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## Trends in the Development of Tertiary Education in the Context of Modern Challenges

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### ABSTRACT

Achievement of stable economic growth and ensuring innovative development, the needs of the creative economy for specialists with digital skills can be considered as one of the main challenges for the sphere of tertiary education. Therefore, the education system should provide a high level of service quality in order to meet the needs of the labour markets. Globalization and international cooperation between the EU and Asia exacerbate these problematic issues. **The purpose** of the research lies in systematizing the basic challenges of the external environment and their impact on the transformation and development trends of tertiary education on the example of the EU states. **Methodology.** The research is based on quantitative methodology and statistical analysis. The development indicators of higher education of the EU countries for 2013-2018 from Eurostat and the World Bank database have been used for the analysis. **The results** prove the complexity of the links between social-economic, environmental, and political issues, which determine the dynamics of tertiary education and transformational changes in tertiary education. The following key challenges have been highlighted in the academic paper, namely: 1) development of creative economy, innovation economy, and knowledge economy; 2) external shocks, such as a pandemic; 3) technological progress and integration of technologies into education; 4) increasing the level of migration flows and strengthening the problem of educational inequality; 5) spreading the practice of commercialization and privatization of tertiary educational institutions (TEIs); 6) globalization and internationalization of tertiary education due to international cooperation between different countries and regions. The following basic trends in the development of tertiary education in the EU countries have been identified, namely: 1) problems of implementing the concept of "knowledge and competence"; 2) challenges in the management of TEIs and management of the educational process; 3) dynamic development of online and distance learning; 4) the growing importance of academic integrity and ethics; 5) challenges related to achieving the goals of sustainable development within the SDG 4 "Quality education"; 6) systemic reduction of TEIs' funding under the conditions of slow economic growth; 7) increasing the level of international students' mobility and students' migration, which necessitates the adaptation of TEIs and foreign students to a multicultural learning environment; 8) flexibility and adaptability of TEIs; 9) challenges related to inclusive education; 10) challenges related to the integration of technology into tertiary education.

**Keywords:** external shocks in education, internationalization of tertiary education, trends in the EU tertiary education, neoliberalism in tertiary education..

## Introduction

Over the past thirty years, Competency-Based Education (CBE) (Lurie & Garrett, 2017) has been widely discussed in scientific literature, in particular, in the educational environment of Europe from the 1990s to the present time (Telling & Serapioni, 2019). Despite the long history of CBE integration, this concept remains a complex innovation for tertiary educational institutions (TEIs). (Frunzaru, Vătămănescu, Gazzola & Bolisani, 2018). This is due to the need to ensure sustainable economic development and productivity growth. Achieving stable economic growth and ensuring innovative development, the needs of the creative economy in professionals with digital skills (Alencar, Fleith & Pereira, 2017) can be considered as one of the basic challenges for the sphere of tertiary education. Therefore, the education system should provide a high level of service quality in order to meet the needs of the labour markets. Globalization and international cooperation between the EU and Asia exacerbate these problematic issues. As a result, a new concept of the development of education emerges - internationalization, which is closely intertwined with the theory of neoliberalism.

Neoliberal interpretation of the internationalization of tertiary education has become a driving force influencing educational policy development and areas of educational research in numerous contexts. The government is increasingly transforming tertiary education into a service sector, stimulating the development of a private market with a national policy that sees internationalization as a means of growth and income in the sector of tertiary education. This movement is mainly due to the expansion of economic imperatives and factors of competition, which has contributed to the development of internationalization strategies. The outlined strategies are often focused primarily on transnational mobility (both external and internal, staff and students' mobility), with ambitious goals for international staff and students' recruitment, expanding strategic international mobility, partnerships for investigations, and research publications. Consequently, a culture of prestige has emerged, in which these rather instrumental factors play a role of indicators that are viewed as indicators of the success of TEIs. The effect of the neoliberal turn primarily lies in instrumentalizing investigations and teaching. Researches are encouraged that benefit corporate or organizational interests or are consistent with policy makers' definition of national priorities. In the 2013 Communiqué, the European Commission's report "European Higher Education in the World" contains calls for the development of more comprehensive internationalization strategies in order to promote mobility and cooperation between universities, the EU Member States and non-EU countries, and to improve the overall quality of the European education. Therefore, internationalization as a dynamic movement requires a more comprehensive approach. However, the results of the Fifth Global Study of the International Association of Universities have revealed that although some universities consider internationalization as an important aspect and seek to fully intensify activities in the field of investigations, training, and civic activism, other institutions do not give priority to internationalization (Bamberger, Morris & Yemini, 2019). Suppose internationalization is interpreted as a movement based on values towards improving the quality of teaching, learning, and research, expanding the experience and understanding of staff and students, solving social issues in order to improve intercultural understanding, integration, and social justice. In that case, this uneven response across the entire education sector gives rise to concern.

The purpose of the research lies in systematizing the basic challenges of the external environment and their impact on the transformation and development trends of tertiary education on the example of the EU countries.

## Literature Review

A number of environmental challenges that affect tertiary education development have been systematized and concretized in the scientific literature. The following basic challenges should be highlighted, namely:

1. Development of creative economy, innovation economy, and knowledge economy, which transforms the needs of the labour market in professionals with digital technological skills (Alencar, Fleith & Pereira, 2017).
2. External shocks, such as a pandemic, resulting in increased pressure on interested parties of the learning process in terms of improving the skills of teachers and digital skills of students (Harsha & Bai, 2020).
3. Technological progress and integration of technologies into the education sphere, which leads to the internationalization of tertiary education (Robson & Wihlborg, 2019) and issues related to religious, cultural, and racial differences among students (Suganya, 2017; Selamat et al., 2017).
4. Rise in migration flows and increasing educational inequality (Henderson, Ryan & Phillips, 2019).
5. Outspreading of the practice of commercialization and privatization of TEIs, particularly through the borrowing of management practices by educational institutions from the business environment to address the problem of funding shortages. Commercialization and corporatization also cause various forms of corruption at TEIs (Denisova-Schmidt, 2017).

Globalization and internationalization of tertiary education are due to international cooperation between different countries and regions, such as the EU and Asia (Henderson, Barnett & Barrett, 2017; Robson & Wihlborg, 2019). "Internationalization as a concept and strategic agenda is a relatively new, broad, and varied phenomenon in tertiary education" (De Wit & Altbach, 2020). The four features of internationalization "embody a complex

entanglement of neoliberal categories and assumptions with other, primarily progressive humanitarian ideals" (Bamberger, Morris & Yemini, 2019).

1. Penetration of the concept of sustainable development in the field of tertiary education and the need of universities in the development of sustainable TEIs.

2. Slow economic growth, especially within the EU, leading to reduced funding for tertiary education.

3. The need for inclusion of children with special educational needs, the number of which is growing (Moriña, 2017).

Thus, economic, social, environmental, and political challenges pose a number of challenges that determine tertiary education development trends. The identified challenges of the external environment stimulate the emergence of new strategies, practices, and tactics of management by TEIs. As a result, a new unique educational environment is formed, characterized by the complexity of links.

## Methodology

The research is based on quantitative methodology and statistical analysis. The development indicators of tertiary education of the EU countries for 2013-2018 from Eurostat and the World Bank database have been used for the analysis. In order to determine the interrelationship between the challenges of the external environment and trends in the field of tertiary education, the following indicators of economic development of the EU countries have been used, namely: 1) expenditures on tertiary education, GDP per capita, and labour productivity as the basic indicators that reflect the needs of the economy in professional professionals and the ability of tertiary educational institutions to meet the needs of the labour market; 2) students' mobility, in particular, the share of international students in the total number of students in the EU countries.

The following indicators of the development of tertiary education in the EU-27 for 2013-2018 have been used for conducting statistical analysis, namely:

1. Students enrolled in tertiary education by type of institution, million.

2. Public institutions, million.

3. Private institutions, million.

4. Mobile students from abroad enrolled in tertiary education, thousand.

5. Share of mobile students, %.

6. Students in tertiary education - as % of 20-24 years old in the population.

7. Expenditure on tertiary education (% of government expenditure on education).

8. Government expenditure per student, tertiary (% of GDP per capita).

9. Real labour productivity per person, Index, 2015=100.

## Results

European countries face a variety of social-economic and political challenges that determine the strategy, policies, and trends in tertiary education development. Various economic concepts and theories are integrated into the practice of TEIs' activities: sustainable development, sustainability, flexibility, and adaptability, etc. The introduction of neoliberalism and its rapid spread among TEIs leads to new challenges within the academic and educational environment. The current challenges of the education system can be considered as follows:

1. Implementation of the concept of "knowledge and competence" in practice in tertiary education institutions (TEIs), in particular, the practical use of knowledge and information in professional activities, the development of critical thinking, skills to solve practical problems (Machado & Carvalho, 2020), determining the balance of necessary knowledge to solve a specific applied problem, reducing the level of interest in theoretical knowledge, increasing the role of non-formal education (Frunzaru, Vătămănescu, Gazzola & Bolisani, 2018).

2. Challenges in the management of TEIs and management of educational process (Gulua, 2018), especially in crisis situations (pandemic spread (Harsha & Bai, 2020) due to low level of risk preparation, assessment and planning based on risk-oriented approach. For instance, in the context of spreading a pandemic, TEIs are forced to reduce the level of interaction and communication, which affects the practical experience of students around the world, affects the ability to apply the acquired knowledge in professional activities (Toquero, 2020).

3. The era of the fourth industrial revolution requires the training of future specialists in the field of innovative technological developments (Suganya, 2017), which determines the need for continuing systemic education, lifelong learning, improving the quality of formal education, legal regulation of non-formal education (Selamat et al., 2017).

4. Dynamic development of online and distance learning, which stimulates the growth of the role of transnational tertiary education in connection with the accumulation of knowledge/experience by professionals, increases competition in the sphere of tertiary education, especially by putting pressure on formal educational institutions (Henderson, Barnett & Barrett, 2017). Robson & Wihlborg (2019) propose the term 'internationalization of tertiary education' as a process of solving intercultural problems and challenges. This leads to the development of new programs and enrichment of the experience in tertiary education through global social challenges. "Newmarket

entrants offer customized content, routes to qualifications, learning, and tuition solutions, which present new partnership opportunities for universities" (Henderson, Barnett & Barrett, 2017). Along with this, transnational education poses the emergence of new risks related to interested parties' management, commercial and legal support, financial investment, adaptation, and management.

5. The growing challenges of academic integrity and ethics related to corruption, internationalization, commercialization, and privatization of TEIs (Denisova-Schmidt, 2017).

6. Challenges related to achieving the goals of sustainable development in the framework of SDG 4 "Quality education," under the conditions when interested parties are not familiar with the concept of sustainability and sustainable university and financial resources are insufficient to ensure sustainability (Aleixo, Leal & Azeiteiro, 2018).

7. Systematic reduction of funding of TEIs in the context of slow economic growth, especially in the European countries.

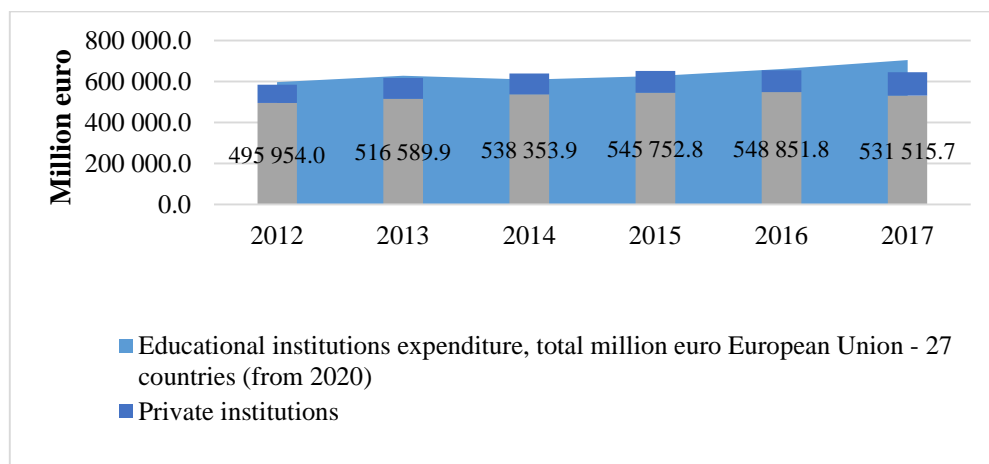
8. Increasing the level of international students' mobility and students' migration, which necessitates TEIs and international students' adaptation to a multicultural learning environment, changing curricula, and integrating a student-centered approach to teaching, taking into account cultural, religious, and racial features of international students. International mobility leads to obstacles and barriers in communication (Henderson, Ryan & Phillips, 2019), problems in the formation of a professional specialist because of the language barrier, limiting the possibilities of international students.

9. Flexibility and adaptability of TEIs as a new challenge in terms of the need for rapid adaptation of educational institutions to changing environmental conditions.

10. Challenges related to inclusive education, particularly the limited practice of inclusion in tertiary education, the problems of developing strategies, policies, and tactics for the transition of universities to inclusive education (Moriña, 2017).

11. Challenges related to the integration of technology into tertiary education, related to students' expectations, readiness and level of participation in online courses; changing the role of teachers, the transition to an interactive form of learning, the need for professional training and conducting trainings for teachers; problems of integration of new content into the educational program (Kebritchi, Lipschuetz & Santiago, 2017; Popenici & Kerr, 2017; Shahmoradi et al., 2018).

Social-economic, political and environmental challenges determine trends in tertiary education (Table 1). In general, the number of students in the EU states is growing, particularly due to the development of the private market of educational services, while the number of students in public TEIs decreased by 0,12% in 2013-2018. Along with this, the expenditures of public TEIs have increased by 7,17%, private - by 27,16% in 2012-2017 (Figure 1). Within Europe, the expenditures of public and private TEIs are differentiated: in 2017, in Belgium, the figure was 28 448,1 million EUR, in Germany – 156 041,3 million EUR, in France – 136 860,0 million EUR, in the Netherlands – 40 538,1 million EUR. For comparison, the expenditures in Bulgaria amounted to 2 033,8 million EUR, in the Czech Republic – 8 014,7 million EUR, in Latvia and Lithuania – 1 301,5 million EUR and 1 707,0 million EUR, respectively. Thus, economic challenges and potential determine the quality of tertiary education, opportunities for integration into the globalized educational environment, attracting future professionals from other countries.



**Figure 1.** Expenditures of the educational institutions by type of institution and expenditure category in EU-27 in 2012-2017, million euro

Source: Eurostat (2021f).

The number of students is also declining due to the growth of international students and students' mobility. Within the EU, the mobility rate has increased by 35,83% in five years, and the share of international students has increased from 6% to 7,7%. The share of students in the population aged 20-24 has increased slightly - by 2,16%, from 31,54% in 2013 to 33,70% in 2018. In particular, if we consider the dynamics of indicators in terms of the EU countries, we can identify differences in the dynamics of the number of students enrolled in tertiary educational institutions: the countries of Central and Eastern Europe (post-communist) are characterized by a significant reduction in the number of students (Bulgaria, the Czech Republic, Estonia, Latvia, Lithuania, Hungary, Poland, Romania, Slovenia, Slovakia) by an average of 22%, including due to students' mobility. For comparison, Western European countries are characterized by an increase in the number of students by an average of 8% (Belgium, Germany, France, Greece, the Netherlands, Norway, Switzerland). In particular, this can be explained by the higher level of development of the private market of educational services: for instance, in Germany, the share of students in private institutions is 10%, in Spain - 22%, in France - 24%, in Italy - 14%, in the Netherlands - 16%, Austria - 20%, Portugal - 17%, Sweden - 10%. High share of students in private institutions is observed in Belgium - 57%, Cyprus - 68%, Latvia - 92%, Poland - 27%, Finland - 48%, Great Britain - 100%. Herewith, private government-dependent institutions and private government independent institutions operate within the EU, and countries differ in the structure of the network of dependent and independent state institutions.

**Table 1. Indicators of tertiary education development in the EU-27, 2013-2018**

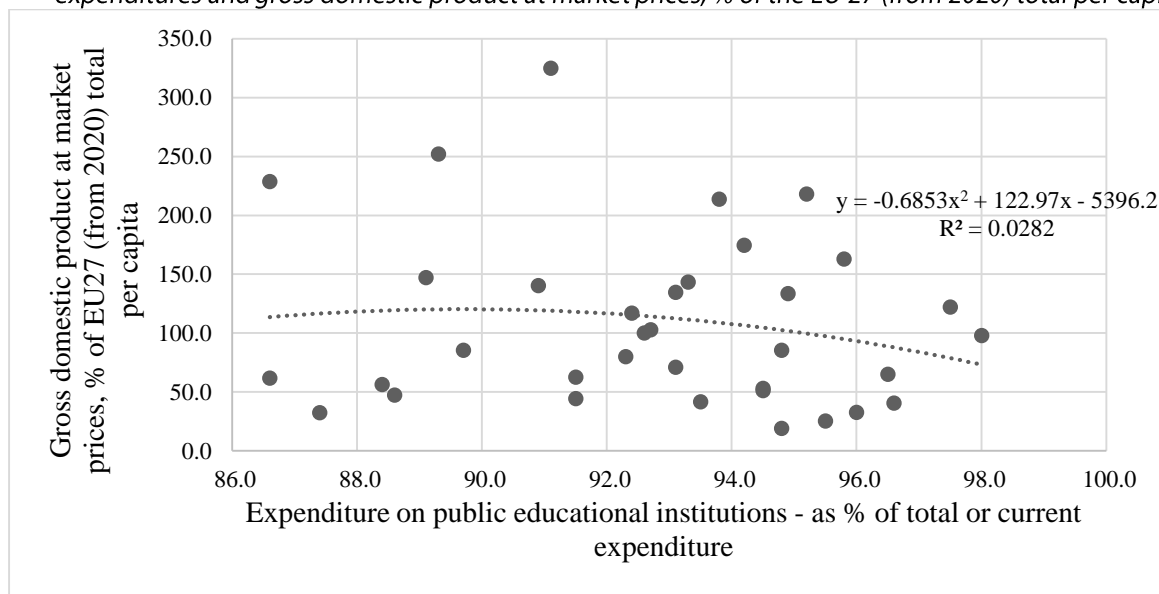
Indicator	2013	2014	2015	2016	2017	2018	Growth, %
Students enrolled in tertiary education by type of institution, million	16,55	16,52	17,21	17,20	17,34	17,50	5,72
Public institutions, million	14,33	14,47	14,35	14,31	14,34	14,32	-0,12
Private institutions, million	2,90	2,75	2,87	2,89	2,99	3,18	9,54
Mobile students from abroad enrolled in tertiary education, thousand	992,1	1150,9	1137,6	1206,8	1276,8	1347,5	35,83
Share of mobile students, %	5,99	6,97	6,61	7,02	7,36	7,70	1,71
Students in tertiary education - as % of 20-24 years old in the population	31,54	31,73	31,71	32,11	34,20	33,70	2,16
Expenditures on tertiary education (% of government expenditures on education)	22,40	22,49	22,85	21,79	22,59	22,42	0,02
Government expenditures per student, tertiary (% of GDP per capita)	26,27	26,90	27,75	26,31	26,81	26,94	0,67
Real labour productivity per person, Index, 2015=100	98,0	98,7	100,0	100,7	101,9	102,6	4,6

Source: Calculated by the author based on Eurostat data (2021a; 2021 c; 2021 d; 2021e).

Most of the students in private institutions may be related to the mobility of students. In 2018, in Belgium, the share of foreign students amounted 10%, in the Czech Republic - 14%, Denmark - 11%, Germany - 10%, Estonia - 10%, Ireland - 10%, France - 9%, Hungary - 11%, Malta - 10%, Netherlands - 12%, Austria - 17%, Slovakia - 8%, Finland - 8%, Sweden - 7%, Iceland - 8%. In contrast, in the countries of Eastern and Central Europe, this figure is

much lower. Expenditures on tertiary education are also differentiated, averaging 22% across the EU states in 2013–2018. Expenditures per student are about 27% of GDP per capita. Education systems also vary depending on the centralization of funding: from mostly centralized tertiary education funding to local funding. Despite the significant share of expenditures on tertiary education and systemic policies and the EU efforts to develop the quality of education in order to meet labour market needs, there is no significant direct link between expenditures on education and GDP growth per capita (Figure 1). This means the complexity of the links between the challenges of the environment and the development of education, which with a lag effect meets the social, economic, and environmental challenges of the environment. Simultaneously, real labour productivity per person in the EU countries has increased by 4,6% over 2013–2018, signifying some progress in achieving productivity growth towards meeting economic goals.

**Figure 1.** The dependence between expenditures on public educational institutions - as % of total or current expenditures and gross domestic product at market prices, % of the EU-27 (from 2020) total per capita, 2017



Source: Calculated by the author based on Eurostat data (2021b; 2021g).

In general, the basic challenges for the development of modern education in Western European countries are as follows: the growing migration flow, students' mobility, the quality of educational services of private institutions and corruption risks, attracting students from other countries for employment, productivity and economic growth. For the countries of Central and Eastern Europe, the following challenges remain, namely: the quality of education in general, social-economic problems, the outflow of human capital, low levels of funding due to budget constraints.

## Discussion

Limited funding of TEIs has contributed to the development of the market of private tertiary education in Western European countries, commercialization, privatization of TEIs, while in Central and Eastern Europe, a low level of development of private tertiary education is observed. This limits the potential for attracting international students compared to developed countries, where students' mobility is increasing. Therefore, universities should make decisions based on development strategies aimed at developing new educational services, in particular, by offering online courses and short-term programs in accordance with the needs of the labour market. Destructive changes and external shocks determine the need for TEIs to take into account all the potential risks of their development (Suganya, 2017). The traditional approach to teaching does not work in new realities and conditions. This is evidenced by the growth of the market of private educational services in the EU. Inequality is one of the challenges in tertiary education, in particular, due to the significant unavailability of the Internet (Suganya, 2017). In CEE countries, most citizens are limited by income; consequently, the cost of lifelong learning remains a barrier to compliance of their skills to the needs of the labour market. Despite the greater level of accessibility of digital education, as the experience of CEE shows, expenditures on private and public TEIs are also an additional limiting factor for the formation of new educational digital services.

Numerous universities declare socially responsible activities; however, the marketing of tertiary education and the society as a whole is reflected in the tension between external, economic, and political requirements, as well as internal, academic and social values of tertiary education (Robson & Wihlborg, 2019). De Wit & Altbach (2020) pay

attention to a realistic assessment of the situation and problems of tertiary education, noting that international cooperation and interchanges are not guarantees of peace and mutual understanding, solving economic problems and increasing productivity. At the same time, they continue to be important mechanisms for maintaining open communication and active dialogue in the context of internationalization and mobility. Innovative interdisciplinary and transdisciplinary approaches to investigating tertiary education challenges emphasize pluralistic, diversified, decolonial and social justice, expanding intercultural understanding and knowledge to address social-economic issues. In the conditions of the rapid spread of neoliberalism and development of the private market of educational services (Bamberger, Morris & Yemini, 2019), the value-oriented, non-market social direction of functioning of TELs becomes relevant, where attention is focused on the collective benefits of internationalization of tertiary education (De Wit et al., 2015). It is possible that the most important challenge in the current geopolitical climate is to support the dialogue on whether this dynamic movement can and how it can promote stability, social cohesion, and cultural tolerance in the European tertiary education environment (Marginson, 2014). Therefore, in the face of new challenges, current trends in the development of tertiary education require timely review of the vision of universities, their social function and their role in developing ideologies of superiority (Saunders & Ramirez, 2017) and quality of tertiary education, in terms of cooperation, interdisciplinary and intercultural interaction.

## Conclusion

The complexity of the links between social-economic, environmental, and political issues determines the dynamics of tertiary education and transformational changes in tertiary education. In general, the basic challenges for the development of modern education in Western European countries are as follows: the growing migration flow, students' mobility, the quality of educational services of private institutions and corruption risks, attracting students from other countries for employment, productivity and economic growth. For the countries of Central and Eastern Europe, the following challenges remain, namely: the quality of education in general, social-economic problems, the outflow of human capital, low levels of funding due to budget constraints. Systematization of the challenges of the external environment makes it possible to highlight the following key trends, namely: 1) the development of the creative economy, the innovation economy, and the knowledge economy; 2) external shocks such as a pandemic; 3) technological progress and integration of technologies into education; 4) increasing the level of migration flows and strengthening the problem of educational inequality; 5) spreading of the practice of commercialization and privatization of TELs; 6) globalization and internationalization of tertiary education due to international cooperation between different countries and regions. The following basic trends in the development of tertiary education in the EU countries have been identified, namely: 1) problems of implementing the concept of "knowledge and competence"; 2) challenges in the management of TELs and management of the educational process; 3) dynamic development of online and distance learning; 4) the growing importance of academic integrity and ethics; 5) challenges related to achieving the goals of sustainable development within the SDG 4 "Quality education"; 6) systemic reduction of TELs' funding under the conditions of slow economic growth; 7) increasing the level of international students' mobility and students' migration, which necessitates the adaptation of TELs and foreign students to a multicultural learning environment; 8) flexibility and adaptability of TELs; 9) challenges related to inclusive education; 10) challenges related to the integration of technology into tertiary education.

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