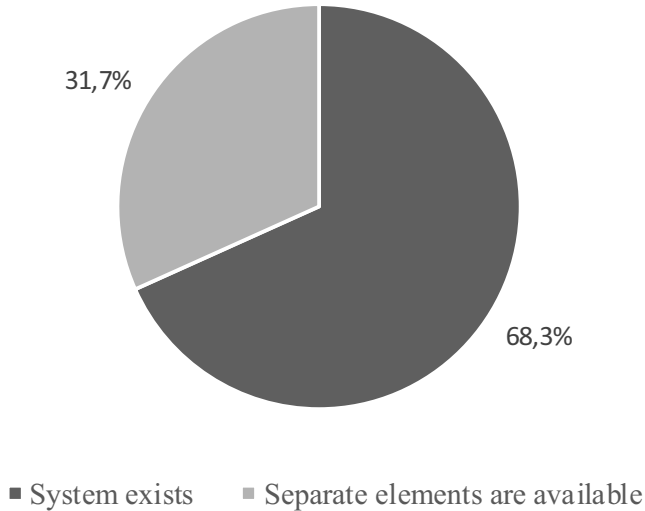


Figure 2.2. Existence of a system of internal higher education quality assurance (Ukraine)

Source: Annual Report of the National Agency for Higher Education Quality Assurance in 2021 (Ukraine).

The results of the research give grounds to assert that the development of internal systems of higher education quality assurance in the European countries, in particular in Ukraine, is not a completed process, and it requires further improvement. The European experts have identified a number of proposals to improve the functioning of these systems, which will facilitate the transition from the internal system of quality assurance at universities to a culture of higher education quality by 2030

(Initial Questionnaire – Results, 2021). Among the proposals that will speed up this process are the following:

- enhanced communication;
- with increasing HEI autonomy, it is crucial that EQA should be designed to capture and support HEI systematic and effective use of internal quality assurance (IQA) results in their strategic governance and decision-making processes, as well as how such results translate into learning and teaching in HEIs study programs and courses;
- an effective quality assurance and support system that focuses on content rather than on administrative aspects of quality;
- integrating new trends (digitalization, innovation, micro-credentials, data management) in ensuring effective quality assurance system;
- involvement of students in IQA processes, including program design;
- evaluation of the functioning and effectiveness of IQA processes beyond their formal design;
- moving from program level to institutional level accreditation;
- focus on the external audit of the IQA procedures – more trust, less control;
- translation of IQA arrangements into daily operations of HEIs and quality culture (Initial Questionnaire – Results, 2021).

The European practices of higher education quality assurance have been realized at Ukrainian universities for more than 10 years, as evidenced by the implementation of the main provisions of the Bologna Process, in particular for 2018–2020 (Paris and Rome Communiqué). Ukrainian universities implement the European standards and procedures for ensuring higher education quality, focusing on traditions and modern achievements in the field of the national education and

science. At the same time, a special emphasis is placed on the development of the internal system of higher education quality assurance; gradual internationalization (cross-border) of quality assurance in education and development of modern models for training education quality experts; introduction of innovative approaches to the organization of training and research.

2.3. Factors 2020: quality assurance in higher education and the labour market

Reforms to transform higher education to market-based economy in the European Union began in the 1990s. Quality assurance in higher education is an essential element of market-oriented higher education. The higher education quality ensuring formation has been lasting for two decades the European Higher Education Area (EHEA). During this time, countries have formed national quality assurance systems, which in their activities should focus primarily on the interaction of higher education with the labour market. These key players make particular demands on the quality of educational services, influenced by external and internal factors. This study aims to identify the impact drivers influencing the quality assurance in higher education in the countries of the EHEA, based on trends in the interaction of higher education with the labour market at the macro-level, reflecting the transformation of higher education to market demands over two decades of reforms.

The scientific literature review indicates different approaches to characterising trends in higher education and its links with the labour market in the EU. For the most part, there are two approaches: thematic – identifying trends on specific topics or issues in higher education and the labour market (European Commission, 2019; Katsarova, 2015; Karseth & Solbrekke, 2016; Mizikaci & Baumgartl, 2015; OECD, 2008;

Sursock, 2017); chronological – reflects the dynamics of changes in the development of higher education over decades or years (Crosier & Parveva, 2013; Gaebel & Zhang, 2018; Sursock & Smidt, 2010; Sursock, 2015).

Based on this, the study uses an economical approach to understand the concept of “interaction of higher education with the labour market” as economic relations that occur in macro-, meso- and micro-levels. Therefore, for the purpose of systematic distribution of the received material, the tendencies of higher education interaction with the labour market in the EU are generalised and characterised on the macro-level in particular. The content and functions of these levels are widely represented in economic and educational theory and practice (Cedefop, 2011, p. 134; Vukasović, 2012, p. 19). According to the research topic, the macro-level means European higher education, which has been transformed under market needs in the EU and is spreading as a systemic phenomenon in the EHEA member states.

The concept of “interaction of higher education with the labour market” has no clear scientific interpretation. However, in the national scientific literature, the higher education interaction with the labour market means the technology of behaviour harmonising of all subjects of market relations (state, trade unions, employers’ organisations, educational institutions, academics and students) to match labour force demand and supply, create conditions for the human capital production, and ensure sustainable socio-economic growth.

In the EU scientific literature, the interaction of higher education with the labour market is understood as its cooperation with industry, government and society, i.e., the third mission of higher education after education and research. Such cooperation is necessary to gain the main objective of higher education – the formation of graduates’ skills needed

for success in the labour market. This mission is vital in the context of today's innovative, globalised knowledge-based economies, where higher education systems seek to respond to stakeholder demands, and balance labour market needs with other priorities. However, building and maintaining a long-term strategic partnership between higher education and the labour market is time-consuming (OECD, 2017, p. 9).

It should be noted that the higher education interaction with the labour market is mainly economic relations between these entities. In economic theory – International economic relations are a system of economic relations characterised by the interaction of individuals and legal entities, states and international organisations at the macro-, meso- and micro-levels. One of the forms of international economic relations is economic cooperation – stable economic ties between the subjects of economic relations, based on international economic agreements concluded for a relatively long time (An Introduction to International Economic Relations, 2014).

Based on the above, under the interaction of higher education with the labour market, we understand partnerships between the subjects of economic relations (state, higher education and the labour market (macro-level)); higher education institutions and enterprises (meso-level); academics, students and employers (micro-level)), which provide flexibility in regulating this process, balancing the supply and demand of workers with higher education in the labour market, the effectiveness of training and development of human resources in a market economy.

In economic theory, the macro-level is understood as ties between states, groups of states, or between states and international organisations. At the macro-level, the economic mechanism is designed to perform several functions with the help of bodies (ministries, committees, etc.): state planning;

programming and regulation of the economy. In education, the macro-level means educational policy at the national and international levels (A Brief Critical Dictionary of Education, 2018) and the education system (Bucharest Communiqué, 2012, p. 136; Vukasović, 2012, p. 19). In accordance, regarding our research by “macro-level” we consider the higher education interaction with the labour market, namely the market relations that take place at the level of higher education in the EU and the EHEA on the way to its transformation in a market economy, where the main emphasis is on studying trends in higher education in line with EU market demands.

Since the beginning of the Bologna Process, the EU higher education development trends have been widely discussed in the scientific literature. Researchers note both universal and distinguishing trends, which indicate the rapid development of various processes affecting the higher education transformation in the EU. Thus, in the report on trends in higher education in 2003 (NESCO-CEPES, 2003), the ministers note the internationalisation of HEIs, quality assurance, trade in educational services, the demographic crisis, the Bologna Process and the recognition of qualifications. Crosier et al. (2007) single out mass higher education, internationalisation of HEIs, qualification structure and quality standards, as well as problems of financing higher education among the trends of 2006. The study for 2007 highlights other trends, in particular the reform of higher education structure – the implementation of three-level higher education, the Bologna process introduction; academic mobility; recognition of qualifications; creation of professional counselling services for students; students’ involvement in the higher education management; quality assurance – the creation of internal structures; lifelong learning; expanding access to higher education. Incidentally, they point to the emergence of problems with employment, labour mobility, and the HEIs

autonomy (Crosier & Parveva, 2013). The primary trend of the first decade, the authors of the report "Trends 2010" consider the development of European HEIs in the Bologna context (Sursock, 2017). Among the trends in the development of higher education in the EU in 2015, Katsarova (2015) highlights talent competition, international cooperation and competition between HEIs, increasing MOOCs and the ICT use. The "Trends 2015" report describes the features of higher education modernisation in the EU as follows: demographic crisis, globalisation, university autonomy, development of EHEA, as well as European and national educational policy, institutional strategies and the emergence of international students, internationalisation and marketing of higher education (Sursock, 2015). It is worth noting that the main events in higher education development over the past years, respondents of the "Trends 2015" report identified quality assurance in higher education, internationalisation and the Bologna Process (Cedefop, 2010, p.26; Sursock, 2015, p. 28). Thus, in the era of the competitive global economy, researchers observe trends in quality assurance in higher education, internationalisation and autonomy of higher education, when the inclusion of ICT in higher education strategies, increased access to higher education, quality assurance, student mobility, international networks and cooperation, joint governance and collaboration between universities are becoming commonplace (Gül et al, 2010).

Based on the above, we reveal current trends in higher education interaction with the labour market at the macro-level – at the level of higher education in the EU and the EHEA. Accordingly, the main trends include globalisation (autonomy of the HEIs, use of English, international students, increasing access to higher education); internationalisation (international cooperation of HEIs, academic mobility, joint international programs, MOOCs development), Europeanization and

standardisation; quality assurance in higher education; the Bologna Process. These trends characterise modern higher education in the EU and the EHEA, transformed to the market-based economy. Here is their content.

1. *The globalisation of higher education* is manifested in creating new state management of the education sector through the autonomy of free education. The current trend in developing new management of higher education is due to the reformatting of HEIs into corporate enterprises for providing educational services, with its administrative structures, governing bodies, personnel, academic and financial autonomy.

In addition, trends in higher education in the era of globalisation are determined by increased access to higher education, global student mobility, alternative sources of funding for higher education, increased research HEIs and global reputation of higher education (increased ratings) (Global Trends in Higher Education, 2014; van der Wende, 2017, p. 1).

2. *Enrolling international students in higher education* has become a vital sign of the country's ability to contribute to future economic development. As a result, the pursuit of talent is gaining global scale. Although the United States is still the world leader with 17% of international students, universities in the UK, France, and Germany are increasingly popular, with 13%, 6%, and 6% of students studying there.

One of the elements that determine the global attraction of international students to the EU universities is the low cost of education compared to American HEIs. Similarly, efforts to develop a quality assurance and mobility accreditation system within the EU bring Europe to the top of the world's most progressive regions. Modern EU universities have about a quarter of the world's MOOCs, and their number is constantly growing. In 2014, the EU launched the global rating system U-Multirank. In the future continuous efforts and continued

international cooperation will be needed to improve existing structures and take full advantage of new technologies.

3. *International academic mobility* was the main goal of the Bologna Process, set a goal for the EHEA member states – at least 20% of EHEA graduates have to study abroad until 2020 (Bologna 2009 Leuven Communiqué, 2009, p. 4). The EU Member States have identified academic mobility as part of their strategy with different indicators. For example, Belgium, France and Malta have joined the 20% benchmark for the EHEA by 2020. Others have set targets for their national education systems beyond the 20% for the EHEA: the Netherlands have set 25% academic mobility for 2013, Austria and Germany have planned to encourage 50% of its students to spend at least one semester abroad by 2020. On the other hand, some EU member states had low ambitions. For example, Estonia has planned 4 – 5% participation in the mobility program by 2015, and Finland up to 6 – 8% outbound mobility. Ireland, Poland and the United Kingdom do not aim for outbound mobility but have established quantitative indicators for inbound mobility (EACEA, 2010, p. 42).

Although European academic mobility programmes (Erasmus and Erasmus Mundus) still have a powerful influence on national policy, in some EU Member States, the national policy does not apply to such a program. Researchers are concerned about the non-significant efforts of countries to analyse national policies and measures to encourage student mobility and the lack of reliable statistics. Only Erasmus data is the only reliable guide for determining academic mobility indicators (European Commission, 2015, p. 38). According to the OECD forecast, due to demographic changes, international academic mobility will reach 8 million students per year by 2025 (International Trends in Higher Education, 2015, p. 5).

4. *The spread of English* is directly related to globalisation, manifested in the widespread use of English in teaching

disciplines, educational programs and research as a second language globally, and the corresponding decline in the importance of other languages. For HEIs, the offer of English-language courses increases the prestige of the institution, greater success in attracting international students, funding for research and development, and increasing the employment of domestic graduates. Since the beginning of the Bologna Process, English-language teaching has been spreading in European universities at all educational levels. Although this trend began in the 1990s in Europe, free educational programs offered in English are common practice now (Coleman, 2006, p. 17).

5. *The internationalisation of higher education* is increasingly becoming a strategic priority for European HEIs. In response to global competition, universities, which have always had international educational backgrounds, have developed strategies for international cooperation. Today, the effectiveness of the internationalisation strategy of HEIs is determined by the university's position in the global networks of knowledge production. It envisages strategies for cooperation and competition at the international and national levels and the appropriate use of digital technologies. If in the past HEIs were determined by the level of educational activities (local, regional, national, European, international), today they tend to work at all levels (Sursock, 2015, p. 26).

Based on the survey results, Sursock (2015) notes that in comparison with "Trends 2010", the survey "Trends 2015" includes more HEIs, which define their leading community as global or European and fewer HEIs, which indicate the regional or national community as the main one. Thus, for example, among the countries showing the most significant development are Ireland, Austria and the Netherlands. Except for France, which is consolidating the regional level, partly as a mechanism for international positioning. Thus, in the era of globalisation

and increasing international competition, there is a growing awareness of the need to strengthen the local or regional mission of the universities and combine it with the international one.

The internationalisation of HEIs is growing strategically, and this trend is expected to continue. The survey conducted by the Association of European Universities (EUA) in 2013 confirmed that. The results show that out of 99% HEIs, 56% respondents have an internationalisation strategy and 13% of HEIs plan to develop it; 30% of HEIs intend to consider internationalisation among other strategies (Privot et al, 2018, p. 9). "Trends 2015" study shows similar results, where out of 93% of respondents, 50% of universities have an internationalisation strategy and 8% of HEIs plan to develop it; 35% of HEIs included it in the general institutional strategy (OECD, 2005, p. 30).

The best benefits of the higher education internationalisation for European respondents are the improvement of teaching and learning quality, the strengthening of international cooperation, and students' international awareness. In addition, researchers note that enrolling international students can combat the economic crisis by increasing incomes and diversifying funding sources. HEIs define three aspects related to internationalisation at home: international students, foreign staff and teaching in English. HEIs with an internationalisation strategy pay great attention to these aspects, providing international opportunities for national students and teachers (Sursock, 2015, p. 71). The EU's Employment and Social Affairs Committee calls on the EU Member States to internationalise education systems and expand academic mobility programs to better prepare students for the EU labour market when a lack of foreign language skills and understanding of other cultures is an obstacle to labour mobility (Draft Opinion of the Committee on Employment, 2018, p. 3).

However, among the negative trends in higher education

internationalisation 5% of “Trends 2015” respondents consider the growing complexity and financial uncertainty of HEIs. They include bureaucratisation, increased workload for administrative and academic staff, additional pressure on student services, heterogeneous academic, cultural and linguistic experiences of international students, which may affect the quality of program implementation. Teaching English can be a challenge for both teachers and students if their language skills are weak. Teaching domestic students in a foreign language can negatively affect their ability to develop the necessary technical and professional terminology in their native language (Sursock, 2015, p. 72).

6. *Europeanization, the Bologna Process and the EHEA.* Europeanization is associated with the Bologna Process, which contributed to the development and establishment of new formal and informal rules for the organisation of the educational process and research, as well as standards and quality assurance and the structure of educational degrees. The main goal of the Bologna Declaration is to create an EHEA that stimulates a balanced exchange of students and staff, cooperation between HEIs, and the introduction of comparable, compatible and harmonised higher education systems (Vukasović, 2012, p. 19).

The successful implementation of the Bologna Declaration principles by the HEIs is confirmed by the implementation report in 2015. The average assessment of the Bologna principles implementation in Germany is 4.53, in Poland – 4,46, in France – 4,38, in Austria – 4,23, in Italy – 3,84 (Strategy for the Development of Higher Education in Montenegro, 2016, p. 12).

It is worth noting that the Bologna Process was a priority trend in developing higher education in the past decade. Currently, the Bologna Process is the third most crucial priority area for higher education modernisation. The majority of the EU member states have completed the essential parts of the reforms (Loukkola & Zhang, 2010, p. 26).

In addition, the last decade has achieved significant results in the implementation of the Bologna Principles, which has led to the adoption and implementation of a three-level structure of education, diploma supplement, ECTS; significant improvement in academic and mobility – students, researchers, teachers and administrative staff; learning outcomes recognition; involving students as crucial partners in the decision-making process; research improvement; quality assurance.

Despite the results achieved, the future goals are increasing the quality assurance in higher education; creating conditions for its harmonisation with the trends in the EHEA in order to recognise national higher education systems outside the EU Member States; making national students competitive with those studying in prestigious European HEIs. The creation of the EHEA is only one of the manifestations of a broader trend in developing international recognition through establishing ties with European and non-European institutions. These connections will allow HEIs to improve and enhance the quality of educational and research activities (Strategy for the Development of Higher Education in Montenegro, 2016, p. 11).

The development of EHEA has a positive global attitude among HEIs. The “Trends 2015” survey shows that the EHEA implementation is assessed by the majority of respondents (59%) positively and that none of the respondents evaluates this process as negative development (Sursock, 2015, p. 35).

7. *Quality assurance in higher education* and the creation of the EHEA, the essential goals of the Bologna Process, are of great importance for 73% of respondents, according to the Trends 2015 survey. It relates to Lithuania (100%), Portugal (93%), the Netherlands (89%), Germany (88%), Denmark and Sweden (86%), Italy and Romania (83%), and Poland (81%). The European quality assurance in higher education is provided in compliance

with the NQF and the requirements of the EQAR by institutional and national quality assurance bodies (Sursock, 2015, p. 39).

The most significant change during the first decade of the XXI century was developing internal quality assurance systems. Thus, 60% of respondents of “Trends 2010” recognised it as a significant factor in the development of universities (Loukkola & Zhang, 2010, p. 18). Furthermore, the “Trends 2015” survey results show that more HEIs have an institutional quality assurance policy that contributes to the planning and improvement of educational activities. Thus, the vast majority of HEIs (63%) have a national quality assurance policy and procedure; almost 13% of HEIs have quality assurance structures at faculties; 15% of HEIs have either a procedure or a policy, and only 1% of HEIs have neither a policy nor quality assurance systems. The results of the “Trends 2015” survey also show progress in involving students in internal quality assurance systems. In 2010, a study on this issue noted that involving students in formal quality assurance processes was not common (Loukkola & Zhang, 2010, p. 25). In 2013, the European Students’ Union (ESU) noted a relatively low number of students (40%) knew about the quality assurance system (Accession of the Republic of Croatia, 2013, p.63). However, since 2015, in most HEIs (83%), students have been actively involved in the quality assurance process (Sursock, 2015, p. 40).

In addition, current trends in membership in the ENQA provide with the audit and evaluation of HEIs educational activities in more flexible, contextual and manageable way. Researchers also note the peculiarities of membership in the ENQA as an impetus to improve the internal quality assurance system and create a culture of quality and the stakeholders and students’ involvement in the activities of agencies. It is also worth noting the extension of the requirements for the external quality assurance procedure. Besides, the EU Member States require HEIs to report on the monitoring of their graduates’

employment and career advancement or the establishment of internal quality assurance units for educational services with external members (Sursock, 2015, p. 42).

For instance, French quality assurance in higher education. At the European level, it reports to the ENQA and the EQAR, which promotes cooperation in quality assurance in the European Union. The French Agency for the Evaluation of Research and Higher Education (AERES) has become a full member of the ENQA. In addition, it is registered in the EQAR, which ensures that its educational activities comply with the ESG in the EHEA. These institutions are mainly focused on developing external mechanisms of the evaluation system determined by the ESG. The French quality assurance in higher education is divided into external and internal systems at the national level. A characteristic feature of the national external quality assurance system is the obligatory assessment of the French HEIs that issue diplomas recognised by the state. Evaluation costs are covered by the agency's budget as government institutes (HEIs do not pay directly for the evaluation procedure) (Mospan & Durdas, 2021).

8. *Internationalisation of quality assurance.* The real achievement in the field of quality assurance was the work of foreign experts and the increase in the number of quality assurance agencies that work together on specific evaluation projects. For example, the Agency for the Accreditation of the Training of Engineers (CTI) in France cooperates with the Agency for Quality Assurance in Higher Education (AEQES) in Belgium (French community) to jointly assess the level of technical education in freelance education. Such cooperation demonstrates the interest and readiness of national quality assurance agencies to internationalise quality control processes and to cooperate across national borders. These international partnership links enhance the exchange of best practices in

quality assurance agencies, provide better understanding and build trust between higher education systems within the EHEA. In this way, they continue the work of the ENQA in promoting shared values and the best practices in quality assurance in higher education. However, recent trends are evolving when quality assurance agencies export their services across borders. Researchers note that the scale of activities among members of the ENQA is growing through counselling and cross-border activities (Sursock, 2015, p. 42).

Researchers consider national legislation, which still regulates the activities of most national quality assurance agencies, to hinder the internationalisation of quality assurance in higher education. Even though the internationalisation of quality assurance agencies is developing rapidly, even chaotically, national authorities are reluctant to support EHEA with cross-border quality assurance and do not allow national HEIs to examine the educational activities of foreign agencies members of the EQAR (de Wit, 2011; Sursock, 2015, p. 42).

9. *Introduction of various forms of financing higher education.* The EU initiates financial support for higher education systems, especially in areas not funded at the national level. For example, joint educational programs and partnership links between HEIs have become prominent forms of European and international exchange and cooperation in educational activities. The economic and financial crisis has had a number of consequences, including the introduction of different ways of distributing free economic financing. Funding reforms have changed the balance between core funding and competitive project funding. The increase in the share of project-based research funding has contributed to an increase in the number of researchers under fixed-term contracts; in turn, the termination of the recruitment of academic staff and changes in the contract increased the number of adjunct teachers, while salaries and pensions of

civil servants, including academic and administrative staff, decreased in some countries (Sursock, 2015, p. 51).

To overcome the effects of the financial crisis, the EU has introduced tuition fees, which vary from one Member State to another. In some countries (e.g., Ireland and Sweden), tuition fees are charged to non-EU students or some courses (e.g., English language courses, lifelong learning). Other countries (e.g., Finland) charged tuition fees for non-EU international students but later abolished them. In Germany, tuition fees were abolished (in 2014–2015), but tuition fees were left for continuing vocational education. Austria also abolished the general tuition fee for domestic and European students (Sursock, 2015, p. 52).

In addition, other measures have been taken to influence the financing of free economic zones. These include performance indicators, funding based on learning outcomes, number of students enrolled and cooperation between freelancers. These approaches are used in different ways in different countries but have the same purpose: financial freedom. The first decade of the 21st century is characterised by expanding institutional autonomy that encompassed continental Europe. However, budget cuts and funding reforms have reduced the ability of HEIs to implement specific strategies (Estermann et al, 2011).

Today's most common national reform is financial, which has led to new ways of allocating limited funding: targeted and performance funding or excellence initiatives. Under these conditions, HEIs are forced to increase productivity at lower costs and diversify funding sources. However, despite the existence of different funding instruments for higher education, the EU lacks a standard policy, and there is no European dimension (coordinated principles) of equal distribution of public funds for educational activities. Thus, it contributes to the further strengthening regional differences in the EHEA (HEFCE, 2017, p. 18).

10. Increasing the number of specialists with higher education. According to the indicator specified in the Europe 2020 Strategy, higher education for the population aged 30–34 should be 40%. However, in addition to this overall EU indicator, most Member States have set their national indicators for 2020 in their National Reform Programs, except for the United Kingdom (43% in 2010). Across Europe, national indicators are changing dramatically and do not correspond to EU indicators, for example, from 60% in Ireland to 26,7% in Romania (Sursock, 2015, p. 44).

Besides, the Territorial Analysis of Indicators for the Europe 2020 Strategy (2015) shows the uneven opportunities to achieve this higher education level in the EU Member States. Although, urban areas in the EU have a much stronger position than rural areas, so it will be easier to achieve European and national indicators. In addition, urban areas have more opportunities to attract and retain highly qualified 30- and 34-year-old men, offering jobs matching their qualifications.

There is also such inequality among regions with different levels of economic development. For example, the achievements of Turkey were impressive in 2008-2010 that appeared in the top ten along with the Netherlands, Poland, Italy and Greece. On the other hand, countries with a high level of higher education obtained by the 30–34-aged (Netherlands, Austria, Great Britain, Germany, France, Bulgaria, Spain) experienced a decrease in the rate between 16,16% and 30,26%. The main reasons are the improvement/deterioration of higher education or the ability/inability to attract and retain highly qualified youth (Sursock, 2015, p. 55).

11. *The increase of Internet providers of educational services* will open a broader range of opportunities for cooperation between HEIs, private companies that provide professional development services or non-profit organisations focused

on lifelong learning. It also requires the recognition of non-formal and informal learning. The EU's Employment and Social Affairs Committee calls on the European Commission and the EU Member States to make efforts to recognise non-formal and informal learning from MOOCs, which increase access to education and increase employment opportunities for the poor (Draft Opinion of the Committee on Employment, 2018, p. 3).

It is worth noting that the interest of investment companies in the MOOCs platforms indicates that this is a potentially very profitable field that has a global level and an unsurpassed ability to gather information about millions of students. However, their business model has not yet stabilised and needs further monitoring and improvement, even though MOOCs are free and the fee for obtaining additional certificates is low (Surssock, 2015, p. 98).

Thus, the formal education provision is complemented by new commercial providers of educational services in the EU, offering new platforms and teaching methods. Their number has increased, so education is no longer limited to formal educational institutions. More than 800 universities offer lectures in apps, allowing students to study anytime and anywhere using a smartphone or tablet. Digital technologies are a catalyst for individualising academic achievement and creating a more active and flexible learning experience. Peer-to-peer platforms allow people from different parts of society and the world to join and learn from each other. New forms of partnership between participants in the educational process, as well as between public and private figures, rejuvenate educational programs, allow experimentation with disciplines and have a positive impact on employment opportunities for graduates (European Commission, 2018, p. 5).

12. *The growth of the market-based higher education* has affected the blurring of lines between public and private HEIs.

That occurs due to the reduction of public funding, which is partly due to weak economic growth. However, even in higher education systems, where public funding is still the norm, the importance of private contributions is growing. Examples include tuition fees for lifelong learning programs, a differentiated level of tuition for non-EU international students, and private sector funding for research. In addition, more prominent forms of marketing are also developing, such as the acquisition of non-profit public and private HEIs by companies for profit (European Commission, 2018).

At the current stage of the higher education transformation in the EU, according to Karseth & Solbrekke (2016), there are clear signs that universities are moving towards strengthening entrepreneurial ideas and the utilitarian spirit defined in the labour market. This new orientation has implications for the formation of teaching staff and students' enrolment, the concepts of academic freedom, priorities in the development of educational programs and teaching methods.

13. *Dissemination of information about the demand and supply at the labour market.* Considering the requirements for qualifications in the EU labour market facilitates the enrolment of students in relevant specialities and helps to bridge the qualifications mismatch to the employers' demands. That raises the priority issue of the EU strategy to upgrade qualifications and ensure a better match between the supply and demand of professionals in the labour market. Public authorities at national, regional and local levels, business, social partners, education providers will benefit from regular information on short-term changes in the EU labour market, available vacancies across the EU and demand for qualifications. The collection of such information promotes the professional and geographical workforce mobility (COM, 2008, p. 11):

- introduction of the European Labour Market Monitor

network, with periodically updated information on short-term trends in the European labour market. The network collects, analyses and disseminates data on vacancies and registered jobseekers through the European Public Employment Service, as well as from other sources, including the economic sectors, companies and recruitment agencies;

- multilingual dictionary creation of jobs and qualifications, which contributes to improving the quality and transparency of information on vacancies, improving the correspondence between applicants and vacancies;

- developing an online service to provide citizens with quality information on professions, qualifications, training opportunities and training in the EU. Part of this online service is the European jobs network (EURES) linked to the Learning Opportunities and Qualifications in Europe (PLOTEUS) Portal and the EuroAccess website, reflecting special geographical offers of vacancies in the EU provides information on study opportunities. In addition, this online service provides professional user files, which allows receiving feedback explaining the reasons for the mismatch of qualifications in the workplace (COM, 2008, p. 12).

14. *The labour market deregulation.* Although European labour markets are precisely regulated, there is currently a trend of increasing their deregulation, which level differs in the EU Member States. Although this process is global, its significance is evident on a European scale. Thus, the deregulation of the labour market at the European level has helped to achieve success in recognising educational degrees, but not for all jobs; increasing academic mobility; creating conditions for labour mobility and employment within the EU (Teixeira, 2013, p. 15; Oruč & Bartlett, 2018).

15. *Lifelong learning actualisation.* Modern professional life is characterised by ephemerality and instability, encouraging workers to constantly retrain and improve their skills, improve

their skills and even change their skills. Today, contemporaries change jobs, and even qualifications, much more often than generations ago. The average European does not have a lifelong job. He changes more than ten jobs during his professional career. In an ageing society with a shrinking workforce, Europeans will have to work longer. It means that professionals aged 40+ need opportunities to reskill and upgrade their qualifications. At present, only 6% of senior workers (aged 55–64) are currently receiving higher education and training.

16. *Demographic decline.* The EU member states that suffered the most from the economic and financial crisis in 2008 are experiencing a significant outflow of their graduates to the EU's cleaner areas. Researchers determine the growth of two flows: from south to north and from east to west. Population ageing and low birth rates significantly impact European regions and depend on social security budgets, especially in Southern, Central and Eastern Europe. For example, global trends of internal migration to cities from rural areas may decrease the country's population. Portugal vividly illustrates demographic change, leading to a reduction in the higher education system, namely the emergence of "winners and losers". Thus, HEIs located in peripheral regions are the biggest losers, while urban universities are the big winners. The migratory flow of students to cities with large universities may mean that small HEIs (up to 7,500 students) and medium-sized HEIs (7,500–15,000 students) will suffer more from demographic change than universities with larger contingents of students. Private HEIs are suffering more from the demographic decline. European countries, especially in Central and Eastern Europe, may face a shrinking private higher education due to demographic trends (OECD, 2008).

Since 2015, the growing number of HEIs has challenged the negative effects of the demographic crisis – a decrease in the number of students, which will continue in the future. In many

free economic zones, the reduction in the number of students was due to demographic changes, especially in Hungary, Latvia, Lithuania, Portugal and Romania (100%), or due to the financial situation of students and their families, especially in Italy (77%), Latvia (75%). Portugal (100%), Slovakia (67%) and Spain (91%) (Karseth & Solbrekke, 2016, p. 64). As a result of demographic changes, HEIs in the future will enrol fewer domestic and more foreign students and staff (Mizikaci & Baumgartl, 2015, p. 16).

17. *The rise in graduate unemployment* is due to many factors, including the disruption of the link between formal higher education and the labour market, which has been a guarantee of employment but no longer meets today's challenges. At present, the EU has the most educated workforce. Almost 40% of Europeans between the ages of 25–39 have higher education; this figure was about 25% in the last decade. However, the EU is struggling with persistently high youth unemployment rates. Although this indicator began to fall, it is still more than twice the overall unemployment rate and is much higher than other developed countries (Mizikaci & Baumgartl, 2015, p. 20).

18. *Complicating the transition of graduates from higher education to the labour market.* Today's graduates with higher education in the EU find it harder to find a job than before, and the vast majority of those who get a job does not work in their qualification. The EU labour market is characterised by a two-part crisis of high youth unemployment and skills shortages. Lack of qualifications is a common cause of entry-level vacancies for graduates to enter the labour market. 40% of European employers' report difficulties in finding workers with the skills needed for career growth and innovation. Education providers do not cooperate with employers, and those, on the other hand, do not often interact with universities, so their qualification requirements are hardly considered while the curricula are developing. Consequently, 72% of HEIs consider

graduates adequately prepared for the labour market, while only 40% of employers and young people share this opinion. As a result, a quarter of graduates do not experience a smooth transition from higher education to the labour market (European Commission, 2018, p. 7). On the other hand, graduates report a lack of practice-oriented education in higher education, which is a fundamental reason for the inconsistent quality of educational services with the requirements of the labour market. 60% of respondents report a lack of professional skills acquired in universities (Mospan, 2021).

19. *Lack of teachers due to ageing staff.* Demographic changes affect not only the population as a whole but also the teaching profession. On average, 26% of primary school teachers and 31% of secondary school teachers are over 50 years old in OECD countries. European countries with a large proportion of teachers over the age of 50 include Germany (47%), Denmark (45%) and Sweden (43%); in elementary schools – Germany (49%), Italy (48%) and Sweden (44%), in secondary schools only 5% of Italian teachers are under 40 years old. Tendencies of the ageing teachers' workforce are also noted in France, the Netherlands and the United Kingdom (Schlotter et al, 2008, p. 5).

20. *Circular economy and the emergence of "green" jobs.* Of all the European Union member states, Finland was the first to actively transit to a circular economy and implement its principles in education. The education system is a crucial player in the transition from a linear to a circular economy. Finland has implemented teaching the circular economy at all levels of education since 2017. Since then, the country has quickly become a leading country for training specialists in the circular economy. Higher education institutions offer the world's most significant number of educational programs and courses in circular economics. The content and purpose of professional

training meet the goals of economic transformation of the state and the requirements of the circular labour market (Sitra, 2016; Sitra, 2019).

21. *Distance education and work* have become an essential part of people's lives during quarantine caused by the COVID-19 pandemic. The Coronavirus is a massive challenge of the last decade that has changed higher education and the job market in the world. However, higher education systems have met with quarantine with varying willingness to use ICT tools in distance learning. For example, for Ukrainian students, distance learning in 2020 was a new experience, i.e., 79,2% of respondents had never learned in remote or even hybrid mode before (Mospan, 2021). Thus, the rapid transition to distance education occurs in different ways depending on the economic development of countries. E-learning statistics show that 63% of high school students in the United States use digital learning tools daily, and 45% of primary school students use one digital learning tool every day (Chernev, 2021). However, TV and radio broadcasting remains the most valuable instruments for distance learning in most countries (The World Bank, 2020). It is worth noting that higher education has transformed more accessible to digital format due to education platforms being widely used. Students at universities enjoy digitally-based learning (Mospan & Slipchuk, 2020).

The above makes it possible to draw the following conclusions. Analysis of trends in the interaction of higher education with the labour market in the EU during the two decades of reforms has identified factors influencing the formation of the quality of education at the macro level. Such factors include globalisation of higher education, number of international students, academic mobility, the spread of English, internationalisation of higher education, Europeanization of higher education, the Bologna Process spread and development

of EHEA, quality assurance of higher education, growth of higher education, the introduction of alternative funding, increase in the number of Internet providers of educational services, marketing of higher education, monitoring and dissemination of information on supply and demand of specialists in the labour market, deregulation of the labour market, the actualisation of lifelong learning, demographic decline.

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III. CULTURAL ASPECTS OF QUALITY ASSURANCE AT UNIVERSITY

3.1. University values for education quality culture development at university

Improving and ensuring the quality of higher education is one of the main priorities of the European Higher Education Area, enshrined in the strategic documents. Thus, it was stated at the Paris Communiqué of the Bologna Process Ministers of Education (1918): “For the past 20 years, the core mission of the Bologna Process and the main objective of structural reforms have been to ensure and enhance the quality and relevance of learning and teaching. Quality assurance is key in developing mutual trust as well as increasing mobility and fair recognition of qualifications and study periods throughout the EHEA” (Paris Communiqué, 2018). The main elements of European and Ukrainian educational reforms are the legal regulation of education quality assurance processes, creation of management institutions at the European Union level, development of external and internal quality assurance system at the national level, impact of quality assurance system on higher education development, internationalization of quality assurance system. However, one of the four principles of quality assurance in the European Higher Education Area – quality assurance contributes to the development of quality culture – is somewhat forgotten in Ukraine; it is obscured by regulated processes of quality assessment and control. Lack of systematic knowledge about the content and implementation of education quality culture is felt in scientific discourse, where there are few publications on this subject, which is an obstacle to its development in Ukrainian higher education institutions.

In the European Higher Education Area, several projects

have been devoted to understanding the quality culture and studying the experience of European universities in implementing its elements. Thus, in 2002–2006, 134 higher education institutions from 36 European countries took part in the project “Quality Culture in European Universities: A Bottom-Up Approach” (2006). The main goal of the project was to determine how to develop an internal quality culture and implement it in higher education institutions. During 4 years the project participants studied best practices in implementing of the quality culture: content, principles, strategy, policy, planning, monitoring, implementation processes depending on the types of organizational structure of the university, the degree of its autonomy and centralization of power, participants in the educational process within the institution of higher education, as well as communication with society and all stakeholders.

The project “Quality Culture in European Universities: A Bottom-Up Approach” (2006, p. 20) drew conceptual conclusions on the understanding of the quality culture of higher education and its implementation in European universities. First, the project defined quality culture as an organizational culture that contains two main elements: the management processes that improve quality, as well as common values, beliefs, ethical standards of all participants in the educational process. The two elements are closely linked and interdependent, and the relationship between them is based on communication, complicity and trust. The model of quality culture is illustrated in Figure 3.1.

The project report also stated that it was extremely important to distinguish between two concepts: quality culture and quality assurance; moreover, they cannot be identified. While quality assurance processes are tangible and institutional decisions, the cultural element – shared values, beliefs, expectations, commitments, and liability, fidelity to

quality – is much more difficult to change at both the individual and collective levels.

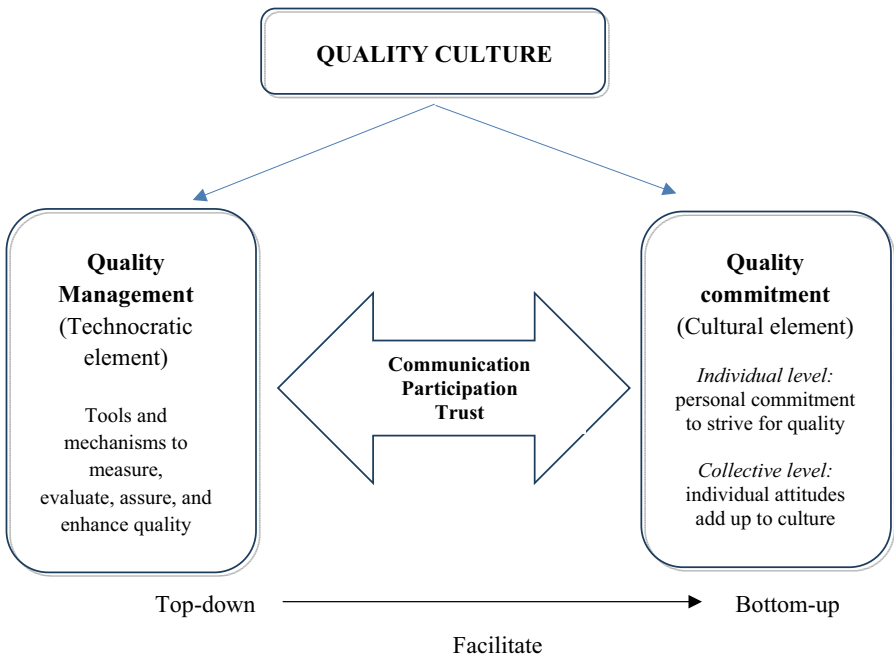


Figure 3.1. The model of quality culture

Source: Quality Culture in European Universities: A Bottom-Up Approach (2006, p. 20).

Secondly, the project “Quality culture in European universities: A Bottom-Up Approach” (2006) formulated the basic principles of implementing elements of quality culture, which were the basis for standards and recommendations for its provision in the European Higher Education Area: the inextricable link between quality and institutional autonomy; formative, not punitive approach to the introduction of elements of quality culture; active participation of students in the processes of quality culture; constant and constructive communication with

all external stakeholders; ensuring a bottom-up approach to the quality of education (i.e. broad consultations and discussions with all participants in the educational process, not just the activities of institutional management) in order to avoid the risk of excessive bureaucratization.

The next project “Examining Quality Culture” (2009–2011) was based on these conclusions, aimed at identifying institutional processes and structures that support the development of internal quality culture.

It was held in 3 stages. The first stage focused on reflecting the existing processes of quality assurance and quantitative indicators of its improvement by surveying 222 higher education institutions from 36 European countries. The second stage was devoted to a qualitative approach to cultural and more informal elements of quality culture. The results of 59 telephone interviews with 10 universities in 10 different countries not only provided suggestions on how to develop the effective quality culture, but also highlighted the role of management, leadership, values etc. in these processes, which should be considered when developing policies and procedures, improving the quality of higher education. Finally, the third stage concerned summarizing and discussing the results of the study. 30 quality assurance experts from the European University Association (EUA) at a two-day seminar in Edinburgh (Scotland) made key conclusions on the results of the project.

It was acknowledged that even the best ideas for the development the quality culture of higher education can not always be automatically imported into another university. “Reframing the quality culture concept along those lines means to let go of the idea of a universally shared ideal” (Examining Quality Culture (2009–2011)).

After all, the socio-cultural determinants of the education quality (economic, socio-political, cultural-historical, and

axiological) in different countries differ in the content and the degree of influence. In addition, each institution of higher education has its own institutional identity, its own corporate culture, its own ideas, principles, norms, traditions. Moreover, in each university there may be a number of cultures and different points of view: for example, scientists, teachers, administrators and students or students of different disciplines. Thus, the project conclusions emphasize that the strategy for the development of education quality culture should be based on institutional identity, must take into account the relationship of external and internal requirements for quality education, and seek a balance between different interests and preferences of all participants in the educational process to get their support (Examining Quality Culture (2009–2011)). After all, it is the ideas, principles, norms, traditions, corporate values, not just spelled out in strategies, charters and other basic documents of higher education institutions, but supported by all members of the university community, affect the personal values, needs, moral norms of each participant of the educational process and adherence to the morality norms and academic values in the institution of higher education is a positive factor that contributes to the formation of quality culture. And it is the change of the existing value system that is one of the most difficult and dominant problems in this area.

The study of Harvey & Stensaker (2008) is devoted to the understanding of the concept of education quality culture and its theoretical substantiation. The scientists have analyzed the historical context of this concept formation and classified the theoretical approaches to its formation. The main conclusion made by the researchers is that the quality culture they consider as a way of being a higher education institution, the dialectical, evolutionary process, rather than a predetermined, mechanistic or codified university concept; not just a question of raising

consciousness, but the ideological construction of the university life; the identifier of potential problems and challenges, and non-response to challenges, as well as a tool for assessing of the university functioning. At the same time, the scientists point out that it is impossible to build the quality culture regardless of the social context in which the institution of higher education is located, so they understand the limitations of mechanistic transfer of the best practices to form the quality culture on another national and institutional basis (p. 13–14).

The Ukrainian higher education institutions did not participate in any of these projects. However, a similar task was performed by the Ukrainian project “Towards Trust in Quality Assurance Systems” (National System for Quality Assurance and Mutual Trust in Higher Education – TRUST), supported by the TEMPUS program (2011–2014). Within its framework, the Ukrainian scientists cooperated with European partners. The project aimed to develop a new strategy for quality assurance in higher education and the approaches to transparent and unbiased assessment of education quality.

Characterizing the low efficiency of the Ukrainian higher education system, project participants identified its main reasons: outdated principles (administrative-command) management of the education system cause a lack of motivation of students, teachers, employers, governmental and non-governmental organizations to improve the education quality; the existing quality assurance procedures are not transparent either to the participants themselves or to an external observer; and since all quality assurance processes depend on state power (i.e. they are created and financed by the state), there is not enough trust to them in society (Dobko et al, 2014).

However, since 2014, the quality assurance system in Ukrainian higher education has changed for the better, especially in the normative-legal framework for the regulation

of educational processes. An independent National Agency for Quality Assurance in Higher Education has been established and has successfully started accrediting the educational programs; “Standards and Recommendations for Quality Assurance in the European Higher Education Area” have become a guide for the universities in building internal quality assurance systems; the distribution of funds from the state budget between higher education institutions is carried out by the Ministry of Education and Science of Ukraine in accordance with the indicators that stimulate universities to develop, respectively to labour market demands, to up-grade the quality of education. The level of openness and transparency of both higher education institutions and governing bodies in this field has increased. However, as noted by the participants of the project “National Quality Assurance and Mutual Trust in Higher Education – TRUST”, the problem of quality assurance in higher education is in the plane of interaction mechanisms between society and education, and it can not be solved only by administrative and management measures. And the above measures to improve the quality of Ukrainian higher education are precisely managerial, administrative, taken “from top to bottom”. It is needed a public demand for the conformity of Ukrainian education to the world level, society social activity and motivation of all stakeholders to improve the quality of education, formed system of values in accordance with leading European practices (Dobko et al, 2014).

Thus, on the one hand, quality assurance processes in the Ukrainian higher education system are tangible and manageable institutional decisions. On the other hand, there are not enough fundamental elements to build the quality culture: it is the cultural element – shared values, beliefs, expectations, obligations and dedication to quality – that is much more difficult to change at both the individual and collective levels. After all, without the common values, ethical norms and traditions that

are perceived and supported by all students and staff of the university, the management processes of quality assurance in higher education remain formal and therefore ineffective. And strengthening public confidence to higher education, without which, again, it is difficult to involve the stakeholders in the process of improving quality and increase their motivation – is a long-term goal that can not be achieved only through revolutionary management decisions.

Thus, the primary and most difficult task in developing the quality culture in the Ukrainian higher education institutions is to strengthen the system of values at both the individual and collective institutional levels. After all, as rightly stated Harvey & Stensaker (2008), emphasizing the ontological dimension of culture, “culture is nothing if it does not belong to the people who live in it” (p. 13).

According to Kremen (2012) values are the universal, along with ideals and norms, components of human existence. The man’s world is the world of values, which is constantly updated in the process of development. Values are fundamental for human existence. They assert the universality of a human being, i.e., its ability to go beyond its individual, separate existence, both natural and social. A man and society cannot exist without values.

Values are correlated with all human life activity, determining the meaningful side of the individual orientation and forming the basis of his relations to the world, to other people, himself, the basis of worldview and the core motivation of life activity. The system of values is the link that unites society with a personality and indicates the landmark, perspective, defined by society for each individual and includes a person in the system of social relations, determines the purpose of any activity and the means by which it is implemented. Human values consist of certain abstract criteria that are applied by a person to evaluate

the world, himself, people around him and ideas about the future and so on. Thus, values govern human being behavior, individual motivation; indicate person purpose and means of achieving it.

Values cannot be studied in a textbook, the value system is not a passive consequence of the socio-cultural environment, economic and political factors influence and even education as a mechanism for the development of values; it is always an active process. Values are a form of self-awareness, self-expression of internal intellectual, moral, aesthetic and other forces and ideas of the individual. After the process of appropriation, the values, an individual seeks new meanings of life, which contributes to an individual formation as a person capable to design, to form an image of a person's future in accordance with the appropriated values. Education in this context has a decisive influence on the individual, because in essence it is a field in which the past and present are combined to create the future, so it appears as a sphere of the future (Ogneviuk, 2003).

In the system of values related to education the internal and external values are distinguished among others. In the internal values of education functioning there are four types: academic, i.e., traditional values focused on the relevant field with qualitative criteria, ranked according to the parameters of the discipline; management, focused on policies and procedures; pedagogical, focusing on skills and competencies, values focused on the graduates' employment in accordance with hierarchically structured standards.

External values are induced to education by society, the state; in particular, they determine the economic values of education, i.e., its ability to ensure the functioning of socio-professional structure of society. It is clear that these groups are interdependent and they are in the process of interaction and transition (Panchenko, 2009).

Thus, the formation and development of university values are considered in terms of two research approaches: the first is devoted to broad cooperation of higher education institutions with different groups of external stakeholders with different needs, prospects and behaviour; the second focuses on students and their roles and attitudes toward collaboration in creating corporate university values.

Socio-cultural factors (economic, socio-political, cultural-historical, and axiological) play an important role (and perhaps a determining one) in the formation of the university community values. However, in Ukraine they are quite unfavourable for higher education and to some extent block the development of quality culture in higher education institutions. The lack of an established democratic state governed by the rule of law and a competitive environment in the country, the oligarchic monopolization of political and economic spheres of social activity leads to opportunities to be employed not according to the criteria of real competence, but only by a diploma which nominally confirms the existence of higher education in its owner, and thus create a kind of mechanism of negative social selection in modern Ukrainian society. This does not motivate a wide range of Ukrainian students to obtain quality higher education (Ryabchenko, 2020).

The socio-political factor is related to economic (weak economy, lack of jobs, insufficient remuneration for work), which negatively affect the professional level of teachers who are not interested in improving the quality of teaching for low wages, and students who in their most remain passive recipients of diplomas rather than real professional knowledge and competencies, and therefore are not interested in a high level of teachers' professionalism. After all, according to a sociological survey conducted by the Center of Independent Sociological Research "OMEGA" commissioned by the Ministry of

Youth and Sports of Ukraine in 2017, almost half of the surveyed employed youth (48.1%) do not work in a specialty obtained in an educational institution (Youth of Ukraine – 2017, 2017). Among the explanations why they have to work outside the profession, the respondents mentioned primarily economic factors: the lack of vacancies and unsatisfactory salary (see Table 3.1).

Table 3.1

Responses to the question “Why do you have to work outside the profession?” (N = 1388), %

Lack of vacancies in the labour market	36,7
Unsatisfied with the salary	31,4
Unsatisfied with the working conditions	18,4
Competencies acquired at HEI do not meet the employers' requirements	10,5
Dislike working in the job	9,7
Lack of career growth	8,1
Lack of prestige	7,5
For health reasons	4,5
Others	0,4
Difficult to answer	18,9

The sum of the answers exceeds 100%, because the respondents could choose several answer options.

Source: Youth of Ukraine – 2017. Sociological survey, 2017.

The following explanation of the respondents why they do not work in their specialty is also noteworthy: the competencies

acquired in the specialty do not meet the requirements of the employer (10.5%). This chosen option did not specify the reasons for this discrepancy: individual failure or non-compliance of education received in a particular institution with market requirements. However, we think that in Ukraine there is a rather acute question of whether the higher education offered by national higher education institutions meets the requirements of the modern information high-tech society market. After all, according to a survey conducted by the Ukrainian Institute for the Future in 2021 together with New Image Marketing Group, 49% of respondents believe that there is a certain stereotype in society that education is the key to success; in fact, the quality of education and knowledge got at an institution of higher education does not matter. According to respondents, the university – is an important space for socialization, finding friends and future partners, the opportunity to experiment with starting your own business with minimal risk, rather than science, knowledge or practical skills in the chosen specialty (Education in Ukraine: one in five aims to study only abroad, 2021).

One of the negative factors influencing the formation of academic values is corruption, which is quite common in education. According to the World Bank report “Review of the Education Sector in Ukraine: Moving toward Effectiveness, Equity and Efficiency” (2019), corruption, including widespread disregard for academic integrity standards and tolerance for violations in the academic sphere, has contributed to declining educational quality and the credibility of diplomas. Although the possibility of corruption in higher education has narrowed since the introduction of the External Independent Assessment in 2008, other problems have not gone away: academic dishonesty and systematic violations of academic integrity, including exam write-offs and plagiarism, are common and are not perceived

as violations. According to various estimates, at least 25–30% of students have direct experience of academic misconduct or bribery, and those who have seen and know about such cases are even more. Because higher education plays a fundamental role in the development of the public and private sectors and is the motive force for social mobility, this challenge remains a big problem for the higher education system (Review of the Education Sector in Ukraine, 2019).

However, Kapitsa (2017) rightly states, corruption is not only a phenomenon when a teacher demands money instead of knowledge. Corruption is also when a student is too lazy to acquire knowledge – and he buys a grade. Phenomena such as plagiarism of scientific works or even elementary writing are typical for Ukrainian universities.

Thus, negative socio-cultural factors that directly affect the higher education system in general and its axiological sphere in particular, lead to the devaluation of higher education and university status value in Ukrainian society, and this, of course, does not contribute to the formation of quality culture in national higher education institutions.

The scandal that broke out in the spring of 2021, when in trial testing of external evaluation in Ukrainian language and literature it was used D. Semenov's text "Ukrainian higher education is dead. Stay away from it" (2016), which was written in 2016 and was supposed to serve to test the critical thinking of school graduates, only confirmed the public distrust of national higher education. Although the Head of the National Agency for Higher Education Quality Assurance S. Kvit (2021) rightly assessed this text as an unsubstantiated and banal claim with a vulgar title, it should be acknowledged that this poor choice of text for the EIT became a litmus test confirming the low status of Ukrainian higher education among main stakeholders – students, employers and society at large.

In fairness, it should be noted that in other countries there is some public dissatisfaction with national higher education. Thus, Cook et al. (2019) published a scientific article with the emotional eloquent title “It’s just not worth the damn!” Examining the perception of the university education value in the UK, the authors concluded that because of massive expansion of the higher education sector in the country its financial benefits decreased due to lack of employment prospects, low wages and rising tuition fees; the benefits of higher education for both the country’s economy and the individual are destroyed. These processes reduce the value of higher education in the UK; they can provoke uncertainty and reduce the demand for higher education in the lower socio-economic strata of society and at the same time provoke intra-class conflicts in the higher socio-economic strata (Cook et al, 2019).

If in the UK, higher education which is the best in Europe and occupies a top position in the world, its social value decreases, what to say about Ukraine, where only half of respondents (54.5%) admit that education provides an opportunity to develop in labour sphere (career growth, salary increase, starting your own business, etc.), i.e., 45.5% of respondents essentially define education as unnecessary in their lives (Youth of Ukraine – 2017, 2017).

A higher education institution as a social institution built into the social system cannot be completely isolated from society and be not subject to its influence of both positive and negative factors. However, in accordance with the principles of quality assurance in the European Higher Education Area, it is the universities that have the primary responsibility for the quality of provided higher education. Thus, each higher education institution forms its own quality assurance system at the institutional level and develops internal standards based on “Standards and Recommendations for Quality Assurance

in the European Higher Education Area (ESG)” and taking into account the needs and expectations of students, all other stakeholders and society. “The implementation of an internal quality assurance system must be based on the unique internal culture of the university, its mission, traditions, appropriate quality policy, mutual respect and trust among all members of the university community” (NAQA Annual Report: 2019, 2020).

Higher education is a fundamental basis and one of the sources of forming a system of individual’s priority cultural and the ideological values. Universities as an important system element of the country social capital formation become a crossroads of social cooperation, form around themselves an atmosphere of social trust and serve to form a just society. The university is an important element in determining the moral position of modern society (Boychenko, 2016). The activity of universities was never limited to the training of future professionals, but always performed the social function of reproduction and development of society and its systems of life, realized through the translation of cultural norms in changing historical circumstances, each time on new material of social relations (Chervona, Bulvinska, 2021).

Education transforms and directs the life of society, preserving in it all that has value for person; determines the strategy and realistic conditions for the development of society, transforming it from “society today” to “society tomorrow”, forms a new thinking of citizens, a new vision of life meaning. In this context, education acts as one of the means of society development managing (Ogneviuk et al., 2012).

The system of common values, attitudes, norms, habits, traditions, forms of behavior and rituals is an important element of the university corporate culture. The effectiveness of the university corporate culture can determine its organizational

success, as known to all members of the university community and all supported values and principles help the institution of higher education to form effective policies and justify specific management decisions.

In addition, clearly defined and understood university values have a positive effect on the university image, its attractiveness to applicants, potential students, who, of course, can not assess the quality of higher education institutions educational services until they start studying there, and therefore when choosing a university for future studies they focus on its image and reputation compared to other institutions.

When the students perceive their university as different from others in values and educational practice and share its values, commitment to and identification with one's home institution of higher education continues even after graduation. For the university, the preservation of loyal graduates is important because it provides access to business organizations, professionals, employers, additional funding, increases the opportunities for oral advertising and, ultimately, the competitiveness of higher education (Jaakson, 2008).

And, of course, common university values, ethics, attitudes and traditions enhance the quality of higher education; they are the basis for the development of the quality culture in higher education institution.

Confidence in university values stimulates not only the desire of students to establish long-term relationships with higher education institutions, but also their willingness to create values in partnership with academic staff, scientists, university administration. As it was emphasized in the reports of European projects on the formation of higher education quality culture, the main mechanisms of this process are communication, complicity, trust. These provisions became the basis model

of co-creation the university community values by the Polish researcher Dziewanowska (2018) (Figure 3.2).

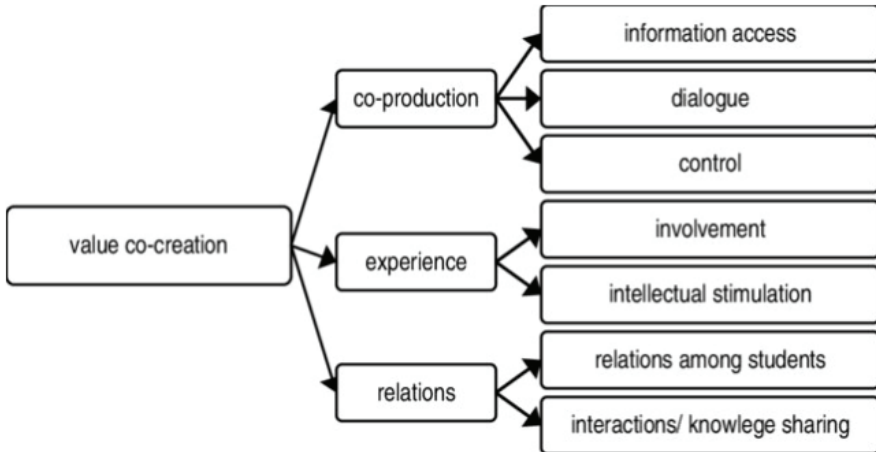


Figure 3.2. Dimensions and components of the value co-creation process in higher education – a proposed model

Source: Dziewanowska, K. (2018). Value co-creation styles in higher education and their consequences. The Case of Poland.

The model includes three dimensions: *co-production* (which reflects the close cooperation between the subjects involved in the process), *experience* (as a stimulus to the use of value) and *relations* (characteristic of a higher education institution). Each dimension is based on processes that can be defined as its components.

Co-production of values is based on three processes: *information access*, i.e. the ability of teachers and students to obtain all the information necessary for an effective educational process, its openness and transparency; *dialogue* as the ability not only of students and teachers to productive educational communication, but also the organizational ability of the entire educational institution to create a comfortable environment for

this; *control*, which provides an opportunity for participants in the educational process to control it and share responsibility for its quality.

Measurement of *experience* provides the active *involvement* of all participants in the educational process in the values creation; *intellectual stimulation* reflects the cognitive dimension of experience (formation and development of individual skills and competencies for professional activities; broadening horizons and critical thinking; personal growth and self-development).

Relations are based on interaction between the participants in the educational process, which leads to the emergence of values in the process of co-creation: *relations among students* reflect the social aspects of experience (participation in public life of the university, student government, student partnership programs); *knowledge sharing* is a key element of teaching and learning in an educational institution; it also applies to joint research, development and improvement of educational programs, university management, cooperation with the district community, city, state).

Thus, with the accumulation the experience of effective, open, transparent, partnership and interaction of all educational process participants the education quality culture will crystallize in the academic community, because, as Ershova and Babina (2015) rightly claim, only in specific institutional environments the concrete participants ensure the result of quality culture is formed, its level rises. Knowledge, about how it can be, must be applied, tested, adapted, adjusted and generate our own knowledge about our reality, quality and culture.

Summarizing the above material, we formulate the main conclusions:

1. In the processes of developing the higher education quality culture an important role is played by the commitment and devotion of all university community members to the unique

internal corporate culture of higher education, its mission, traditions, mutual respect and trust between participants. And if for the regulation of the quality assurance of education, the development of national external and internal quality assurance system can borrow a positive example from other countries, the quality culture can not be mechanically transferred from one university to another; it must take into account socio-cultural factors that affect the field of education, institutional identity and uniqueness of higher education institution.

2. The decisive role belongs to the common and individual values of the university community, which together with quality management measures contribute to the establishment of the education quality culture as a way of the university life, as well as its organizational success, competitiveness.

3. The main mechanisms of forming the quality culture are communication, participation, trust. It is in the co-creation of students and teachers as the main participants in the educational process, as well as employers, scientists, administration, common university values are born, in the accumulation and repetition of experience of individuals the higher education institution quality culture evolutionarily evolving.

3.2. Academic culture and academic integrity as the values of sustainable development of university education

At the present stage, university education requires a global change in the culture of interaction of the educational community. Reluctance to change, acceptance of manifestations of corruption, flattery in order to obtain illegal benefits, lack of true patriotism, consumer culture block Ukraine's movement forward. New principles of quality of interaction between educators are necessary for change of vectors of values of development of university education. Intellectuals and inventors with a high

level of motivation and creativity are the key to success in the future. It is important that Ukrainian universities become a base for training professionals on a moral and ethical basis. The role of the university in the formation of the correct worldview and values of young people is important. Are modern universities capable of such an important mission? The philosophical heritage of M. Hartmann acquires fundamental significance for the discovery of the place and role of values in the education of young people. He believed that the idea of a leading role in the pedagogy of the values of character formation is important: obedience, diligence, perseverance, sacrifice, responsibility. According to M. Hartmann, the manifestation of a person's responsible attitude to the development of their own abilities has a dual character – objective (responsibility to the world) and subjective (responsibility to oneself). That is why the scientist rightly emphasized the importance of a responsible attitude of man to his own upbringing – the development, improvement of individual qualities was considered a real realization of values.

H. Khoruzhyi (2016, p. 50) pointed out the responsibility of universities for the quality control and quality assurance of higher education, the formation of academic culture, the presence of problematic issues in stimulating the value attitude to learning. Researchers consider academic integrity as the guiding principle of the organization of the educational process in higher education, the axiological imperative and the criterion for assessing the quality of higher education, which determines the requirements for all subjects.

The development of academic integrity as a component of professional training of future specialists in European universities has a long-term character. The whole European educational community is connected and they clearly recognize and accept ethical norms and rules. Academic integrity affects not only the moral, ethical and professional qualities of future

professionals, but also the human capital index of the country.

The democratization of higher education and the strengthening of university autonomy have led to increased attention to the problem of institutional quality assurance in higher education, based on sustainable academic traditions and values, interests and priorities for the development of stakeholders. Integration into the Common Space of Higher Education requires the practical implementation of such fundamental guidelines as mutual trust, cooperation, openness, transparency, responsibility, which, in turn, determine the axiological dimension of modern university education. The document "Standards and Recommendations for Quality Assurance in the European Higher Education Area" states that university education policy should support the development of a culture of quality in which all stakeholders take responsibility for and ensure the quality of education, adhere to academic integrity and academic freedom, deny any manifestations of academic fraud.

Policies and procedures for ensuring academic integrity in the university environment are an important component of effective academic governance in UK universities. Let's analyze the experience of ensuring academic integrity in the system of university governance on the example of leading universities in the UK: Oxford University, Cambridge University.

Oxford University's institutional policy on high ethical standards is presented in the following sections:

- maintaining and strengthening the understanding of academic integrity;
- review of policies, processes and management, external involvement;
- investigation of allegations of misconduct in research.

Let's analyze their content. A description of training and development opportunities is provided in the section

“Supporting and strengthening the understanding of research integrity” (University of Oxford. Annual Research Integrity Statement, 2018):

- a recommended list of online courses that are freely available to any student;
- a list of personal trainings that were organized and conducted by various departments of the university;
- programs of seminars on the problems of academic integrity, research data management, research methodology, development of skills in working with scientific texts.

The University has launched seminars for first-year students on the following program:

- research planning, research design and protocol;
- experimental design in scientific research;
- how to avoid cases of illegal behaviour in science;
- statistical thinking;
- writing and publishing scientific papers.

The “Review of Policy, Processes and Governance” section states that the Code of Ethics in force at Oxford University, which was adopted in 2014, was revised in 2018 by a working group of representatives of research and legal structures, discussed and approved by the Research and Development Committee university innovation. The updated document now includes:

- a revised and clearer definition of the concept of «wrongful conduct», which serves to clarify what behaviour may require consideration under this procedure;
- more detailed information on how allegations of misconduct in scientific and educational activities will be assessed, especially at the pre-trial stage, including external third parties;
- additional information on what further action may be required after the allegation of misconduct in the study has been considered. It is also possible to consider anonymous allegations

depending on their severity and the possibility of confirmation from reliable sources. The importance of cooperation between the university and partner institutions at both national and international levels to promote networking and best practices to support and promote research integrity is emphasized in the section “External involvement” (University of Oxford. Annual Research Integrity Statement, 2018, p. 8).

The “Annual Integrity Report” of the University of Cambridge contains information on:

- governance related to research integrity;
- policies and procedures to support the research integrity of research;
- development of best practices;
- supporting and strengthening the understanding of research integrity;
- solving problems related to illegal actions during research.

The role of those involved in academic integrity is described in the section “Governance related to research integrity”. In particular, it is noted that a new position has been created at the university – a facilitator of research governance. In the section “Policies and procedures to support academic integrity” (University of Cambridge. Annual Integrity Report to Council 2017–2018, 2018) it is noted that the university has reviewed practical recommendations for good educational practice. The review recommended a number of changes that were agreed by the Academic Policy Committee (Research Integrity Statement).

Emphasis is placed on the availability of policies on academic integrity that are freely available on the Internet. The section “Development of best practice” is devoted to the consideration of improving the tools for improving academic integrity and assistance to heads of departments at the university (Annual Integrity Report to Council 2017–2018, 2018, p. 4–6). It is noted that to this end, a guidance card has been developed to support

the necessary actions in case of misconduct in the study in the early stages of the process. The electronic and printed versions of this document are provided to the current heads of departments, and the new heads receive it together with a written confirmation of their appointment. The section “Support and strengthening the understanding and application of research integrity” (Annual Integrity Report to Council 2017–2018, 2018, p. 5–8) focuses on the dissemination of policies and procedures on academic ethics and integrity as a key focus for strengthening its understanding and application in the university. It is noted that a central role in raising the awareness of university staff is played by a website dedicated to academic integrity, which provides recommendations on academic ethics and integrity, links to policies on misconduct in research, information on training on academic ethics and integrity. In the section “Solving problems associated with illegal actions in research” (Annual Integrity Report to Council 2017–2018, 2018, p. 8–9) concluded that the university has policies and procedures for misconduct during educational and research activities. The policy clearly defines the manifestations of student misconduct and the responsibility of university staff to report violations if they were witnesses or suspects. The procedure for investigating violations of academic integrity involves careful consideration of charges against persons with appropriate authority, qualifications and experience in the absence of a conflict of interest in the case; is clearly linked to the disciplinary measures contained in the University’s Charter and Orders to ensure appropriate action. It is emphasized that the University seeks to ensure compliance with all obligations to provide information on the investigation of misconduct by researchers and educators to research sponsors and professional bodies as required by grant terms and other legal, professional and statutory obligations and will support researchers to do the same. Policies for research violations,

relevant contacts of individuals are available on the website of the structural unit for staff development and the website dedicated to academic integrity.

The Federal Republic of Germany is a state in which a doctoral degree can be indicated in a passport. Therefore, dishonest citizens resort to fraudulent actions to obtain the desired title. Plagiarism practices and work orders are regularly published in the media. In 2011, a bill was registered in the Bundestag to exclude doctorates from identity cards, but it was rejected. At the same time, after the dissertation of K. Guttenberg, the Minister of Defence of the Federal Republic of Germany, showed signs of plagiarism, concerned members of the community created a project that successfully revealed the facts of improper citation in the dissertations of more than 140 famous politicians, actors and public figures. In most cases, plagiarists were deprived of their degrees through the courts, and in some cases, universities disagreed with VroniPlag's findings.

Many students at European universities report plagiarism and related forms of misconduct. The academic integrity approach to solving the problem of plagiarism is emphasized by the positive promotion and education of staff and students' understanding of academic integrity and cases of neglect of its principles. We analyzed the source texts for postgraduate certificates in higher education (or equivalent) at UK universities. In general, academic integrity was poorly addressed in these texts, and the language used ("deception", "plagiarism") did not reflect an approach based on academic integrity. New issues, such as the acquisition of student writing assignments, have barely been addressed. The concept of academic integrity must be integrated into the main discourse around teaching in higher education in Europe.

Each researcher, according to the results of the publication of the article must sign a document stating that his work does not

contain signs of plagiarism, and the scientist is ready to receive appropriate punishment if found. All scientific achievements used for advanced training or admission to a new position must have a certificate of no plagiarism and an external response to each work, signed by the reviewers.

The following punishments are provided for educators who have been exposed for acts of dishonesty: written warning; reprimand; dismissal, deprivation of the right to be promoted to a higher rank; dismissal from the university; cancellation of the diploma received from the university. If an educator has a high academic title, he is automatically deprived of it. If a higher education institution does not apply the sanctions regulated by law, the Minister of Science and Education may punish the university administration and the plagiarist himself. Punishment for the university administration includes: warning, reprimand, state statement that the director may not engage in educational activities.

The analysis of leading foreign experience in ensuring academic integrity, for which the best universities in Europe were selected, allowed us to draw the following conclusions: summarizing the information of annual reports of leading British universities on academic integrity at the institutional level, open policies and procedures to ensure academic integrity, their continuous improvement, transparency and accountability for adherence to the principles of integrity during the educational process, ensuring the reliability, confidentiality and fairness of the process of dealing with allegations of misconduct in research, creating opportunities in the university environment for learning and professional development of researchers on the issue of research integrity, cooperation of the university with partner institutions both nationally and internationally bottom levels).

Let's analyse ensuring compliance with the norms of

academic integrity in Ukraine. The draft Code of Ethics for Scientists of Ukraine was approved on April 15, 2009. The need to formulate general moral and ethical principles that must be followed by all scientists and researchers during their work was the purpose of creating a Code of Ethics of the scientist of Ukraine (Code of Ethics of the scientist of Ukraine, 2009, p. 15). The Code of Ethics regulates the relations of researchers during professional activity, regulates the rules of fair evaluation of activity from an ethical point of view. Regulated rules are a solid basis for the moral foundation of researchers who are beginning their scientific path. Giving priority to ethical actions in research and responsibility to the scientific community for their own actions is the main purpose of this document. Not all educational institutions keep up with the rapid improvement of technological progress, so the responsibility of the scientist is important. Recourse to fraudulent activities during exams is a negative phenomenon of modern education, because it worsens the image of the university and devalues in the eyes of virtuous students. Those students who study in finance or business are more prone to plagiarism than others. Ukrainian researchers point to the fact that the most shameful manifestations of fraud are writing off cheat sheets, teamwork between students for the sake of high marks, stealing tickets for the exam (Sopova, 2017a, p. 34).

The code of ethics should guide the activities of scientists in such a way that it is as useful as possible for the human community. The axiological and pragmatic aspect, based on the recognition of the self-worth of scientific research and attention to their practical significance, is the inner essence of ethical regulation in the field of science. At different stages of development of science, in different socio-cultural environments, the first or second of these aspects may prevail, but none of them can be completely supplanted: axiology and pragmatics are closely intertwined in

the life of science itself, and in any serious attempts to morally-ethical understanding. The code of ethics cannot reproduce the current state of affairs in a particular society. To outline the guidelines for the desired behaviour of the subjects of the educational process and to formulate the norms that must be observed to implement the essential purpose of science – this is the purpose of the code. The desire to establish universal ethical criteria for the activities of a scientist and the international exchange of experience in which Ukrainian researchers participate should be considered constructive and heuristic. The only in-depth ethical requirements are faced by scientists from different countries in very different economic, political, cultural, ideological circumstances, so it must be taken into account. National codes of ethics should not bypass the uniqueness of specific moral contexts. The remnants of the socialist mentality, the instability of economic relations, the meager allocations for the development of science, the dominance of mercantilism, the ideology of corruption are very powerful factors that cannot be ignored when talking about the moral and ethical dimensions of scientists in Ukraine. Under such conditions, the code of ethics of a Ukrainian scientist should emphasize the axiological aspect of the attitude to truth as self-worth, emphasize such moral qualities of a scientist as independence of one's own opinion, honesty, impartiality.

Despite the large number of pseudo-scientific views and mythologizing of the latest variety, the modern Ukrainian scientist is obliged to take care not only of the rational substantiation of his own views, but also of the value assertion in society of the very nature of rationality. He must be aware of his responsibility for the nature of the interpretation of the acquired knowledge, for the fact that references to them are not used as tools of dehumanization. The important social significance of the moral and practical attitude of scientists in modern Ukrainian society

is confirmed by such a characteristic feature of society: against the background of all current troubles, it shows that sociological research continues to maintain a fairly high level of trust in scientists, respect their moral authority (Malakhov, 2009, p. 12). Therefore, the adoption by the community of Ukrainian scientists of an effective code of ethics would be useful not only for domestic science, but also for society as a whole. The "Code of Academic Integrity of the National Agency for Quality Assurance in Higher Education" was approved at a meeting of the National Agency for Higher Education Quality Assurance on February 25, 2019 (Code of Academic Integrity of the National Agency for Quality Assurance in Higher Education, 2019).

Academic integrity is the most important component of university education as an institution, i.e., during the educational or scientific process, all members of the academic community adhere to the moral and ethical principles of a developed community. The category of academic integrity consists of such components as ethical values, counteraction to deception, fraud, theft of opinions; support for the principles of academic ethics; responsibility in research and publication of articles. In the conditions of decentralization of education, observance of academic integrity gives the university greater competitiveness, because it creates an attractive virtuous image, professional reputation. Grantees pay attention only to those universities that have Codes of Honour.

Professor (lecturer), representing a particular field of knowledge as a professional and involved in intellectual (scientific, scientific and methodological), and often personal, friendly relationships that go far beyond a university and have for him of paramount importance. In this case, he can be considered as a representative of the profession at this university. His professional activity may conflict with the corporate interests of the university, ranging from such a basic thing as the ability of the university

budget to support its research, and ending with the extent and quality of its subject is represented in the curriculum. Thus, the simplest example: The Faculty of Management is professionally interested in their subject being not only necessarily presented in the curriculum, but presented in a volume sufficient to be able to lay out its basics and instill in students the ability to make management decisions. Equally objective is the clash between the motives of professional integrity, which are based on the focus on truth and its translation in the pedagogical process, and pragmatic motives, which involve external success, are usually opportunistic in nature. There are aspects of public life for which the subordination of the mechanism of market efficiency is detrimental. The party of professional scientific and educational activity, undoubtedly, first of all has relation to them. Here, market mechanisms can be used to advantage in a very limited amount, and only in those points where we are talking about the conditions of scientific and educational activities, but not about its essence.

It is clear that the value of the proposed model is not limited to the above ideas. No less valuable is the fact that they are translated into the language of applied ethics and divided according to possible sections of the code. It is inappropriate to introduce into the university code provisions that are of a general nature and can be in any code (most importantly, which do not put specific more or less unambiguous actions and behavioural patterns). In the absence of a section on the obligation to respect the personal dignity of the student, it will not be possible to bring to disciplinary responsibility a teacher who has committed such an insult.

Leaving aside the question that the formal codification of norms is not a condition of their ethical obligation, we note that the existence of such a point in itself does not give anything, unless a more detailed explanation is offered.

Another group of actions involves reforming the management system, regulatory framework and established control procedures. This is done to increase the effectiveness of control, a clear division of responsibilities between the structures that exercise such control, the establishment of simple and clear criteria for competitive selection, denial of candidates and suppliers with a bad reputation, elimination of conditions in which there are cases of corruption and fraud communication (receiving complaints and suggestions from employees).

Prohibitions and restrictions are the easiest way to combat corruption and fraud. Some acts of academic dishonesty (forgery of diplomas, receiving or giving bribes, embezzlement of university funds) are punishable by imprisonment, others – release or expulsion, fines, cancellation of exam results.

In many countries, automation of processes plays an important role in combating academic dishonesty in exams, plagiarism, teacher absenteeism, corruption in recruitment, embezzlement, corruption in the issuance of library books, and the distribution of dormitory space. Unfortunately, in many cases, automation does not eliminate the subjective factor and leaves a wide range of opportunities for abuse, so it can have a significant effect only in combination with other actions. Actions to stimulate public control consist, first of all, to ensure information openness of educational institutions, as well as to encourage the activities of public activists who monitor the work of the education system.

In order for the policy of information openness to be effective, a number of conditions must be met. As the European experience shows, it is important not only to ensure that everyone has access to key information about the work of educational institutions (for example, budget spending) in a simple and easy to understand way, but also to make public members aware of their rights to access such information, for

which it is advisable to conduct information campaigns with the participation of government agencies and human rights NGOs. It is also important to provide feedback (for example, publications in the media) for those activists who find violations.

The experience of a number of European post-socialist countries shows that anti-corruption student movements can make a significant contribution to the fight against academically dishonest behaviour. Examples are the activities of the Bosnian student group Millennium, which, with the support of government agencies and international organizations, monitors the perception of corruption in universities and public mobilization campaigns, and the Anti-Corruption Student Network, which includes student organizations from Albania, Bulgaria, Macedonia, Moldova and Croatia (Uusiattu, & Maatta, 2012, p. 52).

Special skills' training is very important, along with organizational and legal measures, as well as raising the level of awareness and morale of those who can play a key role in the fight against corruption. Teachers, administrative and technical staff, students and activists need to be assisted in learning the skills of anti-corruption budget monitoring of institutions, the relationship between the administration and service providers. Along with training, it is very important to simplify financial and other reporting to make it easier for anyone to check it.

A special role in the fight against corruption and fraud at the university level is given to codes of ethics, whose role is not only to draw the line between approved and reasonable behavior, support corporate values, but also to be the basis for disciplinary decisions up to the dismissal of unscrupulous staff or student deductions. In practice, the application of codes of ethics often faces a number of problems: few people know about the content of these codes; they do not work without orderly mechanisms for fulfilling the requirements; with an undemocratic system of

government, such codes can become a tool for reconciliation and pressure (Sopova, 2018, p. 80).

Therefore, the provisions and mechanisms of application of codes should be simple and communicated to all staff and students, and disciplinary decisions should be entrusted to a body independent of the administration of higher education institutions with the participation of teachers. In addition to the above recommendations, it is advisable to maintain an open database of violations (Sopova, 2017a, p. 31), which increases the transparency of university disciplinary policy, sets precedents for decision-making in typical situations, and builds a national reputation.

Not only feedback but also analytical support, including risk analysis and perceptions of corruption, can be a serious help in making effective management decisions to combat academic dishonesty. In the analysis of risks, alarming symptoms (“red flags”) serve as a guide, the presence of which may indicate abuse (Sopova, 2017a). The results of surveys on the perception of corruption allow us to assess the success of the measures taken and, if necessary, adjust the policy pursued.

In the conditions of thorough reforming of educational process in institutions of higher education the problem of researches of tendencies of development of academic integrity of future experts as a component of academic culture of university acquires special urgency. The experience of European universities is the basis for such research. A significant place in the European system of higher education is given to the awareness of the essence of the principles and norms of academic integrity. The European educational area understands that in modern life the main chance for success is the ability to build real educational cooperation between students, parents, teachers, university administration, graduates, employers. All participants in the educational process have a common goal.

European student strives from the beginning to embark on the path of virtuous learning. European teacher is a person who helps the student to understand the essence of moral norms and standards in education, to be interested in their acquisition and to open opportunities for future professional and social life in the conditions of following ethical standards. Europeans understand that corruption in education and academic dishonesty threaten the security of higher education institutions, undermine the authority of the university and education in general, and cast doubt on the competence of individual teachers.

The values of academic culture and academic integrity are the basis of educational and scientific training programs for future professionals in various specialties.

Academic culture and academic integrity reflect the attitude of the individual to the moral and ethical values and rules of conduct those are common to education workers (Guidance for applying Enterprise Risk Management, p. 27). The values of academic culture are regulated in the Bucharest Declaration of Ethical Values and Principles of Higher Education in Europe (Stadnyi, 2015), among which are the academic freedom, moral and social responsibility of scientists for their work; the desire of research organizations to conduct joint research projects; partnership relations of all members of the scientific group; responsible attitude to work.

In the process of globalization, academic integrity in the world's universities is becoming an increasingly important topic for discussion. Due to the rapid development of science in general, the role of academic integrity is a major attribute of justice in higher education institutions around the world. Any university with a good reputation must qualitatively politicize academic integrity. The key point of this policy should be the legal literacy of this issue, where the legal aspects must be clearly verified both for the successful work of teachers of

higher education institutions and for students themselves. Moreover, it will serve as a basis for ensuring academic justice for the development of science. And the elaborated legal aspects on this issue can serve as a guarantee and synthesis to the approach of writing any research projects. This allows educational institutions to increase their ratings.

In order to intensify the fight against academic dishonesty in Ukrainian free economic zones, they study best foreign experience, establish inter-university cooperation, and involve students in international research projects and programs. However, the situation has not significantly improved, which is due to significant reasons. In most universities, under the influence of lack of financial and human resources, there is a usual imitation of change, increasing administrative influence instead of systematic educational work. A formal approach to solving the problem by developing numerical codes, regulations and declarations prevails, which in practice is harmful and ineffective. Obtaining quality higher education depends on the perception of new scientific knowledge as the highest value, the conscious attitude of each student to learning, personal motivation, the desire to become an active, independent and creative subject of learning, willingness to take responsibility for results. It is possible to explain the paramount importance of axiological indicators, which measure the nature and direction of higher education, its personal and social significance. Freedom, honesty and responsibility are the leading elements of the system of academic values. To gain academic freedom, it is not enough to give teachers and students the opportunity to freely make their own choices, express opinions, influence the processes of development and decision-making. First of all, it is necessary to achieve their awareness of the priority of common goals, the establishment of constructive relations based on trust, cooperation, mutual respect, honesty and

openness, pluralism, diligence, integrity. And most importantly – it is necessary to cultivate personal involvement and responsibility for the successful implementation of educational goals.

Due to corruption in higher education institutions, the quality and level of scientific research is declining, and academic culture is suffering. Transparency and accountability of higher education institutions is an effective way to prevent violations of academic ethics. A modern university must adhere to the principles of academic integrity, which should become one of the main vectors of institutional policy. The higher education institution must find ways to resolve disputes, building a space of transparency and honesty. Researchers begin by countering plagiarism and writing off, allocating these terms separately at the university and documentation levels. Every modern university has its own «Code of Honor» and hires teachers only after reviewing the document and certifying that the person will adhere to moral and ethical principles. Some higher education institutions have an employee who takes care of ethical issues in the team; in other institutions this function is performed by the student council. But this is not enough. Non-acceptance of corruption should become the norm in the educational sphere of our country. This requires courageous deeds from educators, lack of fear of telling the truth, exposing dishonest acts. You need to be prepared to defend your intellectual property if someone encroaches on it. Academic honesty and academic culture require that we protest when a degree or academic title is awarded to an odious public figure far removed from science. Civil society must not be silent, it must support science and education. The academic culture of universities, free from corruption, has not yet formed among young people who will study at Ukrainian universities, because they do not yet fully understand that success in life and professional growth depends on the quality

of education, competencies, adherence to academic culture. Ukrainian business and industry should be interested in ensuring that their future professionals are not prone to abuses of academic culture. This is the only way Ukrainian companies will prosper. Value orientation unites people into a purposeful community, makes them more friendly and dedicated. It frees people from focusing on their own interests and obliges them to take care of the environment and people. We need to change our mentality, become more open to the values of academic culture and new social standards. If the values of the university change, the whole academic community will undergo radical changes. Overcoming corruption and adhering to the postulates of academic culture in higher education will help to improve the culture of public relations in general. For university education, the problem of academic integrity and academic culture is quite urgent, especially during the global changes in Ukrainian society. The number of articles on violations of the code of academic ethics and culture in Ukraine has increased in recent years, which proves the urgency of issues for science, education, and the academic community. Due to the change in the direction of Ukrainian academic policy to academic integrity in science and education, it is advisable to consider the development of academic integrity of students in European university education.

One of the most important and hotly debated issues in our topic is the question of the feasibility of decentralization of education management. It is a question of expansion of autonomy of regional bodies, establishments of higher education and their divisions, and also increase of a role of university self-government. On the one hand, decentralization makes governance more efficient and flexible, creating the preconditions for an effective internal system of anti-corruption control. In particular, the expansion of university self-government opens opportunities for conducting pressure-protected internal

audit of costs, procurement, property agreements and making balanced and impartial disciplinary decisions based on the code of ethics. A decentralized education management system may lose control and thus become even more corrupt than before. Therefore, decentralization, according to most experts, is not so much an effective solution as a step in the right direction, which should be combined with reforms that create an adequate regulatory framework and increase the capacity of government. In European universities for the training of future professionals has already established a certain practice of forming academic integrity: there are schools of academic writing, centers of academic communication. Universal and specific features of the development of academic integrity have a systemic nature, interact and interdependent, are manifested in the training of future professionals. In European universities, there are uniform rules that all students follow and accept. Changes should be made in Ukraine according to this principle.

Analyzing the state of the modern Ukrainian system of university education, we can conclude that the formation of a new academic culture based on the principles of academic integrity is still not a law for universities, which directs them to constant change and progress. In contrast, we see gaps in the field of university culture, values that are recorded in documents, but absent in university life. This discrepancy provokes corruption and academic dishonesty.

We can state that despite the significant scientific interest in studying the problem of academic integrity and academic culture, research on these issues was conducted sporadically, which explains the interest in the topic given the uncompromising issues facing the modern higher education system in Ukraine. It takes a certain period of time for the educational and scientific community to realize the importance of building academic culture in Ukraine.

3.3. Culture of knowledge management at a modern university

The theory of knowledge management as a logical result of the development of the knowledge society, which has become widespread in scientific research since the 90s of the last century and has made the basis of modern innovation, is largely based on the ideas of the dominance of the “knowledge worker in the “knowledge society” economy, for whom a characteristic feature is the possession of one’s own “means of production”: intelligence, memory, knowledge, initiative, personal experience. The knowledge management model based on the most effective use of intellectual resources finds its implementation in educational discourse, therefore, the purpose of the study is to analyze the culture of knowledge management at university. This problem is revealed in the following questions: understanding the main factors of efficient knowledge management; defining the essence of the knowledge management process at the cognitive, managerial and technological levels; consideration of the role of information culture in the knowledge management system of university; identification of promising areas of knowledge management at university.

The key feature of the knowledge society is the maximum use of an individual’s intellectual potential for the purpose of further self-improvement, however, the imbalance observed in the possibilities of access to knowledge provokes a digital divide that contributes to the development of the knowledge gap (access to information, education, scientific research, cultural and linguistic diversity).

In the most general definition of knowledge management, it is a combination of innovation and communication management, as well as the use of new information technologies in order to

collect, process, use and transfer information, which provides an organization with the generation of new knowledge and its use in the interests of gaining competitive advantages. "Knowledge workers" do their job in teams, and the application of knowledge is effective only when this knowledge is specialized – and even the more specialized knowledge is, the more effective it is» (Druker, 1994). The essence of management is to make knowledge productive. And only an organization can provide the continuity that knowledge workers need to be effective. In the knowledge society, more and more advanced knowledge is acquired by a person after completing formal education, and a person who continues to learn throughout his or her life, especially through formal education, will be considered an educated person.

The knowledge creation model consists of three elements: the knowledge creation process by transforming implicit and explicit knowledge, the general context of knowledge creation, resources, results and moderators of the knowledge creation process. Explicit knowledge is description of theory, methods, algorithms, techniques, technologies, machines and system; implicit knowledge is specialists' culture of thinking, mastery, skills, intuition developing over time through experience, professional activity and training. The knowledge creation process is a spiral that grows out of these three elements; and dialectical thinking is the key (Nonaka et al, 2000).

Implicit knowledge can be attributed to unsystematized and non-formalized knowledge, conditioned by the personal context – insight, intuition, prediction. Providing an atmosphere of creativity, an exchange of views and knowledge, the generation of ideas and, as a result, the creation of new knowledge takes place. The intellectual capital of the university is represented primarily in human capital (educational and knowledge potential and professional qualifications of personnel) and infrastructure capital (corporate culture, management processes, information

technology, network communication systems). Taking into account the global intellectual potential of university teachers, it can be stated that implicit knowledge makes up a significant part of it. As the result of implicit knowledge processing by information systems, its coding, systematization and archiving, the explicit knowledge is formed. In the context of the knowledge potential of a university, explicit knowledge is collected in publications, journals, manuals, lecture notes, reference materials, electronic archives (databases), electronic letters and on portals of universities. This knowledge is disseminated by means of active social interaction between university members through discussions, exchange of experiences, meetings, conferences, etc., contributing to the achievement of basic educational goals (Lomachinska & Lomachynskyi, 2021).

Knowledge management involves four processes: acquiring (absorbing the latest knowledge from external sources), evaluating (activities and practices that make current knowledge more useful), applying (actually using knowledge) and protecting (actions taken by an organization to protect internal knowledge and prevent its illegal and wrong use) (Kafashpoor & Shakoory, 2013). Knowledge management capabilities, including knowledge infrastructures and processes, have a direct and indirect influence on a university's performance efficiency. Among the most effective methods of knowledge management are the following: focus on continuous self-learning (exchange of methods of thinking and accumulation of skills with an emphasis on the implicit knowledge of the most experienced team members); knowledge library (providing shared access to the most valuable results of previous experience that can be used in the future), mission awareness (mission assessment by stakeholders).

A promising area of knowledge management in the university environment is the development and implementation

of communities of practice as structures where knowledge is exchanged between different members within a certain common area of interest. Communities of practice play an important role in managing the explicit and implicit knowledge held by members of the university community, contributing to more efficient use of their intellectual resources. Communities of practice also support teaching, research, training and administration activities. The purpose of a community of practice and the results expected from it are highly dependent on the problem or process they focus on. In addition, the general expected results for all communities of practice are testing existing knowledge, stimulating interaction, accelerating the exchange of knowledge and experience, facilitating learning, creating new knowledge, effective adaptation of new members (Dei &Walt, 2020).

In recent years, the key directions of organizing the culture of knowledge management in the modern system of higher education have been the following: cognitive (study of the nature of knowledge, the ability to manage knowledge, and information culture); managerial (a study of the organizational culture of universities, providing for the development of effective models of higher educational institutions and higher education management); technological (study of the possibilities of modern information and communication technologies in the accumulation, transfer and management of knowledge). The cognitive level of organization of knowledge management culture involves the study of the nature of knowledge, the characteristics of knowledge development, the ability to manage knowledge, and information culture. Research at this level involves changing the style of thinking, mobilizing individual intellectual potential, creativity and transformational leadership.

The management level of organizational and information

culture in the European system of higher education is based on two mega-trends: globalization and complication of information and communication technologies. The main feature of universities is the fact that they must not only meet modern trends, but also be ahead of them. The university, as a special organizational structure, should promote a developed culture of knowledge management. It should serve as an example of a new organizational culture, which with its viability proves the effectiveness of the implementation of the latest scientific advances in everyday practice.

The effectiveness of the assimilation of collective knowledge, the desire of employees to share information with colleagues, the ability to find the necessary information, communication competence skills in dialogues with colleagues – consideration of all these aspects and the development of relevant information competencies must be taken into account in the process of developing a knowledge management strategy based on the appropriate level of information culture.

The formation of scientific ideas about the phenomenon of information culture as a logical result of interrelated factors of the formation of the modern information society – including the global growth of information scopes, the development of information engineering and technologies, the complication of the processes of informatization of society, requiring a new analytical level of information thinking, necessitates a philosophical analysis of the functional orientation of culture from the standpoint of technocratic, information-technological and cultural approaches. The technocratic approach considers information culture in the context of information competence; the information technology approach considers information culture as a set of knowledge, skills and abilities to search, select, analyze information in order to meet information needs. In this context, the level of information culture acts as one of the

criteria for the social stratification of society. The philosophical dimension of information culture forms the possibility of its analysis as a global phenomenon of accumulation, preservation and transfer of knowledge potential of humanity, taking into account the dynamics of cultural heritage assimilation by an individual.

The development of information culture is ensured by the transformation of material and intellectual resources. The main resources for this transformation are different types of knowledge and information, and the result is a processed intellectual product necessary for material activity. Using Tarde's concept concerning assimilation of social experience according to the principle of imitation, it can be stated that information culture acts as a process of dialogue between an information leader (who forms social experience) and practical workers who implements the suggested models of social behaviour.

In the conditions of formation of a global network society, there is an improvement and subsequent differentiation of the functional orientation of information culture and its organic combination with organizational, digital and media culture. In this context, it should be noted that from the standpoint of the attributive approach to the essence of information, information culture is synonymous with culture as a whole – a set of material and spiritual values created by humanity, which arise as its knowledge potential; from the standpoint of the functional approach, information culture lies in historically acquired ways, means of storing and transmitting information, and this implies its differentiation from other types of culture.

Depending on the subject acting as the bearer of the information culture, the latter can be considered at three levels: as the information culture of an individual, as the information culture of individual communities, as the information culture of society as a whole. The national level determines the

culture of interethnic relations, the moral content of which is largely determined by the norms and values of the culture represented by a person, because thinking and self-awareness are formed as a result of one's socialization. The information culture of interethnic relations serves for establishing effective intercultural communication. In this context, it should be noted that the internalization of universities is one of the ways to "nurture" advanced knowledge at an organization, thereby improving its organizational and information culture. Private and professional contacts of visiting researchers enhance the intellectual potential of universities. One of the ways to access advanced knowledge can be the international movement of scientists from developing countries, as well as the international mobility of students as a way to increase implicit knowledge in the country (Horban et al, 2021). The education system best solves complex social problems only when solutions are achieved through joint efforts of higher educational institutions on the basis of sustainable and effective interuniversity partnership.

The group level of information culture is mainly conditioned by the implementation of various types of information relationships in the field of professional activity and is manifested in the culture of public speaking, collective discussions, in the ethics of leaders' communicative interaction. The status and authority of an information leader presupposes the ability to regulate information flows in a team, the ability to conduct a communicative game, the formation of joint lexical experience and conventional terminology, which determines the symbolic reality of group interaction. This creates the possibility of thinking in general categories and orientation in time and space using group information and communication coordinates. At this level, the problem of supporting self-education and the security of communications as integral components of information culture is becoming relevant.

At the individual level, information culture is realized in the subject-object relations (mainly in documentary communications) and the subject-subject relations (in the culture of verbal communication). The subject of information culture can be an individual person, a social group, and a collective as a whole. In the subject-subject relations, information culture receives its moral dimension, because it realizes the value orientations of an individual, his or her needs and ideals in the coexistence with others. The information culture of communication largely depends on upbringing of the individual's emotional sphere, expressed in the ability to empathize, to see the world through the eyes of another person. Mutual understanding is a sphere of human relationships, conditioned by the depth of dialogical interpenetration, where cognitive processes and emotions, socio-psychological rules and ethical norms are closely intertwined, because the formation of images of the world is not based just on the logical processing of information, but is closely related to emotional and motivational aspects of living. In other words, it is not only understanding of information, its transmission and receiving, but also understanding of another person as individuality with his or her own needs and interests. In social terms, having information culture is an important source of social recognition of an individual and a necessary condition for one's self-affirmation.

The predominant types of information culture in the educational environment are: integrated information culture, focused on the internal exchange of information in structural units; a proactive information culture focused on the wide exchange and use of information; and an informal information culture focused on informal exchange and use of information (Lauri et al, 2016). The integrated information culture is focused on the results of its own subdivision. Informal information culture is characterized by the experience of information overload.

Information culture has influence on job satisfaction and on executives, as well as on individual performance efficiency, because it is the context for how information is communicated in an organization and how norms and values are formed for its creation, exchange and use. The effectiveness of the level of information culture depends on the type of leadership and influences organizational innovation, and job satisfaction is the subjective emotional response of the team to the vision of their work.

An important factor of a modern person in the knowledge society is having an information worldview (as a system of value orientations of a person in the world of information), awareness of one's own information needs, beliefs, ideals, principles of knowledge of information in the world. At a group level, information culture is a reflection of group information needs, in particular, in the educational sphere, among others, this is the ability to use information technology, computer literacy; knowledge about information and information environment; the group's ability to build information activities and behaviour.

The necessity for the development of information culture provides the ability to process information arrays as the ability of a complex system to adequately respond to external challenges to maintain its further functioning. Information competence should become an integral part of information culture in knowledge management – the quality of actions ensuring an effective search for information, its adaptation to the peculiarities of pedagogical process, qualified work with various information resources, the ability to learn various information and communication methods.

In Western European and American scientific thought, there is a widespread approach to considering information culture as similar to organizational culture, but with a clear focus on the general assumptions, values, norms and

behavior that shape the perception, management and use of information by the organization. In this context, we can distinguish between two approaches to the definition of information culture – as a “culture of information”, that is, an environment in which effective information management is carried out and the display of cultural values, attitudes and behavior regarding information. Information cultures exist in organizations, regardless of whether they contribute to the effective information management, therefore, the content of information culture should not be narrowed down only to the possession of information technologies. Information culture is an integral part of organizational culture, and the more complex is the essence of the organizational structure (for example, a university), the larger can be the multiplicity of its information cultures. Information culture is shaped by cognitive and epistemic expectations inherent in performing tasks and making decisions. For example, the requirements related to the work of assessing the properties of information, the proposed standards of information behavior and the values of the organization.

In the context of the development of the organizational culture of a university, information culture determines the key mechanisms for the management and use of information. Information culture manifests itself in the values, norms and practices of the organization that influence the perception, creation and use of information. Values are the deeply held beliefs about the role and contribution of information to an organization, and the principles that determine the way the information should be created and used. Norms are rules or socially accepted standards that define what informational behaviour is normal or expected at an organization.

Organizational information culture is seen as a generator of connections that implements and establishes bridges between

different forms of knowledge (Choo et al, 2008, p. 11), accordingly, four types of goals of information culture can be distinguished: the goals of the results-oriented culture are achievements and competitive advantages; the rule-based culture requires dedication and discipline; the relationship-oriented culture is based on communication and participation; the risk-taking culture is about creativity and the exploration of new ideas. These types of culture can replace each other, depending on the stage of the organization's development. A change of culture can mean a change in the corporate spirit, images and values that drive actions, and this new way of understanding organizational life must be involved in the management process (Wright, 2013).

In general, an organization that has several types of information culture, such as divisions or segments representing each of the four types of culture, can be more efficient than an organization that lacks this cultural mobility.

The information component of organizational culture can serve as a tool for increasing labour productivity and has a significant impact on the long-term sustainability of the organizational structure and its results. Thanks to a conscious understanding of the basic norms of corporate culture, the activities of team members are regulated not only by a system of orders and compromises, but primarily through internal cohesion, a combination of guidelines and employees' aspirations contributing to the unity of the worldview, value attitudes and the formation of the vision of the team's future. Such identification of the employee with the team contributes to the internal perception of corporate values, norms and ideals, which become, in essence, his or her own values and norms.

Organizational culture has an evaluative element that includes social expectations and standards, values and beliefs that bind organizational groups. Communication, both internal and corporate, is key to the social structure of an organizational

culture and creates the potential for community building (Dalkir, 2013).

The determinative features of organizational culture are group interaction, a kind of “team spirit” that forms job satisfaction and pride in one’s results; exactingness to the quality of work; loyalty to the organization and compliance with its standards; willingness to change as a result of the challenges of the time.

The university as an organizational structure is stipulated by the specifics of the processes of coordination, integration and concentration of efforts, creativity, initiative, professionalism; the dynamics of communicative ties that determine the unity of the team; the specifics of socio-psychological conditions based on the degree of compatibility of team members); the specifics of information and business exchange and the adequacy of the perception of the organization and plans by all participants in the organizational environment.

Knowledge management contributes to the constant updating and development of skills and abilities by distributing and systematizing significant amounts of accumulated knowledge in various academic ways, that is, it contributes to further learning. This can be achieved by transferring formally structured activities to each other or informally promoting harmonization and dissemination of day-to-day implicit and explicit knowledge. In addition, the dynamics of knowledge management at universities stimulates students to exchange experience and knowledge not only within one educational institution, but also in the networked educational space as a whole.

Intellectual capital that is created and developed by higher educational institutions does not consist only of knowledge and practice of its application. The creation of knowledge, its development and transmission are accompanied by rumors,

gossip, inappropriate or false beliefs, delusions, etc., that is, the process of creating opposition takes place. In a university environment, organizational memory does not only improve the application of the acquired knowledge, but also contributes to strengthening the boundaries of knowledge, and the development of organizational memory on the already existing connection between knowledge and counterknowledge reduces the flexibility of the organization (Cegarra-Navarro & Martelo-Landroguez, 2020).

In the information system of a university, organizational culture is the basis of knowledge management, therefore, the relationship between organizational culture and the success of knowledge exchange is based on such cultural elements as trust, communication, information systems and rewards. In this context, it is possible to broadly define information culture as a body of knowledge and know-how that is shared by a community and allows one to appropriately find, identify, qualify process and transmit information (Yolande, 2010).

The interdisciplinarity of approaches both to understanding the phenomenon of information culture and to models of knowledge management in modern educational discourse forms a wide range of areas of its analysis – informational (as a set of knowledge, skills and abilities to meet information needs efficiently), communication (possession of the required level of communication competence), technological (abilities and skills of working in the field of IT), methodological (methodology of operating with information arrays), managerial (efficient management of information resources).

In an organizational culture of knowledge exchange, it is important to create communities with common information needs, well-established communication and a desire to cooperate and exchange their own knowledge potential. In the culture of knowledge management, the traditional leadership

system is changing: knowledge leaders do not have a monopoly on knowledge, their goal is to create for employees the most optimal conditions for knowledge exchange.

An inefficient human resource management system at university presupposes purposeful organizational communication within the team in order to create a new system of values, norms, rules of behaviour, that is, such an organizational culture that creates an atmosphere of internal corporate identity. Modern organizational culture has a strategic focus on the development of both managerial, social, labour and social relations and turns out to be one of the main factors of innovative transformations, it does not only personify all spiritual values, but determines the place of the team in the surrounding world and sets priorities in relation to ways of harmonizing interests in crisis situations.

The culture of knowledge management does not regulate only the processes of obtaining and selecting knowledge, but also the possible risks, therefore the results of the perception of the organization's views on failures and mistakes by the personnel are among the important factors. In some organizations, a mistake that can be explained and justified logically, it is accepted or even welcomed, but in other organizations only one mistake can negatively affect the future professional activities of an employee. Therefore, the risk and the creation of new knowledge is the result of the adopted organizational management approaches. The culture of knowledge management must be based on creativity, because creativity involves applying knowledge in a completely new way, it requires freeing organizations from outdated mental models of the past that describe the required actions in certain circumstances. The university authorities should encourage the building of communities of like-minded people, their meetings and cooperation, which are the basis for knowledge exchange. Knowledge exchange should be integrated into universities' culture and values. A collegiate organization based

on belief and consensus rather than diktat has the potential for strategic transformation, as it activates people and unites them around common goals. Leaders who form the backbone of the management structure and university management should have a possibility to use social forces and inspire people to take action based on a shared vision of the university perspective, including the perspective of these project participants.

In the conditions of introduction of practice-oriented learning, measures to increase the level of information culture of students mobilize analytical approaches to assessing information, improve the quality of work with information resources and network systems, mobilize the ability to generate knowledge and its practical use in future professional experience. The conditions of the pandemic entailed significant changes in the organization of knowledge management culture in the modern system of higher education: the effectiveness of distance learning and distance organization of higher education came to the fore, which caused the need to improve management models of higher educational institutions and change the functions of key subjects of management models.

Accordingly, one of the important factors of the technological level of knowledge management in the university environment is the digitization of knowledge, but the possibility of digital rethinking of knowledge management is largely determined by a clear organizational strategy aimed at innovation. A unique feature of digital transformation is the fact that risk becomes a cultural norm, so the main challenge to digitization is not technology, but the human factor, cultural traditions, workers' resistance to change, lack of relevant knowledge and best practices, lack of adequate resources, lack of motivation and risk (Schwertner, 2017).

The culture of knowledge management provides a quick response to changing current conditions, making decisions

based partly on past knowledge and partly on the basis of analytical forecasting of the future. Knowledge management includes activities to create knowledge (study and research), analysis (discovery and organization), education (use and demonstration), dissemination (transmission and dissemination) and optimization (assessment and improvement), which involves the active involvement of analytical methods in determining the most perspective knowledge, its subsequent classification, organization of the flow of knowledge gained, assessment of its usefulness, classification and systematization of the knowledge array. However, analytics cannot be taken into account as a basis for the formation of future knowledge if the information obtained is not used in decision-making. "Data-driven management is done with the availability of the right processes and culture to stimulate important business decisions taking into consideration a proven information array" (Anderson, 2015).

However, organizational culture can influence knowledge management in different ways. As new knowledge replaces the cultural space, knowledge management also influences organizational culture. The logic of knowledge management is that the perceived concrete values of an organization can lead both to favourable and unfavourable behavior. For example, positive drive and motivation for sharing knowledge is organization and mutual trust, where interpersonal communication can positively impact knowledge management. On the other hand, negative competition and unwillingness to share knowledge are some of the factors that negatively affect knowledge management. A paradoxical situation arises when organizational culture becomes the main obstacle to knowledge management, because in a highly competitive organization that aggressively focuses on market culture, the culture of accumulation of knowledge creates barriers to knowledge

exchange, as it focuses on the roles associated with rational goals, and neglect of roles related to human relations and open systems.

It is necessary to note the relationship between the information culture of an institution, its size and structure, and the adopted knowledge management model. Internal orientation determines the concentration of employees in the internal information environment and the use of their own information resources. External orientation determines the concentration of workers on obtaining information on external resources and using information in communicating with the environment, for example, in the development of reports, information products or marketing activities.

The technological level of knowledge management is associated with the active involvement of information technology. The relationship between knowledge management and information technologies determines four main areas of the near future – social software, consumerization (of knowledge), the human factor and the organization of work, systems and practice. Modern information culture forms other methods of socialization, in which preference is given to the indirect interaction of social subjects, and social experience is alienated from its bearer. Socialization in information culture require the compaction of social time and space, which leads to the devaluation of social experience faster than it is assimilated by a person, requiring constant internal worldview and value transformations. The virtual dimension of information culture expands its educational function, because in virtual communities, users gain access to interactive platforms and create communities of ways to share ideas and information regarding their needs and expectations. Skills of self-directed learning include components of planning, strategies, resources, motivation, monitoring, and evaluation. Online learning

technologies have the potential to transform students' professional development; they are able to penetrate through cultural, disciplinary and other barriers and to bring educators together to share acquired knowledge.

University knowledge management involves the active involvement of social networks for the exchange of experience, which requires the skills of information culture in the virtual space. With the revolution of new technologies used around the world, most lecturers and students use social media to share knowledge, such as Twitter, Facebook and wiki software which helps to optimize cooperative workspaces.

Social interaction in academic conditions through communication and cooperation is a key factor in the creation of knowledge and its exchange, therefore, attention should be paid to the use of mobile devices by students in the learning process, which creates opportunities to receive, store and share learning resources such as images, videos, web-pages, etc. Mobile technologies improve both informal and formal academic communication (for example, exchange of ideas, and transfer of information).

In the organizational culture of modern European education, a close connection with production occupies a key place. The main mission of universities is to provide an effective link between knowledge and practice. The «University of Entrepreneurship» is a new sense of organizational and information culture, on the basis of which the European higher education system is being reformed. Manufacturing companies, the university and institutions linking companies with the university, located in close proximity to each other, can provide the most effective creation of knowledge, its promotion and implementation in production (van Oostrom et al, 2019).

An important place in organizing knowledge management culture in the modern system of higher education is occupied by

open innovations and technologies for its transfer. The openness of the organizational and information culture increases the possibility of adopting the “open innovation” paradigm.

For more efficient assimilation of knowledge and professional development, the potential of virtual learning communities based on the development of professional identity can be used (Strunga, 2015). Members of virtual learning communities can interact with other professionals in their field from the whole country or region, increasing their own intellectual and social capital. The university model of knowledge management can integrate a multi-level model of virtual communities – from beginner to professional. The beginner’s level is characterized by the search for the community’s own professional identity, this is a kind of level of assessment of theory and practice: virtual learning communities are used, where the interaction between students and teachers (as well as between students) is superficial. The next, competent level concerns persons with knowledge, but experiencing difficulties in using the accumulated knowledge. In this case, students actively receive and develop knowledge, but they lack the ability to transfer what they know to real life situations. At this level, the need for e-mentoring and e-internship becomes apparent. The next level of experts is represented by people who understand where knowledge can be applied and work with knowledge without outside interference. In this case, virtual learning communities become expert communities which include experts from the same sphere, who discuss issues of current research, project funding opportunities and different approaches to practical issues. The ultimate goal is to fully internalize knowledge, when learning networks can become platforms for capacity building to develop partnerships between international and national institutions as well as a place where knowledge of scientific advances is created and disseminated.

In the conditions of the search for the most optimal strategies for the efficient transfer of knowledge, the idea of a new information space, coworking space (CWS), deserves attention. Coworking Space (CWS) is a globally growing phenomenon of a new collaborative environment used by freelancers, entrepreneurs and small businesses, often working in the sphere of information technologies and creative industries (Rese et al, 2020). A culture of knowledge management should not ensure only the knowledge transfer, but also its efficient assimilation. The most interesting results relate to the intermediary role in the assimilation of knowledge in the relationship between the internal network and innovation. To create a knowledge management system, electronic document management systems, corporate networks and Internet services, corporate mail, etc. may be involved. In this context, the close relationship of information ethics and confidentiality should be stressed, in particular, the effectiveness of guaranteeing the protection of the confidentiality of Internet users, actualizing the problem of preserving the principles of freedom and autonomy in the Internet environment (Fugazza & Saldanha, 2017).

One of the main factors in the development of the information culture of the modern knowledge society is the information education system, which is interpreted as part of the education system, the emergence of which is conditioned by the formation and development of the information society. Such social institutions as educational institutions, libraries, mass media, public organizations and professional associations are involved in the development of information education. The effectiveness of building a unified strategy and tactics of information education implies the maximum use of the potential of various social institutions: educational organizations, libraries, media, public organizations and professional associations related to information activities and the development of the information society.

With the active development of information technologies, the media environment is becoming an important element of educational practices, because the concept of “information” mainly hides communication, not knowledge, since the priority positions are occupied by the replication (and not creation) of an intellectual product for a mass audience through the media and the Internet. Accordingly, one of the tasks of a modern university should be the system of media education, understood as teaching theory and practical skills for mastering modern media of mass communication, which are considered as part of a specific, autonomous branch of knowledge in pedagogical theory and practice; it should be distinguished from the use of media as aids in teaching other areas of knowledge (Understanding Media and Information Literacy in the Digital Age).

The globalization of modern science requires improvement of the quality of scientific research from the Ukrainian universities – in particular, introduction of interdisciplinary approaches to the creation and dissemination of intellectual resources in order to enter actively the world scientific space. In the university educational space, knowledge management includes: improvement of the management structure based on the formation of informal innovation leadership; expansion of research activities; creating conditions for improving the system of advanced training, both internal (self-study, consulting activities, practice, trainings) and external (internship); formation of the electronic knowledge base; labour market analytics with the subsequent involvement of advanced ideas to improve the professional competencies of graduates.

In the organizational system of university, information culture can be defined as the level of mastery, development and acquisition of new information competencies which are necessary for intellectual professional self-improvement. At the organizational level, a university is perceived as a complex

information and communication system, in which information culture is designed to perform a number of essential functions – educational, ideological, communicative, technological and the function of preserving social memory. Information culture is considered effective if it demonstrates a high level of correspondence to the mission, strategy and beliefs of the organization in its orientation towards success.

Efficient knowledge management is at the heart of organizational results and it enables realizing the value of human capital by organizations. At the cognitive level, the culture of knowledge management involves the mobilization of intellectual potential and a change in the style of thinking, creative activity; on the managerial level – attracting analytics and innovative leadership; on the technological level – the active use of the latest information technologies.

In modern conditions of the search for the most optimal knowledge management models the success of a modern university is made up by a combination of corporate values (mission, development strategy, focus on innovation) and information culture which ensures the formation of culture of knowledge. Among the promising areas of knowledge management in the university environment are the internationalization of education, the expansion of interuniversity partnerships, the introduction of online learning technologies, close ties with production and the expansion of practice-oriented learning.

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