

University Education Standards in the Postmodern Context of Sustainable Growth

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Abstract: *In the period of postmodern changes, trends for global cooperation and the development of the contemporary standards of university education are focused on the convergence of state higher education layouts in Europe to design an Area for Higher Education in Europe (EHEA), which will mainly strengthen worldwide competitiveness. The principles of university standards system modernization in the postmodern era are not the same but similar in both European and global educational environments. In general, they may be described as the triple-phased process of standardized assessment, combining a triangle of education, research, and innovation. Global cooperation trends and the adoption of common standards in European and world education enable university students and staff at different levels to be mobile without legal or other restrictions within the international community. The university has always been and remains a powerful structure that has survived many historical epochs. Thus, postmodern transformation processes in the university education sector have led to the need to review and reorganize the whole system of standardized assessment of a threefold set of knowledge, based on exploration and alteration, correlated with the conventional and contemporary university function, connected with producing new knowledge, that is not restricted to the national frameworks, but is worldwide, directed on the global cooperation, and development.*

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Introduction

Stable society evolution regarding the globalization of higher education and science, the worldwide process of humanity, and the transformation of the institutionalization concerning world political, economic, and social structure – is a comprehensive and multilayer reciprocity scope of nation, economies, communities, public institutions, culture, traditions, populations, states, ideology necessarily affects the education and science prototype of the nation, as well as changing the global educational and scientific paradigm. In the era of postmodernity, significant changes are taking place in European higher education. We remember the period when nations adopted global policies aimed at integrating their economical organization, political structures, and social systems.

Furthermore, due to Potter & Devecchi (2020), it is getting explicit that science, higher education, and innovative transformations are crucial segments to entirely fulfilling the prospective benefits of upcoming modernizations. This concept, as Brockmann et al. (2011) indicated, has been promoted in various high-level European-wide education procedures, increasing several audacious goals and targets meant to secure Europe's long-term dominance as an expertise creator, consumer, and propagator. But all these processes were interrupted by the pandemic COVID-19, which has led to the isolation of the internal environment of many countries, not only in terms of economies and social life but above all in the educational sphere. That is why we assume that the issues of global educational modifications are especially acute in the current difficult situation. Undoubtedly COVID is a global problem, the scale, trajectory, and consequences of which, require close cooperation and coordination of efforts, first, leading developed countries and international educational institutions.

As the following study demonstrated, high education systems in Europe are no longer strangers to geopolitical change; for the greater segment of thirty years period, this category has been incorporated into greater domestic, international, and even worldwide changes in the European west and east. Despite this, there is a mounting affirmation that the European high school is entering a complicated three-dimensional stage of education, research, and innovation transformation in which the validity of its purpose, structure, functioning, basis, methods of thinking, and resources is being disputed and reshaped (Zinchenko, 2021).

Empirical data show that there are some general trends in the development of education, research, and innovation, and their adaptation and integration in the context of the development of the overall model of

the European and world university. These trends outline the different directions of transformation of the main functions of the university that are to take place in the coming years, including the standardized quality assessment system. As it is possible to control the quality of educational services only due to an adequate evaluating procedure that can demonstrate the advantages and disadvantages of the working educational system with its components.

This article aims to characterize the goals and practices of standardization in European university education. Accordingly, we have identified the following tasks: to analyze the standardization process in terms of the Bologna Declaration, to describe new dimensions to improve the standardization process of university education in Europe, and to analyze the basic features of these dimensions from an internationalization and globalization perspective.

Literature Review. Our analysis has demonstrated that during the past 20 years, much more information has become available on the problem of standardization both in European and Ukrainian educational environments. Thus, many Ukrainian scholars considered theoretical and practical issues of the standardization process in vocational education based on the experience of countries with highly developed economies, taking the globalization scale into account. Pukhovska & Leu-Severynenko (2020) studied professional standards and qualifications in advanced European states. Ogienko & Roliak (2009) grounded European standards through the model of professional competencies formation. Kalenskyi et al. (2018) studied the experience of standardization of professional education in different countries with high economics.

Researchers of standard transformation processes in European universities, such as Warhurst, Masyhew, Finegold & Buchanan (2017) describe different national skill and qualification systems, comparing them with each other and analyzing similar and different features. While Brockmann, Clarke, & Winch (2011) depict the standard process of accepting vocational qualifications, skills, and competencies in the European labor market, which is directly related to the introduction of the knowledge triangle in the educational space.

Humeniuk et al. (2022) analyzed some topical issues of the higher education management system in Ukraine compared to some western countries. The authors claim the great impact of globalization, internationalization, and digitalization on the Ukrainian managerial system of higher education. The following methods, suggested by scholars, should be applied in the management of education: economic methods, administrative

methods, methods of psychological and pedagogical influence, and methods of public action (Humeniuk et al., 2022, p.344).

Much of the current studies focus on the role of national qualification systems in assisting the modernization of high education. Nonetheless, a content analysis of the data obtained from different resources revealed that the problem of standards introduction into postmodern university education through different dimensions: global, national, and institutional, was not the subject of a systematic study. As a result, we believe that this layer requires a special investigation.

Methods

Chronological Framework and theoretical background. The chronological framework of the study covers the late phase of the XX and early XXI centuries. The lower chronological limit (the 90s of the last century) falls on the period of intensive reform and renewal of the European education system. The upper chronological limit is due to global changes in political, economic, and cultural life caused by the accession of European countries at the beginning of the XXI century to the Bologna Process, which led to the active implementation of globalization, marketing, and international cooperation trends in education. The theoretical concept of the study is entrenched in the understanding of university education as an important component of the national education system and an evolving, dynamic, flexible sociocultural phenomenon founded on humanistic principles and concepts of global cooperation and development, consisting of a set of interrelated components: structure, goals, content, technologies, and the quality assessment (Nichols, 2020). The dynamism of European higher education is due to specific domestic political, economic, and national traditions and various external trends: globalization, internationalization, cooperation, promotion of sustainable development, and the creation of a single European space.

As we have already mentioned, the situation with COVID-19 forced the processes of multipolarity, growing regionalism, and educational disruption in all the world's countries. As a result, most contemporary researchers support the transformation of world standards in European universities, as it is important to unify the development of educational balance and avoid a sharp disparity in educational levels in the most significant world regions, considers Roliak (2020). So that education does not collide with a large-scale crisis and difficulties, it is necessary to mobilize the technological and intellectual interests of the world, as well as to strengthen the exchange of knowledge globally. That is why the educational

problems of our time imply the universalization of ongoing events and form an adaptable global, international trajectory that is characterized by a single-world approach and mechanism of standard cross-political decision-making (Roliak, 2020).

Procedure. Fundamental information was aggregated from a variety of source materials in the context of education within the world, mainly Europe and Ukraine from 1990 to 2021. About 50 scientific articles that researched the topic of standards application in university education from more than three social and cultural generations have been analyzed.

We realize that compared national systems of standards have profound similarities and differences across countries. Displaying similarities between two different countries is critical to highlight differences and make comparisons meaningful. That is why the comparative study has become more complex, including case studies with the levels of conceptualization, generalization, and reintroduction of the complex categorical framework, differentiated through diverse perspectives. The authors also provide a scheme for classifying and comparing final assessment standards in national and European dimensions.

A combination of qualitative, methodical, synergetic, ethnic, and axiological approaches to comparative analysis of educational phenomena was used to collect the data for this empirical study.

The content analysis reveals that comparative studies can include juxtaposition across a wide range of topics. For a detailed study of the process of university education standards implementation, we identify three basic dimensions: 1) global through European dimension; 2) national dimension; 3) institutional dimension.

So, whereas everything has been said as yet, we continue our analysis, considering these major layers.

Results

Global Dimension in the Process of University Standardization

The first dimension embraces the general world and European tendencies in the system of the university education standardized assessment. In this part of our research, we focus the topic on the major historical document, signed in 1999 by 29 European countries, and known as the Bologna Declaration. It concentrated on bringing together national high education systems across Europe to establish a European Higher Education Area (EHEA), and lately World Higher Education Area (WHERA), which will primarily strengthen the global competitiveness and

sustainable growth of European tertiary education, allowing students and staff at various levels to move freely within the European Community without legal or other constraints (OECD, 2021).

Moreover, our study proves that Bologna initiated the process of sustainable development in education. Over the past few years, sustainable development issues have become increasingly popular all over the world. Sustainable is “development that meets the present needs but does not put in danger the ability of future generations to satisfy their requirements,” a definition formulated back in the 80s in the UN report “Our Common Future”. The concept of sustainable development has been proposed by Willets (2017) as a new model for economic growth, social equity, and environmental support. After decades, sustainable development remains a generally accepted notion and a daily practice that all countries want to expand, especially in the educational dimension. Everyone realizes that only with the help of high-quality tertiary education that provides adults with the required information, skills, values, and competencies will the global community be able to confront the world’s interlinked issues and find effective explanations for today’s and tomorrow’s problems (Willets, 2017, p. 16).

Since the beginning of the XXI century, education for sustainable development (ESD) (UNESCO, 2022) has been acknowledged as a crucial component of global cooperation processes directed at creating the space for transformative knowledge, allowing individuals to take conscious individual and group action to transform our communities and the world (Brundtland, 1987).

In this respect, UNITWIN/UNESCO Chairs Programme is famous for involving over 700 organizations throughout 116 states, promoting global intercollegiate collaboration and networking to intensify corporate abilities midst collaboration and the exchange of knowledge directed at sustainable growth (Brundtland, 1987).

Undoubtedly these processes influenced European universities, encouraging them to increase efforts to create a standard and appropriate system of monitoring and evaluation of the achieved general results. Among the main standard structural aspects included in the university work assessment before and during the Bologna Declaration is the quality of education provision.

Thus, the current period of university education transformations is characterized by the development of a "general model" for the evaluation of the teaching services quality. This new model of assessment is now accepted all over the world. Eighteen of twenty leading European countries use it as the system of accreditation (“Education for sustainable development,” 2020).

Another segment of the standardized apparatus of university education, we consider is the adoption of the European Qualifications Framework (EQF). It was created as a meta-structure that combines the first two dimensions: global and national. Moreover, all differences and commonalities in the content of degree programs at diverse European universities can be evaluated through these criteria.

National dimension in standards development

Our analysis demonstrates that universities in the national dimension reacted to these standards in their way, but general principles can be characterized as the following: 1) introduction of a new “three-cycle” degree structure of European higher education, 2) promotion of greater students’ and tutors’ mobility, 3) general shift towards learning outcomes, and, accordingly, the introduction of more detailed and coordinated schemes for recognizing these outcomes, 4) establishment of standard program context (Schwartz & Westerheijden, 2004).

What is more, according to EQF, it does not matter how the educational program is implemented, either through distance learning courses online or on a full-time or part-time basis, the main thing is that the standardized content of the program is mastered (European Commission, 2005). We think that the OECD’s strategy to produce PISA-like examinations for high education institutions, as well as the European Commission’s introduction of a common registry of students’ success indicators, are likely to further standardize the European Higher Education Area and combines global tactics with the national education policy (OECD, 2021).

In this part of our study, we want to discuss improving the research component of university education as a vital problem of different political debates. As the epoch of postmodernity is the knowledge-based era, the main issue on the agenda today, defined by Humeniuk et al. (2021), is the development of scientific talents and the concentration of resources around them. To assess the research achievements in a standard way European Union creates the Research Council of Europe (ERC) and the European Institute of Innovation and Technology (EIT). Although unfortunately, new initiatives of changing the institutional landscape or creation of new financing schemes, based on final research outcomes were interrupted by the global pandemic situation. Moreover, in some European countries, there has been a partial decline in government allocations and an increase in grants and contracts as Weber & Duderstadt (2010) stated. Moreover, most contemporary universities, as Scott (2012) noted, pursue short-term and

applied research, tied to one subject so scientific work becomes highly specialized and market-oriented, and researchers themselves should be more limited in time and approach. On the other hand, the current changes should not be disregarded. After all, the greater emphasis being placed on research commercialization and patenting indicate the increased rivalry among institutions of tertiary learning.

We recognize that at this stage, the research component of tertiary education acquires the features of international cooperation due to the implementation of global programs. The most well-known of them are the following: American Fulbright and FOX Programs; Canadian Global Change Leaders Program; British Millennium Development Scholarship; Austrian Science Fund (FWF); Japanese Canon; Israeli MASHAV; Finnish Centre for International Mobility (CIMO); Chinese Beijing Scholarship Program and others. But overall, there seems to be some evidence to indicate that the introduction of a standardized assessment of the research level, its necessity, topicality, and influence on innovation implementation exists only as conditional and rather subjective projects.

Considering all that has been defined as yet, it can be assumed that in the pre-pandemic period, economically developed countries were transforming from “closed innovation systems” to “open innovation systems” The concept of “open” due to Zinchenko (2019) can include several factors (legal, economic, etc.), as well as the development of networks, including key elements such as public-private partnerships or links between the university and industry (Maasen, 2011).

At this point, it is vital to mention the presence of the so-called European contradiction. It is undeniable that EU nations dominate the world in quantitative measures of high-quality scientific ideas but fall behind in the capacity to translate these findings into technologies that produce national income, states Clark (2008). The concepts behind the European Commission’s research strategy are centered on channeling university research capacity into the European private sector of innovation and economic prosperity (Roliak, 2020).

According to the Lisbon Conference, research policy is closely linked to innovation and is a key factor in competitiveness. That is why the European Commission began a broad discourse on the function of higher education institutions in creating the core principles of modern research and innovation standards focused on universities over the post-pandemic years, driven by the principles of the Bologna Process. By allowing universities to contribute to the execution of the Lisbon Strategy, the European Commission hopes to create a unified market for research and mobilize

European “intellectual power” to build a global scientific and innovation community that will work for the benefit of mankind. This is the so-called response of the European university education system to the challenges of the post-pandemic era (Nichols, 2020).

Institutional dimension in the standards transformation process

The rapidly changing post-pandemic situation calls for an update of both the research system and the tertiary education system. Today, as Bourner (2019) enlightens, European universities need not only to adapt to rapid transformation processes but also to influence them directly. They are motivated by some very important factors: 1) increased demands on university education, that must be centered on the interdisciplinary reorganization of knowledge; 2) internationalization of education and research, which may bring new forces to the scientific community; 3) the need to create effective and close cooperation between the university, industry, and environmental challenges; 4) competition between educational institutions that produce and distribute knowledge, 5) the emergence of new expectations from universities directly related to the introduction of the knowledge triangle (a combination of information, research, and innovation) in the educational space (Scott, 2012).

In general, our study has shown that in the European environment, the times of heated debates about the unified organizational structure of universities have come to an end as Barnett (2005) stated. Considering the reforms of higher education as applied processes of establishing effective structural formations and collaboration layouts following the needs and achievements of common targets, European countries concluded the modernization of the entire university system.

In this regard, the study of worldwide change in the university higher education has revealed numerous concepts. Thus, we share the opinion of Clark (2004) and Greenberg (2007), who suggest that traditional internal features of universities can endure even after the most severe rounds of reforms and modifications, yet further transformation of a European university's organizational structure is still unavoidable (Kwiek & Maasen, 2012; Clark, 2004).

Consider Denmark, Norway, and Sweden where a program of “merging” or “consolidating” higher education institutions was implemented from 2004 till 2014 (this process continues now). Deriving from the postmodern reforms, the total of universities was decreased from 12 to 8 by the Danish authorities. The main goal of these transformations due to Nichols (2020) and Greenberg (2007) is to create major research centers

capable of competing with the world's greatest universities. Similar political efforts to establish elite top-tier tertiary education institutions can be found in Germany, Finland, the USA, China, and even Japan if we consider not only Europe but also the world setting.

Even though external demand for change is broad and diversified, the question now is whether university transformation in the European community will be holistic and unidirectional, connected to global development. The process of forming a "Europe of knowledge" defined by Potter & Devecchi (2020), demands general efforts and a standard approach in the evaluation of achieved results. For example, at the institutional level, the concept of the "knowledge triangle", which is perceived as a call for greater integration and unity, may be judged as a standard goal for all systems of tertiary education. Though, from a national point of view, this is not always true. At the national level, the knowledge triangle is embodied in different ways. In our opinion, diversity is felt in terms of structural changes in universities.

Together, these studies outline that in Germany, Norway, and Great Britain, the contemporary system of national higher education is thought to have the knowledge triangle as its defining feature, a key component of which is systemic integration with institutional specialization. In contrast to Denmark, where in the sector of higher professional education, because of institutional integration, in other words, the merger of several educational institutions, new universities have appeared in which the research component is not the main factor of functioning but combined with professional training (Zinchenko, 2019).

Judging the problem of non-unified organizational structures of universities from the inner-institutional dimension, we may stress that the European Credit Transfer System (ECTS) has become a kind of standard that can diffuse the impact of diverse models of tertiary education, bringing them to the common denominator. The standard system of credits (Table 1) is adopted by almost all European countries, and it is well-known all over the world. The rates of final assessment in Table 1 illustrate the appropriateness of the points score with the ECTS grades, so that the educational progress of a student may be adequately evaluated by the university staff of every country. Thanks to this credit system, tertiary education is evolving into a flexible and mobile structure that can easily open its advantageous sides to international students, researchers, and lecturers.

Table 1 Correlation between the final assessment's point total and the ECTS scale

Result in points	Result in the national scale		Score in the ECTS	
	Exam	Final Credit	Grade	Explanation
90-100	Excellent	Credited	A	Excellent (outstanding accomplishment with hardly any mistakes)
82 - 89	Good		B	Very good (higher than standard with several mistakes)
75 - 81			C	Good (generally accurate accomplishment with several serious mistakes)
67 - 74	Satisfactory		D	Satisfactory (not bad, but with several shortcomings)
60 - 66			E	Enough (performance meets minimum criteria)
35 - 59	Unsatisfactory	Non-credited	FX	Unsatisfactory (reevaluation)
1 - 34				F Unsatisfactory (mandatory course repetition)

Source: Author's own conception

Discussion

The research is aimed at characterizing the targets and practices of standardizing European university education. The main issues covered – are the analysis of the standardization process based on the Bologna Declaration; the description of new dimensions for improving the standardization process of university education in Europe; the scan of the key features of these dimensions from the perspective of internationalization and globalization. The research concept is based on the emphasis on education as a key unit of the national educational system and a flexible sociocultural phenomenon.

The methodology of the current research covers the combination of qualitative, formal, symbiotic, ethical, and philosophical approaches to the comparative survey of the educational aspect.

Due to the content analysis, three basic dimensions were underlined and examined: 1) global dimension; 2) national dimension; 3) institutional dimension. Totally, the study justified the end of the times of heated discussions about a single organizational structure of universities in the European environment.

It is simple to illustrate the adaptability of university education by noting that any student who has successfully finished a medium-term course in one of the world's or European universities with ECTS, can become a student in a long-term program in any other university through the system of credit unit enrollment (Roliak, 2019).

For a bachelor's degree, as Nichols (2020) admits, European institutions recommend the first three years of qualified tuition. However, a bachelor's degree earned through a university training program could mark both the end and the beginning of a new educational trajectory. A Master's degree, a Doctor of Philosophy (Ph.D.), or even a Doctor of Sciences are all possible in tertiary education. As a result, a credit transfer system of this type allows a student to pursue tertiary education at any university of his choice while also conducting research from a global perspective.

A further set of analyses examined the impact of standardized final assessments on the system of international students' enrollment into European tertiary education (and vice versa). The criteria for final assessment are standardized for most tertiary education institutions in Europe and the world. The final grade is calculated using the following formula, which considers the outcomes of candidates for higher education work during the course's study: the average current grade (up to 100 points), plus the final control grade (maximum 100 points) (Vught, 2008).

Moreover, due to the COVID-19 pandemic, a change in the final assessment process is required that takes into account the distance format. But the system of standard grades allows one to estimate the quality of the received academic knowledge in a certain university dimension and, if necessary, tie them directly to the students' internationalization procedures.

Conclusions

Social networks and other businesses of a similar nature can and should exist, but they must be subject to rules and laws. Companies can't govern themselves and then declare that they can no longer regulate themselves because things have gotten too out of hand. Public and governmental supervision is necessary to restrain the brutal, predatory capitalism that characterized the Western world in the late 1800s and early 1900s. Such corporations' algorithms must be regulated, and worldwide financial incentives must be modified.

Thus, because of the conducted research, we may draw the following conclusions. The university has always been and continues to be a formidable structure that has endured through numerous historical epochs and eventually get closer to sustainable development. Most postmodern

change processes in higher education have resulted in the necessity to examine and rearrange institutions' relationships with society and the global community. Taking into consideration the major issues of the post-pandemic period, tertiary education renovation in the university sector must be all-inclusive with worldwide and international trends.

The outcomes of this study indicate that:

- the introduction of standard evaluation rules for a threefold set of academic knowledge based on research and innovation is in no way a threat to universities, as its three primary roles—education, research, and innovation are closely tied to the university's historic purpose of producing new information;

- the adoption of the standardization system in both the European and global cooperation contexts will make university education more flexible, allowing a circular flow of important research-based data to influence the development of global innovations capable of combating the recent pandemic COVID-19.

The research has gone a long way toward improving our grasp of the reality that high-quality university education is broad and comprehensive, encompassing not just academic information based on research but also the outcomes impacting global scientific and inventive frameworks.

After all, most researchers feel that incorporating internationalization and global cooperation concepts into modern university education would re-energize it, resulting in breakthroughs, achievements, and discoveries.

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