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Leaving No One Behind in Access to Higher Education in the Baltic States and Poland

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Abstract

The article presents research on the accessibility of higher education in the Baltic States and Poland and its compliance with the principle of "Leaving No One Behind". A qualitative approach was used to achieve the research objective using analysis of statistical indicators and the contents of documents. The results of the study reveal that the progress on higher education attainment is not homogeneous and not consistent in the countries analyzed. Document analysis indicates that higher education accessibility differs across Lithuania, Latvia, Estonia, and Poland. Lithuania and Latvia are the most accessible due to unified application systems, while Poland lacks such a system, creating extra costs and delays. A comparison of the mandatory examinations and minimum requirements set by the countries shows that Lithuania has the highest barriers to access to higher education: people with lower results or learning gaps in secondary education are deprived of the opportunity to acquire higher education, and their chances of avoiding falling behind are lower. Lithuania does not provide for exceptions for the admission of people with disabilities: they must meet the same requirements as other applicants. Another group of people who may face exclusion in Lithuania, Latvia, and Poland are members of national minorities. These results suggest that the governments of the countries and universities need to be more inclusive in their admission policies.

Keywords:
Leave No One Behind (LNOB);
Higher Education;
Equity; SDGs;
Baltic Countries;
Poland.

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1- Introduction

The "Leave No One Behind" (further – LNOB) principle is incorporated in the 2030 Agenda and Sustainable Development Goals and is commonly invoked in reference to inequalities within each country [1]. For measuring inequalities within countries, the LNOB Index considers 34 indicators and reports the countries' development on four inequality dimensions (poverty and material deprivation, income inequality and respect for fundamental labor rights, gender inequality, and access to and quality of services). In the field of education, the principle of equal opportunities in education is often referred to as a fundamental normative principle for all [2, 3]. A strong normative commitment to equality was already evident in the 19th century, at the dawn of modern education, when the first advocates of public education envisioned it as a "great equalizer" of opportunities and conditions in society. Today, the international community is committed to ensuring the right to education, which was first enshrined in the 1948 Universal Declaration of Human Rights and is now enshrined in national legislation. Equality in education is also a specific Sustainable Development Goal set by the United Nations in 2015 [4].

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As the Europe Sustainable Development Report 2025 (further – ESDR) indicates [5], despite progress in implementing LNOB on gender equality, "the Baltic States and Central and Eastern European countries appear at the bottom of the 2025 LNOB Index (with average scores of around 71)" and persisting within-country inequalities still are indicated. "The situation is particularly alarming with regards to "Access and quality of services", where 32 of the 34 European countries covered by the Index show no progress or reversal in progress" [5]. This is partly due to inequalities in health, education, and security between population groups. The research on the Baltic region countries' progress in the implementation of LNOB [6] revealed that the dimension of access to and quality of services for most countries in the Baltic Sea Region shows a decreasing trend: even the LNOB progressive Denmark, Sweden, Finland, and Germany are predicted to show a decline in their performance and situation. Sustainable Development Goal (further – SDG) 4 "Quality education" (at the beginning of the period rated 4 and 2 at the end) was responsible for the significant downward trend. As it is pointed out in ESDR 2022 [7] "there are persistent gaps in learning outcomes by socioeconomic status, in access to lifelong learning, and in access to and the quality of education in non-EU countries". "Across Europe, learners from disadvantaged backgrounds, including from rural and remote areas, are overrepresented among underachievers" [8]. However, SDG 4 "Quality Education" is often indicated as the key to the achievement of other SDGs and development and progress overall. So, the experts [7] stress the requirements "… to make investments in education and skills at different levels (pre-primary, primary, secondary, tertiary, and lifelong learning) to ensure that no one is left behind and to further the convergence of living standards and productivity and the transformation promoted by the Green Deal Europe". Meanwhile, in the new plan for Europe's sustainable prosperity and competitiveness, the EU Commission establishes a Union of Skills, which will focus on investment, lifelong learning, and skill retention [9, 10].

Higher education is crucial. To ensure national and regional equality, as well as economic and sustainable development, it is highly important to assure equal accessibility of higher education and its correspondence with the principle of LNOB. The reports [11, 8] and scientists Jansons & Rivza [12], Damyanov [13], Hofflinger et al. [14]; Lacher [15] highlight the importance of education, innovation, and life-long learning as a means for economic well-being and sustainable development of countries (also SDG transformations inside the EU). The importance of higher education is often emphasized for the progress and transformation of countries. Higher (tertiary) education is considered to play an essential role in society by fostering innovation, driving economic development and growth, and more generally improving the well-being of the population [16]. Crato & Patrinos [17] pointed out that higher education fosters sustainable development by providing students with the knowledge and technical skills needed to address today's complex challenges related to environmental, social, and economic development. Jansons & Rivzas [12] stated that no individuals or social groups should be left behind in higher education.

Although the importance of higher education is recognized, there are no research studies on the accessibility of higher education. Research in the field of leaving no one behind in education focuses on the causes of exclusion and possible solutions [3, 14, 15, 17, 18]. Palmisano et al. [3] analyze inequality of opportunity in higher education systems in European countries. In the existing research on the topic, authors distinguish the factors that are beyond an individual's control, such as parental education, family income, and social status, and individual efforts, such as academic ability and motivation. The research in the context of higher education in Europe or even the Baltic states examines the transformations and development challenges of the higher education system [12, 19, 20]. For example, Jansons & Rivza [12] investigated the higher education tendencies in the Baltic countries and Finland in terms of quantitative and structural developments in the corresponding higher education institutions as a reflection of the changing future industry needs. Gogiashvili [19] indicated that the biggest challenges facing the Baltic countries in the field of higher education funding are related to a lack of funds. Gusta & Gusta [20] analyzed the problem of students' housing in Latvian universities and even discussed this as a possibility to promote the export of higher education. The research conducted in the context of higher education and the LNOB mostly focuses on the infrastructural and cultural accessibility of higher education for people with disabilities and disabled people's experiences in higher education institutions [21-28]. But there is a lack of research on opportunities to enter higher education in the European Union and the Baltic States, particularly with regard to the challenges of higher education in ensuring inclusion and leaving no student behind.

Therefore, evaluating the prerequisites of access to higher education in the Baltic countries and Poland is a highly relevant research problem that can provide insights and recommendations for improving the regulation of the education and higher education system and for keeping pace with more progressive countries.

The article presents the research on compliance of the accessibility to higher education in the Baltic countries and Poland with the principle of LNOB. The constituent questions addressed by the research are:

- How is higher education measured in the context of leaving no one behind in the European policy and development guidelines, and what challenges does it face?
- What is the dynamic of higher education attainment, and are the regulations of admission to higher education in the Baltic countries (Lithuania, Latvia, Estonia) and Poland ensuring the implementation of the LNOB principle?

The analysis of statistical data, scientific literature, national regulation and higher education institutions' information and data was accomplished to compare the access to higher education (further – HE) in four countries: Lithuania, Latvia, Estonia, and Poland. In this way, the research question can be addressed facilitating a discussion on the political adjustments required to ensure equal access to HE for all.

The article consists of several interrelated parts. The second part reviews the scientific literature examining European education and higher education measures and challenges in the context of LNOB. It highlights the evaluation indicators related to higher education set out in European policy documents and development guidelines. It also discusses the main challenges affecting the implementation of education policy in the context of LNOB. The third part presents the research methodology. This part describes the research process, justifies the research methods chosen for analysis, provides a list of documents selected for document analysis, and indicates the limitations. The fourth part presents the empirical results, which are analyzed on the basis of the criteria and indicators identified in the theoretical part. The fifth part provides a discussion – it compares the results obtained with the conclusions of other studies and critically assesses their significance and practical implications for the higher education policy in Europe. The sixth section presents the conclusions, which summarize the main results of the research and suggest possible future research directions.

2- Literature Review

2-1- Identification of Higher Education-related Evaluation Indicators in the European Policy and Development Guidelines

The reports and scientific literature stress the importance of education and higher education. As it is indicated in the Council Resolution on a strategic framework for European cooperation in education and training towards the European Education Area and beyond (2021-2030) (further – the Resolution on ECET EEA) [29], in order to thrive in today's world and cope with future societal, economic, and labor market transformations, all individuals must be equipped with the appropriate knowledge, skills, competencies, and attitudes. As it is pointed out in the Resolution on ECET EEA [29], education and training are essential for the personal, civic, and professional development of European citizens. When identifying criteria for the evaluation of accessibility to higher education, it is relevant to systematize the indicators specified in the guidelines for European development (see Table 1). One of the most important documents listing and defining some indicators is the Council Resolution on a strategic framework for European cooperation in education and training towards the European Education Area and beyond (2021-2030) (2021/C 66/01). The Resolution on ECET EEA [29] points out that all the initiatives and goals of the European cooperation in education and training development are aimed "at personal, social, and professional fulfillment of all citizens, whilst promoting democratic values, equity, social cohesion, active citizenship, and intercultural dialogue". The implementation of five strategic priorities and seven European-level goals of the Resolution on ECET EEA [29] is monitored using seven indicators. One of these indicators is related directly to higher education (tertiary educational attainment), and two indicators are related to lifelong learning (adult participation in learning and exposure of vocational education and training graduates to work-based learning). Tertiary education is provided by universities and other tertiary educational institutions and typically follows secondary schooling [16].

Table 1. The indicators of measurement SDG4, LNOB, and the European Education Area implementation

<table>
<tr><th>Education level</th><td>Council Resolution on a strategic framework for European cooperation in education and training towards the European Education Area and beyond (2021-2030) EU-level targets [29]</td><td>SDG4 indicators [5]</td><td>The measures of the dimension "Access to and quality of services" of the LNOB index [5]</td></tr>
<tr><th>Related to primary and secondary education</th><td colspan="3">Participation in early childhood education (% of children between age of 3 and starting age of compulsory primary education).</td></tr>
<tr><th rowspan="3">Related to primary and secondary education</th><td>Low-achieving 15-year-olds in basic skills.
Low-achieving eighth graders in digital skills.</td><td>PISA score
(worst 0–600 best)</td><td>Underachievers in science
(% of population aged 15).</td></tr>
<tr><td>Underachievers in mathematics (% of population aged 15).</td><td colspan="2">Variation in mathematics performance explained by students' socio-economic status (%).</td></tr>
<tr><td colspan="3">Early leavers from education and training (% of population aged 18 to 24).</td></tr>
<tr><th>Related to higher education</th><td colspan="3">Tertiary-level attainment (% of population aged 25 to 34, should be at least 45% by 2030).</td></tr>
<tr><th rowspan="2">Lifelong learning</th><td colspan="2">Participation of adults in learning (at least 47% of adults aged 25–64 should have participated in learning during the last 12 months by 2025).</td><td rowspan="2">Youth not in employment, education or training (NEET) (% of population aged 15 to 29).</td></tr>
<tr><td colspan="2">Exposure of vocational education and training graduates to work-based learning</td></tr>
</table>

Also, global guidelines for development are identified in the Sustainable Development Goals (further – SDG or SDGs). SDG 4 "Quality Education" is often indicated as the key to the achievement of other SDGs, development and progress overall [1, 7]. SDG4 "Quality education" is composed of 7 indicators [5]. One of these indicators is related to higher education (tertiary educational attainment), and the other one is related to lifelong learning (adult participation in learning). The LNOB's dimension "Access to and quality of services" is composed of 15 measures: five of them are related to education, and just one measure indirectly relates to studying after graduating from secondary school (youth not in employment, education or training). Thus, the analysis of the guidelines on the evaluation of the European higher education development revealed that evaluation indicators focus on quantitative data about tertiary-level attainment or participation in education/training. Based on the list of indicators presented in Table 1, it can be concluded that the importance of secondary education is emphasized more in the agendas, while higher education assessment is limited to the number of people who have obtained it. Thus, it can be concluded that access to higher education is also not examined in guidance documents' indices.

2-2- European Education and Higher Education Challenges in the Context of LNOB

In the context of education and higher education in Europe, the reports [7, 30] and academic literature [13, 17, 21, 31-33] refer to a variety of groups of individuals and their experienced difficulties: pupils from rural areas; pupils who have been on distance education for a longer period; students from low socio-economic or educational backgrounds; racial and ethnic minorities; migrants and refugees; people with disabilities; and other groups. Similar or unique challenges faced by different groups can lead to greater difficulties in or even exclusion from higher education. As Palmisano et al. [3] state, it has been observed that a growing body of normative economics literature examines the different factors that determine individual differences, distinguishing between just inequality (i.e., inequality that arises from the efforts of different individuals) and unjust inequality (i.e., just inequality arises from the efforts, choices, and motives of various individuals and is related to personal responsibility and effort). Unjust inequality occurs when individual opportunities are limited due to factors beyond their control. Factors such as socio-economic status, geographic location, gender, ethnic origin, or disability discrimination, unequal distribution of educational quality or resources between schools or higher education institutions, etc. It is precisely this unjust inequality that poses some of the greatest challenges to individuals wishing to participate in higher education, and therefore some motivated students are left behind.

A large number of researchers and literature [8, 14, 17, 18, 30] highlighted a constant decline in the achievements of different groups of pupils/students, especially in mathematics and reading. Crato & Patrinos [17] indicate that OECD countries' mathematics scores have been significantly decreasing since 2003, and PISA results have been declining since 2009. In 2022, the decline in mathematics performance was three times greater than any previous consecutive change: 25-60% of 15-year-olds from different countries were falling behind as they were considered low performers in mathematics, reading, and science [30]. According to Tire [18], there were 13.6% of pupils who failed the mathematics exam in Estonia in 2019, whereas in 2021 this number reached 38.6%. Tire [18] also points out that the share of low achievers has increased, and the share of high achievers has decreased in Estonia. It should be noted that the decline in student achievement in Europe is not uniform – socially and culturally vulnerable groups are the most affected. This shows that simply improving the overall quality of education is not enough; targeted measures are needed to reduce inequality and strengthen support for the weakest groups in order to prevent long-term social exclusion.

Palmisano et al. [3] conducted a study to assess inequality of opportunity in higher education institutions in European countries, concentrating on circumstances (e.g., parental education, socioeconomic status) and effort (individual performance). The authors found significant differences between countries, with inequality being lower in Northern Europe and higher in Southern and Eastern Europe. Disaggregating by circumstance shows that parental education and parental occupation are the most important factors contributing to higher education. This points to the socioeconomic background as the most relevant driver of higher education, with primary and secondary effects on educational achievement (primary factors are those that affect academic achievement, while secondary effects capture the role of social background on educational choices, net of academic performance). Socioeconomic factors are also mentioned in the OECD report [30], which indicates that educational achievements and knowledge of effective learning strategies relate to socioeconomic factors. The students who stayed on a distance learning experience had greater losses of achievement than students who returned to the schools for face-to-face learning; students from poor backgrounds had more gradual declines than students from middle-class and affluent environments; and the students who were already struggling academically had significantly decreased results compared to students at or above grade level [17]. Thus, with the increasing requirements for HE admission, those who have lower achievement might be left behind. Hofflinger et al. [14] indicated that "broader socioeconomic implications of different educational disruptions are profound, potentially leading to decreased future income and heightened poverty levels, especially among vulnerable groups". Kottmann et al. [31] noted that individuals from low socioeconomic or educational backgrounds are unrepresented in HEIs and provide insights into the economic challenges, such as tuition fees and living costs, and social obstacles, such as family expectations and educational support, faced by this group of students in different higher education institutions. Therefore, government policies and financial support are crucial for enhancing access to HE [34]. As Wanti et al. [34] suggested, financial barriers for students from low socioeconomic status backgrounds can be significantly reduced by national policies and provision of scholarships, grants, or subsidies. Thus, scientists indicate serious problems in the education of the young generations even in developed economies.

Some literature brings findings about the obstacles of minority representatives. Crato & Patrinos [17] identified that the achievements of ethnic minority students were worse than those of others. Damyanov's [13] findings reveal that despite national inclusion-promoting policies, significant barriers persist, especially for Roma students, who continue to experience exclusion, bias, and limitations on learning. Higher education providers and specialists frequently indicate difficulties in meeting the diverse needs of students in under-resourced schools, while psychological and cultural biases further hamper effective inclusion. Kottmann et al. [31] and Damyanov [13] identify a critical policy-practice gap, with inclusive education policies often poorly implemented due to lack of cultural competency and institutional support. As education remains a key determinant of future possibilities, this gap has direct consequences for the social mobility of marginalized students [13].

Research on the inclusion and exclusion of individuals with disabilities in HE has been dominated by studies on the adaptation of HEIs to the needs of people with disabilities and their experiences, inclusive policies, and practices. Filippou et al. [21] emphasized the importance of inclusive policies and practices for ensuring disabled persons' participation and success in HE and highlighted a critical need for accessibility regarding physical structures, social environments, and digital provisions. Fernández-Batanero et al. [22] indicated that access to HE for students with disabilities is limited by many physical, institutional, and social barriers. According to Krejtz et al. [23], faculty readiness and institutional support are key factors in ensuring effective accessibility. García González et al. [24] emphasized the importance of disability awareness training to familiarize staff with assistive technologies and accessible digital content. Lister et al. [35] recommended allocating resources to staff development and fostering a culture of accessibility to maintain inclusion. As suggested by Fernández-Batanero et al. [22], the creation of communities of practice for sharing accessibility resources and the provision of specialized support services further strengthen support for students with disabilities. Including accessibility in university policies and providing faculty with training and resources form the basis for inclusive education.

Lopez-Gavira et al. [25] emphasized key elements that support inclusive education, including fostering positive attitudes among faculty toward students with disabilities, implementing appropriate adjustments in teaching methods, assessment practices, and learning resources to facilitate effective learning, and leveraging technology to improve accessibility. Katsu et al. [26] indicated that in higher education institutions students with learning difficulties encounter negative ("crip") experiences. Goodall et al. [27] revealed that in Norwegian HEIs students with disabilities are still expected to fit into an environment designed for mainstream / "ideal" learners. The metaphor "sink or swim" was used by some informants to illustrate how educators are expected to navigate their role as an educator without sufficient support from the higher education institution. Katsu et al. [26] discussed significantly lower participation of disabled people in HE in Finland and highlighted the importance of HE to people with disabilities in terms of promoting their employment, social inclusion, and participation. Katsu et al.'s [26] research revealed that equal opportunities for HE among persons with disabilities are far from reality in Finland, as there is a variety of different forms of discrimination (for example, not assuring suitable accommodation during the admission process, or during schooling; not extending the examination time for some students with disabilities to accommodate their disability-specific needs; and others).

Thus, the literature analyzing education and higher education indicates that the EU faces the challenge of balancing inclusion, quality, and adaptability in a wide variety of educational settings (Figure 1). Although initiatives such as the European Education Area aim to promote cohesion and mobility, structural inequalities, changing labor market needs, and sociocultural diversity, significant barriers remain. It has been observed that socioeconomic status (family income, parental education, school quality) plays an important role in accessing higher education. The literature on education highlights a decline in students' performance in mathematics and reading. The reports highlight the link between student achievement and socio-economic characteristics. The challenges or remaining barriers faced by people with disabilities and ethnic minorities are also highlighted. According to Mahrishi et al. [36], quality higher education must be inclusive and equitable, ensuring all students have equal access to quality education regardless of their background. This includes eliminating gender disparities in education, promoting diversity and inclusion, and ensuring that higher education institutions are accessible to students with disabilities.

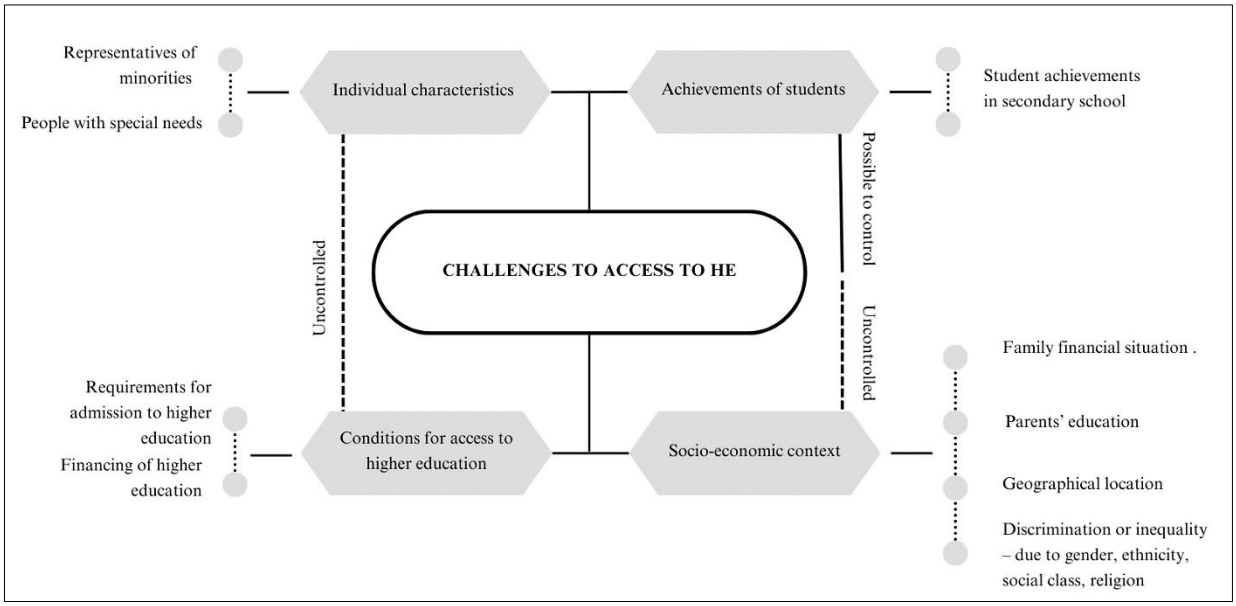


Figure 1. Challenges to access higher education

3- Research Methodology

This paper analyzes the accessibility of first-cycle HE in the Baltic countries (Lithuania, Latvia, and Estonia) and Poland. In these countries, undergraduate education is provided by universities (in all countries), colleges (in Lithuania and Latvia), universities of applied sciences (in Estonia), or state higher schools/academies of applied sciences (in Poland). Like the other countries of the European Union, these neighboring countries are striving to develop their economies and achieve breakthroughs in innovation and science. Each country's individual competitiveness and progress is particularly important now, as the world undergoes radical geopolitical and economic transformations. However, different legal frameworks and the uneven development of quality assurance in higher education (e.g., establishing entry requirements) create the preconditions for future professional, social, and economic inclusion or exclusion. Thus, a comparison of access to higher education in neighboring countries can provide valuable insights about the implementation of the principles of LNOB, creating more inclusive education systems and ensuring that more students can pursue HE and contribute to their country's growth.

The structure of the research methodology is presented in Figure 2. The analyzed scientific literature and the European guidelines for the development of higher education allowed to identify the criteria most relevant to LNOB. Based on the identified criteria, higher education in the Baltic States and Poland was analyzed.

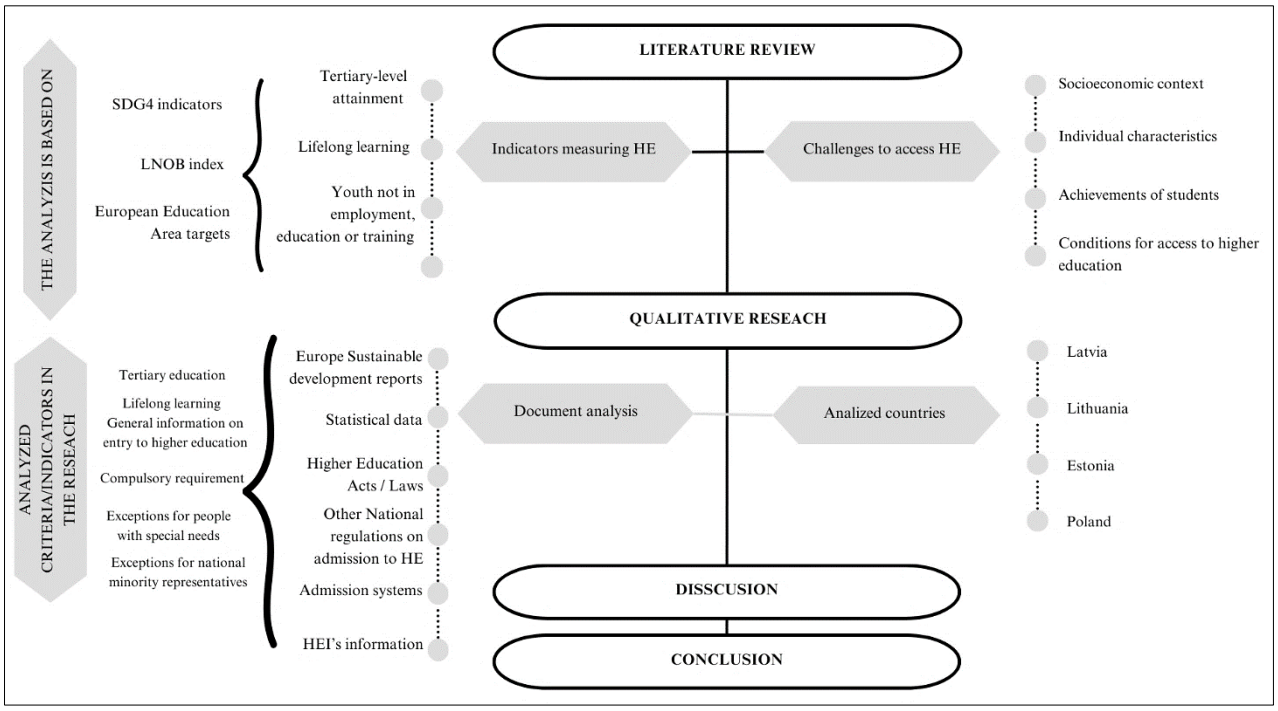


Figure 2. Methodology process

The empirical research was conducted using document analysis – the systematic examination and evaluation of written or digital material such as documents, statistical data, texts, articles, reports or any other form of content [29]. Accessibility is determined by national laws on science and higher education, other national and institutional regulations on admission, support, and exemptions for enrollees. Therefore, in order to assess the accessibility of higher education, national legislation, information from admission systems, and the admissions departments of several higher education institutions (further – HEIs or HEI) were analyzed (Table 2).

There are many challenges that a person may face when accessing higher education. In this research, we chose to analyze only a few specific indicators / criteria that are relevant to the leaving no one behind principle in higher education. We also provide general information about opportunities to enter higher education in selected countries, as this is in line with the principle of inclusion and equality. The national documents and informational sources were examined for research relevant indicators / criteria: tertiary level attainment, lifelong learning, general information on entry to higher education (information about application systems, application options and the number of desired programs, application fees), compulsory requirements (examinations, minimum threshold achievements), exceptions for people with special needs, exceptions for national minorities representatives.

Limitations. The analysis of access to HE was intentionally limited to the legal requirements applicable to residents and did not include information on foreigners' enrolment in HEI. The analysis does not take into consideration socio-cultural diversity. This article analyses affordability only through admission / entry fees, while tuition fees are not addressed due to the limited scope of the article.

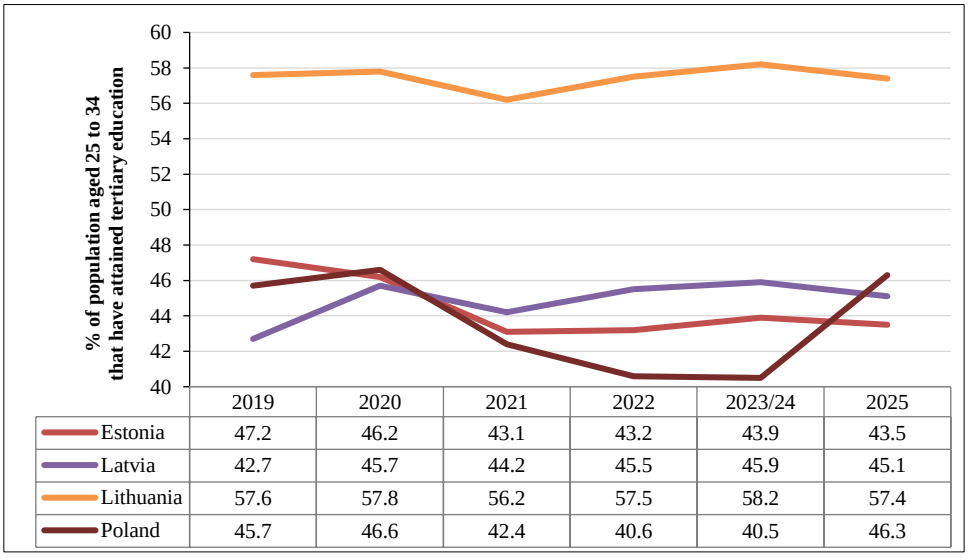
Table 2. Analyzed national and institutional documents

Document group	Country	Document title
Europe Sustainable Development reports	Lithuania, Latvia, Estonia, Poland	Europe Sustainable Development Report 2019; 2020; 2021; 2022; 2023 / 24; 2025 [37, 11, 38, 7, 1, 5]
Statistical data	Lithuania, Latvia, Estonia, Poland	Eurostat Data, Persons aged 25-34 with tertiary educational attainment level [16]; Eurostat Data, Adult participation in learning [39]
Higher education acts /laws	Lithuania	*Republic of Lithuania Law on Higher Education and Research* [40]
	Latvia	Law on Higher Education [41]
	Estonia	*Estonia Republic Higher Education Act* [42]
	Poland	Act on Higher Education and Science [43]
Other national regulations on admission to HE	Lithuania	Order of the Minister of Education, Science and Sport of the Republic of Lithuania [44]; Social scholarship [45]; Supporting students with disabilities [46]
	Latvia	Regulations on Requirements, Criteria and Procedures for Admission to Study Programmes [47]
	Poland	Ministry of National Education information about Matura exam [48]; Benefits for students in academic year [49]
Admission systems	Lithuania	LAMA BPO [50]
	Latvia	Electronic application for undergraduate studies [51]
	Estonia	Study Admission Information System [52]
HEI's information	Lithuania	Admission rules of Klaipėdos valstybinė kolegija / Higher education institution [53]
	Estonia	Application Fee in Estonian Aviation Academy [54]; Application Fee in the University of Tartu [55]; Preparatory courses in Tallinna Technikaulikool [56]; Entrance tests and admission to undergraduate studies in Tallina Technikaulikool [57]
	Poland	Admission rules in the University of Zielona Góra [58]

4- Results

4-1-Analysis of Higher Education Indicators and Their Dynamics in the Baltic Countries and Poland

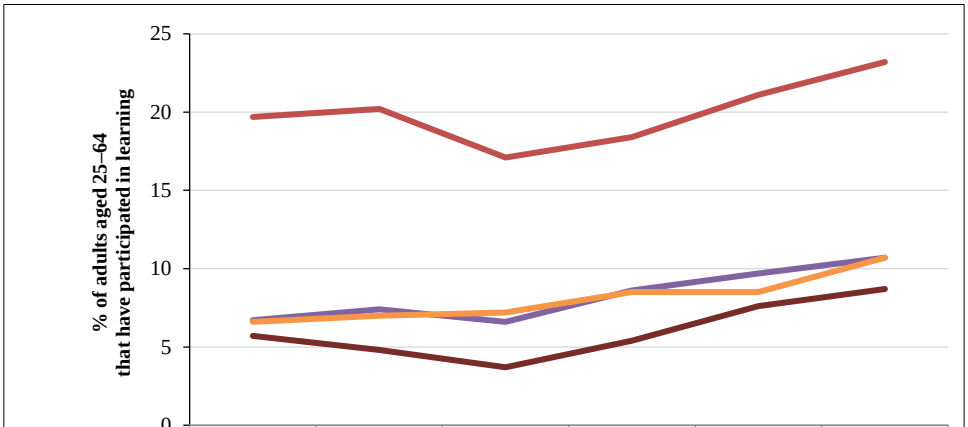
As it was indicated, Europe development guidance documents indicate two indicators for measurement of the situation and progress in the higher education area: quantitative data on tertiary-level attainment and adult participation in education / training. Therefore, it is very important to determine the actual situation with higher education and what the dynamics are in the Baltic countries and Poland. According to the Eurostat data [16], the tertiary education attainment rate in the EU was 44.1% in 2024, which was a significant increase from the 39.6% recorded in 2019. The systematization of SDG4 indicator "Tertiary-level attainment" 2019-2025 data (Figure 3) [1, 5, 7, 11, 37, 38] indicate that the highest level of the indicator at the beginning and end of the period was in Lithuania (57.6% and 57.4%), while the lowest level was in Latvia (42.7%) at the beginning of the period and in Estonia (43.5%) at the end of the period. Therefore, it can be indicated that at the beginning of the period only Latvia was below the identified EU-level target of tertiary education attainment (tertiary education attainment should be at least 45% by 2030 [29]), and according to the latest data, Estonia is just below the identified EU-level goal. The analysis of SDG4 indicator "Tertiary-level attainment" 2019-2025 dynamics reveals that progress is not homogeneous and consistent. ESDRs indicate that in 2021 there was more or less pronounced decline in the tertiary education attainment indicator in all countries. The declining number of tertiary education attainment in Poland was indicated in the 2022 and 2023/24 ESDRs. In 2025, once again, all the Baltic countries face a decrease, while Poland is making a significant increase. During the period 2019-2025, Latvia made the most progress (the number of people with tertiary education increased by 2.4%), Poland made slight progress (0.6% increase), Lithuania experienced a slight decline (-0,2), and Estonia recorded the largest decrease (-3.7%).



	2019	2020	2021	2022	2023/24	2025
Estonia	47.2	46.2	43.1	43.2	43.9	43.5
Latvia	42.7	45.7	44.2	45.5	45.9	45.1
Lithuania	57.6	57.8	56.2	57.5	58.2	57.4
Poland	45.7	46.6	42.4	40.6	40.5	46.3

Figure 3. Dynamics of the tertiary education attainment indicator in the Baltic States and Poland, 2019–2025

The other important indicator is adult participation in learning. According to Eurostat data [39], the adult participation in learning rate in the EU was 10.8% in 2019 and till 2024 this indicator increased to 13.5%. SDG4 indicator "Adult participation in learning" 2019-2025 data (Figure 4) [1, 5, 7, 11, 37, 38] indicate that the highest level of the indicator at the beginning and end of the period was in Estonia (19.7% and 23.2%), while the lowest indicator was in Poland (5.7% and 8.7%). In the Resolution on ECET EEA [29] it was indicated that by 2025 at least 47% of adults aged 25–64 should have participated in learning during the last 12 months. Thus, it must be noted that none of the countries has yet achieved the EU-level targets. The analysis of the dynamic of SDG4 indicator "Tertiary-level attainment" 2019-2025 reveals that progress is not homogeneous and consistent. All countries analyzed experienced a decline in this indicator in 2021. From 2022, ESDR [1, 5, 7] reports indicate increasing numbers of adults participating in learning. During the period 2019-2025, the growth of the indicator of adults participating in learning was very similar in all countries: Lithuania – 4.1%, Latvia – 4%, Estonia – 3.5%, Poland – 3%. Therefore, it can be concluded that in the context of higher education (in the context of education after graduating from the school), adult participation in learning is significantly more constant, while the dynamics of the number of higher education graduates are generally negative. Therefore, national governments need to consider the attractiveness and accessibility of higher education.



	2019	2020	2021	2022	2023	2025
Estonia	19.7	20.2	17.1	18.4	21.1	23.2
Latvia	6.7	7.4	6.6	8.6	9.7	10.7
Lithuania	6.6	7	7.2	8.5	8.5	10.7
Poland	5.7	4.8	3.7	5.4	7.6	8.7

Figure 4. Dynamics of the adult participation in learning indicator in the Baltic States and Poland, 2019–2025

4-2-Analysis of Documents Regulating Admission to Higher Education in the Baltic Countries and Poland

The information revealing access to higher education in the neighboring countries compared is presented in Table 3. The access to higher education institutions in the Baltic countries and Poland was compared on the following characteristics: general application characteristics (applying options, number of programs indicated in application, the application / registration fee), the list of mandatory and entrance examinations, minimal threshold, exceptions for people with special needs and for national minority representatives. A comparison of neighboring countries in terms of higher education accessibility provides valuable insights into the assurance of LNOB implementation in the context of HE.

The application options relate to physical accessibility – time and money resources required for application actions. In Lithuania, Latvia, and Estonia, individuals can apply for admission through national application systems: LAMA BPO [50] in Lithuania, Electronic application for undergraduate studies [51] in Latvia, and Sais in Estonia. The common national online admissions systems for HEIs in these countries enable applicants to submit their applications to geographically distant institutions simultaneously, without incurring additional time or money costs. However, online systems can pose difficulties for individuals with lower digital literacy levels. The Estonian law and HEIs information indicate that admission is solely through the Sais system. Meanwhile, in Lithuania and Latvia, there are also opportunities to apply directly through a HEI. Therefore, individuals with less experience of using online applications or with special needs can receive assistance from the specialists at their chosen HEI when submitting their applications. In Latvia, some universities additionally allow on-site registration. This flexibility enables applicants with limited experience in online systems or with special needs to receive support from HEI staff when submitting their applications. In Poland, applications can only be made through higher education institutions (HEIs), and each university has its own application

system. Using these systems requires digital skills, which may be problematic for less computer-savvy candidates, as they are expected to submit an application form and scanned certificates of their Matura exam results, as well as any additional documents required for certain programs, such as medical studies or physical education (for these programs, candidates are required to submit a medical certificate issued by an occupational medicine doctor, confirming that their state of health permits them to study the chosen program).

The possibility to list several study programs or HEIs on the application form (variety of choice) increases the probability of admission and reduces stress, provides flexibility, and allows assessing priorities. The Lithuanian admissions system allows individuals to include from 1 to 9 different HEI institutions and/or different study programs in their application. In Latvia, applicants can list up to 10 preferred programs while applying remotely through the electronic system; additionally, institutions also accept applications on-site. In Estonia, applicants can apply to up to two programs per university and to a maximum of five different universities, allowing for a total of up to 10 programs with a single application. In Poland, the number of programs applied for is not limited. Thus, countries create wide possibilities to choose study programs. However, at the same time, online systems give the possibility to assess one's ranking among other applicants.

The variety of choice is related to economic accessibility. This research takes in consideration not the prices, but just the admission fee or registration to the studies fee. The Lithuanian admissions system does not charge applicants, but institutions charge different registration fees ranging from 45 to 120 €. The highest fees are charged by private HEIs or for foreigners. In Latvia, applicants are charged a 40 € fee. In Poland, the fee for application (1 program) for most programs is 85 PLN (approximately 20 €), 100 PLN (approx. 25 €) if there is an exam, and 150 PLN (approx. 37 €) if there is a test of artistic skills. It must be noted that the application price must be multiplied by the number of programs in the application. The previously mentioned certificates required for applicants in Poland also require expenses: a certificate is usually issued at a fee of at least 100 or 150 PLN (25-35 euros). Expenses increase in times if one wishes to apply for more programs, as for each of them a separate certificate is required. Once the candidates are accepted, they must submit original paper documents either in person or by post (incurring an additional postal cost). Thus, in Poland, the total cost of applying to a large number of HEIs or programs increases significantly. In Estonia, nationals or those who have finished the previous level of studies in Estonia generally do not have to pay for the application: the HEI does not have the right to charge from the student an admission fee or a fee for performances required for admission. But the other group of applicants (foreign people, those who have failed the studies before and who have already studied at tuition-free studies before) are charged. For example, at the Estonian Aviation Academy there is a non-refundable 50 € application fee, at Talin University there is a fee of 100 €. Private HEIs may charge for applications similar fees. Therefore, the economic accessibility is the cheapest in Lithuania.

The key feature of access to HE is the compulsory level of examinations specified in the admission requirements. In Lithuania, Estonia, and Poland, there are two levels of matriculation exams: basic (in Lithuania titled as the school level, in Estonia – narrow) and advanced (in Lithuania titled as the state level, in Estonia – broad level, and in Poland – extended). In Latvia, there are three levels of exams: general, optimal, and highest. The laws on science and HE in comparable neighboring countries differ substantially in the mapping of entry requirements. In Lithuania, applicants are required to pass the required 3 examinations at the state/advanced level if they want to apply for HE. In Latvia, applicants must pass 3 exams (Latvian, foreign language, and mathematics) at the basic level and two optional exams at a higher level. However, there are also additional exams in different HEIs. For example, ISMA University recently introduced a BBA program, where applicants must either be graduates of an International Baccalaureate (IB) school or pass a special entrance examination to enroll.

In Poland, to enter higher education, the person needs to pass three subjects (Polish and a foreign language, and mathematics) at the basic level and at least one subject at an advanced level. It is worth noting that in Poland, each university indicates the compulsory level of exams (also on mandatory exams). The results of these exams are considered by the higher education institution, which informs what subjects will be considered (more than one chosen subject may be required; e.g., for medical studies one usually has to pass exams in Biology, Chemistry, and Physics at an advanced level). At the University of Zielona Góra, there are additional exams only for the program in music education as well as jazz and popular music studies. In the case of the programs in interior design, graphics, painting, and visual arts, candidates have to submit their works for review. In the case of all the other programs, there are no additional exams or tests [58]. The Estonian HE Act gives HEIs the right to set their entry requirements. For example, Tallinn University in its admissions information notes that in some programs applicants are admitted based on the results of entrance exams, while the selection of applicants is based on the results of state examinations. In 45 study programs offered by Tallinn University, 25 study programs admit students based on the entrance exam results, while 20 select students with a mixed model (school exam results and entrance exam results).

Table 3. Comparison of national and institutional requirements for admission to higher education in the Baltic countries

Lithuania	Latvia	Poland	Estonia
Applying options			
1. Through the general admission information system LAMA BPO [7]. 2. Directly through HEI.	1. Through the unified portal Latvija.lv 2. Directly through HEI.	Directly through HEI.	Through a unified services portal Sais.
Number of programs indicated in the application			
1-9	1-10	Not limited	1-10
The application / registration fee (€)			
45-120	40	20, 25, 37	0-100
The list of mandatory examinations			
1. Lithuanian language and literature advanced level. 2. Mathematics advanced level. 3. An advanced level freely chosen by the applicant (except for the study field group of arts).	1. The Latvian language at least at the basic / optimal level. 2. The foreign language at least at the basic / optimal (B2) level. 3. Mathematics at least at the basic / optimal level. 4. Not less than two examinations in advanced courses at the highest level.	1. Polish language oral and written at basic level. 2. Mathematics basic level. 3. A foreign language oral and written at a basic level. 4. At least one chosen subject at an advanced level written exam.	The criteria of admission to studies at the level of HE, including the minimum requirements of the level of the skills of the language, are established and published by particular HEI.
Entrance examinations			
Exams run by the HEI are possible regarding specific abilities (artistic, physical, etc.) or motivation, which are not tested during exams.	Are more applied in an art field and engineering fields.	Exams run by universities are possible regarding specific abilities (artistic, physical, etc.) which are not tested during the "matura" exam.	Entrance exams, motivation letters and interviews, and portfolios of personal achievements/works dominate in admission.
Minimal threshold			
Is established nationally and calculated from 5 subjects and is established as: 7 (for university candidates); 6 (for college candidates).	Not established. HEIs determine that an additional selection criterion for the competition is the result of a passed centralized exam on a specific learning content that ensures thematic compliance with the thematic area of studies, and the highest level of learning content.	Not established. Each university creates a list of candidates to fill in the number of places. The minimal number of points to be admitted is known after the end of application process.	Not established. HEIs individually set the minimal threshold for school graduation exams results and for entrance exams.
Exceptions for people with special needs			
No exceptions on admission. For students with moderate or severe disabilities a supplement and a partial reimbursement may be granted.	HEIs can determine regulations and procedures in the admission of persons with special needs. They do not have to take the examinations.	Exceptions can be offered by HEI. There are social scholarships and financial aids for students in need	The act on HE identifies some reductions for people with disabilities, and other special groups (parents of children younger than 7 years or disabled children).
Exceptions for national minority representatives			
No separate regulations for minorities that are Lithuanian residents. Everybody must pass Lithuanian language exam at the advanced level.	No separate regulations for minorities that are Latvian residents.	It is obligatory to take both written and oral exams in Polish and in minority language.	Candidates must have a minimum level of B2 in Estonian, as evidenced by an official language test result of B2 or above, or have completed secondary education in Estonian, which automatically confirms the required level of language proficiency. Particular HEI set requirements on Estonian and English language proficiency.

Minimum threshold achievements can make a significant difference in access to higher education. In Lithuania, the college applicants' arithmetic average of the 5 subjects must not be lower than 6 points, while the university applicants' average of the 5 subjects must not be lower than 7 points. These requirements permanently prevent those with lower grades from entering higher education. To study in HE, the person needs to retake an exam or exams or to obtain a vocational qualification. In practice, this is not realistic. In Latvia and Poland, there is no nationally established passing threshold, and admission depends on the achievements and grades of those who enroll in a given year. In Poland, highly-ranked HEIs and more popular and prestigious programs (e.g., medical studies, law, psychology) usually require a higher number of points than less prestigious ones. For example, at Jagiellonian University in Kraków, the oldest Polish university among the top three ones, there are minimal thresholds set by the Rector (candidates with lower scores are not accepted even if there are places available), which are later juxtaposed with actual candidates' results (so the actual threshold can be higher). In 2024, the threshold to study law was 80 points (the result of the worst candidate was 81 points); to study economics, the Rector's threshold was 75 points, while in practice the worst candidate had 88.5 points; for medical studies, it was 70/73.67 points; for English studies, the threshold was 70/80.86 points; and for Japanese language and culture studies, it was 90 and 94.25 points, respectively [59].

Even if a person's achievements and grades are lower than other applicants in one year, the person's achievements in the following year or at another HEI may be sufficient, as there is a limit in the number of students, not a fixed threshold. Therefore, universities usually do not publish information on thresholds, and even after the recruitment is over, it is not easy to find the respective data online. In Estonia, HEIs not only select students through entrance exams but also set minimum threshold levels of achievement to pass the exams. For example, Tallinna Technikaulikool has set that

"mathematics entrance tests are not open to 2025 graduates who have scored less than 30 points in the broad mathematics national exam or less than 70 points in the narrow mathematics national exam". But the HEI offers an opportunity: "if the state examinations have not been passed or have been passed below the expected result, the HEI offers entrance tests in mathematics and the Estonian language". The Tallinna Technikaulikool offers preparatory courses in mathematics, physics, and applied architecture. In Lithuania, although some universities offer paid tutors to help fill gaps in knowledge and achievements, the person interested in studying must still pass the necessary matriculation exams at an advanced level, according to the approved national procedure. Thus, a comparison of the minimum threshold requirements set by the countries suggests that Lithuania has the highest barriers to access to higher education, which permanently excludes lower achievers from better education and creates exclusion.

Lithuania does not provide exceptions for admission of people with disabilities but provides financial support for people with disabilities studying at HEIs: financial aid is granted to students with disabilities who have a participation rate of 45% or less or a severe or moderate level of disability to meet their special needs related to their studies and/or to partially compensate for the costs of their studies; the applicant with a disability has a 50% discount for the study registration fee. Orphans younger than 25 can get a social grant after enrolling at the HEI. But all groups of these persons must fill in the request for financial aid after starting studying. In Latvia, people with special needs or medical conditions do not have to take state exams, and HEIs indicate special regulations and exceptions for their admission. The Estonian Higher Education Act [42] indicates that people with disabilities and other vulnerable groups (parents raising children younger than 7 years or disabled children and others) are not charged for studies or applications. In Estonia, HEIs strive to ensure equal opportunities for people with disabilities through a range of measures and benefits like personalized admission conditions (special conditions may be provided for persons with disabilities during the entrance exams, such as extra time, an adapted environment, or alternative assignments), financial support (scholarships or other financial benefits to students with disabilities to help cover the costs of study or living), and assured accessibility (universities and colleges try to adapt the study process to the individual needs of students, for example, by providing learning materials in accessible formats or physical accessibility). Each institution establishes its own list of benefits and exemptions. In Poland, the exceptions are created by a particular HEI. In Poland, according to the Act on Higher Education and Science [43], one of the roles of HEIs is creating conditions for students with disabilities to enable them to fully take part in the application process, studying, and scientific activity. As a result, candidates with special needs resulting from disability are offered assistance, e.g., adapting exams to their needs, extra time, and others. In addition, students with disabilities may apply for scholarships, the value of which is fixed at each HEI separately. HEIs have centers of support for students with disabilities offering assistance in this matter.

The other vulnerable groups are national minority representatives. Young people from national minorities frequently study in specialized schools or junior high schools, where they can interact more with people representing their nationality, spend more time communicating and learning their national language and traditions, and spend less time learning the state language; some subjects might be taught in the minority language. Part of the graduates of these institutions do not take the national language exam, especially at a higher/advanced level. This can be a barrier and a challenge for enrollment in HE. The regulation analysis indicates problems. In Lithuania, there are no exceptions for members of national minorities: all those who have completed secondary education in Lithuania and want to study at the HE level have to pass the Lithuanian literature and language examination at the state/advanced level. The only option for them is to study in the HEI as foreign students, which is always charged a tuition fee. In Latvia, there are no exceptions for members of national minorities. In Poland, the students taught in one of the minority languages (Belarussian, Lithuanian, Ukrainian, German, Kashubian, or Lemko) additionally must take a written matura exam at a basic level in that language apart from all the other exams, including the Polish language exams. In Estonia, HEIs indicate different requirements for language, but most of them indicate a B2 level for Estonian or English proficiency. Thus, the necessity to take national language exams, having studied it less in secondary school, can lead to young people from national minorities being excluded and to a greater probability of being left behind in the future.

5- Discussion

The analysis of scientific literature revealed that overall students' learning achievements are decreasing and there are clear links between learning results and socioeconomic or educational backgrounds. An analysis of the legal regulations has shown that the neighboring countries have different requirements for applicants to HE, which creates challenges for the accessibility of HE and the implementation of the LNOB principle. These findings are in line with Palmisano et al.'s [3] findings, indicating significant differences between European countries. The Law on Higher Education and Research of the Republic of Lithuania (2025, 46 art.) [40] identifies setting conditions for the admission of students as an important instrument for ensuring the quality of scientific and/or artistic activities and studies. Aspiration to increase the quality by excluding lower achievers from the higher education system (e.g., Lithuania's requirement to pass state/higher level exams and setting the minimum thresholds), might close pathways "for individuals to improve their socioeconomic status through access to knowledge and opportunities" [13]. Young people with lower educational achievements can access vocational education. This would be in line with the ESDR experts' [7] suggestions that it is necessary to develop a dynamic, resilient and inclusive labor market that will have a place for young people with varying levels of education. However, the current legal framework in Lithuania prevents people from obtaining higher education even after some years, when they have gained a lot of practical experience, if they have not passed the required number of state

examinations with a minimum threshold. Therefore, we would like to refer to the Resolution on ECET EEA call "to ensure a truly inclusive education and equal opportunities for all learners in all levels and types of education and training, academic attainment and achievement should be dissociated from social, economic and cultural status, or from other personal circumstances" [29].

As Lacher [15], referring to the German example, declares, "that the higher the level of education, the higher the participation in adult education". As scientists indicate, low-skilled workers face various barriers to further education; they participate less in digital media adult education programs, and this inequality poses a challenge for implementation of the political program and the principle of LNOB [15]. Therefore, the actions to ensure the quality of higher education should be subsequent, and the national efforts should start with ensuring the quality of pre-primary and primary education in order not to have lower results. This idea is consistent with the recommendations of the ESDR experts [7] for countries to invest "in quality early childhood education and targeted efforts in socioeconomically deprived areas", as these actions have proven to reduce inequalities in education outcomes. Without good learning experiences or foundations (especially in mathematics), gaps are developing. According to scientist Lacher [15], and Crato & Patrinos [17], these gaps are very difficult to fill later. Meanwhile, the requirements set by countries become a sentence that excludes individuals from the higher education system and from the greater possibility of not being left behind and especially being left behind in terms of educational opportunities for all [15]. Addressing learning loss is a challenge of the education policy of our time. High-dosage tutoring must be available for students who are behind [17]. We would like to refer here to Marginson's [60] statement that high-participation systems of higher education are initiated, shaped, and regulated by states.

The research also shows that in some countries analyzed, people with disabilities and young people from national minorities are at risk of being more excluded. In Lithuania, for example, there are no exemptions from the entry requirements in terms of exams or minimums for either persons with disabilities or members of national minorities. The Law on Higher Education and Research of the Republic of Lithuania identifies equal opportunities as one of the fundamental principles underpinning education [40]. And these findings are in line with Goodall et al.'s [27] results showing that students with disabilities, despite being seen as a resource, are expected to fit into a learning environment designed for the 'ideal', able student. In this case, we want to refer to Katsu et al.'s [26] idea that "the prohibition of discrimination does not extend to positive discrimination, which is when particular groups of people are supported with special measures if, without them, they are at risk of falling into a less favorable position". It must be remembered that inclusive education for people with a range of special needs is not yet decades old, so many of the people graduating from schools today have not had the opportunity to develop their best skills and have lower levels of achievement. We are referring to Filippou et al.'s [21] insight about the importance of inclusive policies and practices to ensure disabled persons' participation and success in HE. Therefore, it is important for Lithuania to follow the example of the neighboring countries, especially Estonia, where additional support is provided to people with disabilities and members of national minorities in order to make them more inclusive. In the context of increased migration due to pandemics, economic challenges, and military conflicts, countries should also change the rigidity of national policies and procedures for national minorities. Only by improving the accessibility of higher education will countries equip people with knowledge, skills, and attitudes to fulfill their potential in personal, occupational, and social life and contribute to promoting the quality of life and assurance of leaving no one behind.

6- Conclusion

Although the importance of higher education is highlighted in international agendas and development guidelines, higher education's assessment is limited to quantitative data about tertiary-level attainment, and access to higher education is also not examined in the guidance documents' indices. The reports on leaving no one behind in higher education and education and scientific literature point out a constant decline in the achievements of different groups of pupils/students, and the correlation of achievements with socioeconomic background. The challenges or remaining barriers faced by people with disabilities and national minorities are highlighted.

The analysis of SDG4 indicators and admission systems highlights uneven progress in higher education across the Baltic states and Poland. While Latvia shows the strongest attainment gains, Estonia and Lithuania face declines, with Lithuania imposing the strictest entry barriers. Higher education accessibility differs across Lithuania, Latvia, Estonia, and Poland. Lithuania and Latvia are the most accessible due to unified application systems, while Poland lacks such a system, creating extra costs and delays. Lithuania enforces the strictest entry standards and thresholds, which disadvantage lower achievers and provide no concessions for people with disabilities, unlike Latvia, Estonia, and Poland, which offer some support measures. Minority students in Lithuania, Latvia, and Poland also face exclusion due to demanding national language requirements, whereas Estonia often accepts B2-level proficiency in Estonian or English.

Further research into the accessibility of higher education should continue to explore the identified problem areas and the limitations applied in this research. In the long term, it is necessary to analyze whether stricter admission requirements correlate with better study results or careers. It is advisable to examine the aspects of assistance for persons with disabilities and positive discrimination, ensuring the successful experiences of persons with disabilities when entering higher education. It is also important to examine the economic accessibility of higher education in different countries.

7- Declarations

7-1- Author Contributions

Conceptualization, I.P. and J.P.; methodology, J.M. and K.M.; formal analysis, I.P., J.P., J.M., and M.K.; resources, I.P., J.M., and M.K.; writing—original draft preparation, I.P.; writing—review and editing, J.P. and M.K.; visualization, J.M.; supervision, I.P. and J.P. All authors have read and agreed to the published version of the manuscript.

7-2- Data Availability Statement

The data presented in this study are available in the article.

7-3- Funding

The authors received no financial support for the research, authorship, and/or publication of this article.

7-4- Institutional Review Board Statement

Not applicable.

7-5- Informed Consent Statement

Not applicable.

7-6- Conflicts of Interest

The authors declare that there is no conflict of interest regarding the publication of this manuscript. In addition, the ethical issues, including plagiarism, informed consent, misconduct, data fabrication and/or falsification, double publication and/or submission, and redundancies have been completely observed by the authors.

8- References

[1] Lafortune, G., Fuller, G., Kloke-Lesch, A., Koundouri, P., & Riccaboni, A. (2024). European Elections, Europe's Future and the SDGs: Europe Sustainable Development Report 2023/24. SDSN and SDSN Europe, Paris, France. doi:10.25546/104407.

[2] Ferreira, F. H. G., & Gignoux, J. (2014). The Measurement of educational inequality: Achievement and opportunity. World Bank Economic Review, 28(2), 210–246. doi:10.1093/wber/lht004.

[3] Palmisano, F., Biagi, F., & Peragine, V. (2021). Inequality of Opportunity in Tertiary Education: Evidence from Europe. Research in Higher Education, 63(3), 514–565. doi:10.1007/s11162-021-09658-4.

[4] United Nations. (2015). Transforming our world: The 2030 Agenda for Sustainable Development (A/RES/70/1). United Nations, New York, United States.

[5] Lafortune, G., & Fuller, G. (2025). Europe Sustainable Development Report 2025: SDG Priorities for the New EU Leadership. Working Papers hal-04964911, HAL. doi:10.25546/110692. Dublin University Press, Dublin, Ireland. Available online: https://eu-dashboards.sdgindex.org/ (accessed on November 2025).

[6] Pikturnaite, I., Pauzuoliene, J., Anastasiadis, F., & Tsoulfas, G. T. (2024). Baltic Sea Region Countries' Progress in Leave-No-One-Behind. Economics and Culture, 21(2), 91–106. doi:10.2478/jec-2024-0021.

[7] Lafortune, G., Fuller, G., Bermont Diaz, L., Kloke-Lesch, A., Koundouri, P., & Riccaboni, A. (2022). Achieving the SDGs: Europe's Compass in a Multipolar World. Europe Sustainable Development Report 2022. SDSN and SDSN Europe, Paris, France. Available online: https://sdgtransformationcenter.org/reports/europe-sustainable-development-report-2022 (accessed on July 2025).

[8] Council of the European Union. (2023). Council resolution on The European Education Area: Looking to 2025 and be-yond (CELEX: 32023G0526(01)). Official Journal of the European Union, Council of the European Union, Brussels, Belgium. Available online: https://eur-lex.europa.eu/legal-content/EN/TXT/PDF/?uri=CELEX:32023G0526(01) (accessed on November 2025).

[9] European Commission. (2024). Political guidelines for the next European Commission 2024–2029. European Commission, Brussels, Belgium. Available online: https://documents.worldbank.org/en/publication/documents-reports/documentdetail/099071223174514721/p179960038bed500a08dfc0489b6fa2254 (accessed on November 2025).

[10] European Commission. (2024). A new plan for Europe's sustainable prosperity and competitiveness. European Commission, Brussels, Belgium. Available online: https://commission.europa.eu/priorities-2024-2029/competitiveness_en (accessed on November 2025).

[11] SDSN and IEEP. (2020). The 2020 Europe Sustainable Development Report: Meeting the Sustainable Development Goals in the face of the COVID-19 pandemic. Sustainable Development Solutions Network and Institute for European Environmental Policy, Paris, France. Available online: https://sdgtransformationcenter.org/reports/europe-sustainable-development-report-2020 (accessed on November 2025).

[12] Jansons, E., & Rivza, B. (2019). Awaiting industry 4.0: Transformation of tertiary education in the Baltic countries and Finland. Research for Rural Development, 2, 146–152. doi:10.22616/rrd.25.2019.062.

[13] Damyanov, K. (2024). Inclusive Education and Social Inequality: An Anthropological Study of Social Mobility and Access to Education. International Journal of Scientific Research and Management (IJSRM), 12(10), 3719–3731. doi:10.18535/ijsrm/v12i10.el04.

[14] Hofflinger, Á., Rodríguez-Ramírez, R., & Vegas, E. (2025). Chile: From Closure to Recovery: Tracing the Educational Impact of COVID-19. Improving National Education Systems After COVID-19. Evaluating Education: Normative Systems and Institutional Practices, Springer, Cham, Switzerland. doi:10.1007/978-3-031-69284-0_2.

[15] Lacher, S. (2024). Promoting equal access in German adult education. Andragoška Spoznanja, 30(2), 81–99. doi:10.4312/as/16259.

[16] Eurostat. (2025). Persons aged 25–34 with tertiary educational attainment level [Data set]. Eurostat, Luxembourg, Luxembourg. doi:10.2908/SDG_04_20.

[17] Crato, N., & Patrinos, H. A. (2025). PIRLS 2021 and PISA 2022 Statistics Show How Serious the Pandemic Losses Are. Improving National Education Systems After COVID-19. Evaluating Education: Normative Systems and Institutional Practices, Springer, Cham, Switzerland. doi:10.1007/978-3-031-69284-0_1.

[18] Tire, G. (2025). Estonia: The Impact of Covid-19 on Education in Estonia—What Have We Learned from PISA 2022 and National External Evaluations?. Improving National Education Systems After COVID-19. Evaluating Education: Normative Systems and Institutional Practices. Springer, Cham, Switzerland. doi:10.1007/978-3-031-69284-0_5.

[19] Gogiashvili, S. (2025). Higher Education Funding Policies and Challenges in the Baltic Countries. Moambe, 1(25), 197–214. doi:10.52340/atsu.2025.1.25.15.

[20] Gusta, S., & Gusta, I. (2019). Problems of providing affordable high quality student housing in context of development of major Latvian universities. Engineering for Rural Development, 18, 1801–1810. doi:10.22616/ERDev2019.18.N137.

[21] Filippou, K., Acquah, E. O., & Bengs, A. (2025). Inclusive policies and practices in higher education: A systematic literature review. Review of Education, 13(1), 70034. doi:10.1002/rev3.70034.

[22] Fernández-Batanero, J. M., Montenegro-Rueda, M., & Fernández-Cerero, J. (2022). Access and Participation of Students with Disabilities: The Challenge for Higher Education. International Journal of Environmental Research and Public Health, 19(19), 11918. doi:10.3390/ijerph191911918.

[23] Krejtz, K., Marcus-Quinn, A., Duarte, C., Stasiak, I., Pereira, L. S., & Krejtz, I. (2025). Higher education accessibility information in practice. A report on the accessibility of European Universities. Universal Access in the Information Society, 24(3), 2673–2685. doi:10.1007/s10209-025-01224-4.

[24] García González, J. M., Gutiérrez Gómez-Calcerrada, S., Solera Hernández, E., & Rios-Aguilar, S. (2023). The Twisting Road to Access to Higher Education for People with Disabilities in Spain. International Journal of Disability, Development and Education, 70(5), 829–842. doi:10.1080/1034912X.2021.1910932.

[25] Lopez-Gavira, R., Moriña, A., & Morgado, B. (2021). Challenges to inclusive education at the university: the perspective of students and disability support service staff. Innovation: The European Journal of Social Science Research, 34(3), 292–304. doi:10.1080/13511610.2019.1578198.

[26] Katsui, H., Laitinen, M. T., Kuosmanen, I., Tengström, M., & Lindström, M. (2024). 'Disability is so invisible at the University''.' Disability, Happiness and the Welfare State, 28–47, Routledge, Abingdon, United Kingdom. doi:10.4324/9781032685519-3.

[27] Goodall, G., Mjøen, O. M., Witsø, A. E., Horghagen, S., & Kvam, L. (2024). "Breaking a vicious cycle": the reproduction of ableism in higher education and its impact on students with disabilities. Frontiers in Education, 9, 1504832. doi:10.3389/feduc.2024.1504832.

[28] Kleemola, K., Hadjar, A., Haas, C., Hyytinen, H., Tuononen, T., Powell, J. J. W., & Toom, A. (2025). Struggling for equal access and success: disability in European higher education. Comparative Education, 61(4), 606–626. doi:10.1080/03050068.2025.2466905.

[29] Council of the European Union. (2021). Strategic framework for European cooperation in education and training towards the European education area and beyond. Council of the European Union, Brussels, Belgium. Available online: https://eur-lex.europa.eu/EN/legal-content/summary/strategic-framework-for-european-cooperation-in-education-and-training-towards-the-european-education-area-and-beyond.html (accessed on November 2025).

[30] OECD. (2024). PISA 2022 Results (Volume V): Learning strategies and attitudes for life. Organisation for Economic Co-operation and Development (OECD), Paris, France. doi:10.1787/c2e44201-en.

[31] Kottmann, A., Vossensteyn, H., Kolster, R., Veidemane, A., Cseres-Gergelyne Blasko, Z., Biagi, F. & Sanchez Barriolu-engo, M. (2019) Social Inclusion Policies in Higher Education: Evidence from the EU. European Union, Brussels, Belgium. doi:10.2760/944713.

[32] Leist, A. K., Bar-Haim, E., & Chauvel, L. (2021). Inequality of educational opportunity at time of schooling predicts cognitive functioning in later adulthood. SSM - Population Health, 15, 100837. doi:10.1016/j.ssmph.2021.100837.

[33] Petrovica, S., Anohina-Naumeca, A., & Avanesova, J. (2022). The Impact of Digitalisation of Higher Education: The Case of Latvia and Nordic-Baltic Region. Applied Computer Systems, 27(1), 19–29. doi:10.2478/acss-2022-0003.

[34] Wanti, M., Wesselink, R., Biemans, H., & Brok, P. den. (2022). Determining factors of access and equity in higher education: A systematic review. Equity in Education & Society, 1(2), 279–296. doi:10.1177/27526461221092429.

[35] Lister, K., Pearson, V. K., Coughlan, T., & Tessarolo, F. (2022). Inclusion in Uncertain Times: Changes in Practices, Perceptions, and Attitudes around Accessibility and Inclusive Practice in Higher Education. Education Sciences, 12(8), 571. doi:10.3390/educsci12080571.

[36] Mahrishi, M., Ramakrishna, S., Hosseini, S., & Abbas, A. (2025). A systematic literature review of the global trends of outcome-based education (OBE) in higher education with an SDG perspective related to engineering education. Discover Sustainability, 6(1), 620. doi:10.1007/s43621-025-01496-z.

[37] SDSN & IEEP. (2019). The 2019 Europe Sustainable Development Report. Sustainable Development Solutions Network and Institute for European Environmental Policy, Paris, France. Available online: https://www.sustainabledevelopment.report/reports/2019-europe-sustainable-development-report/ (accessed on November 2025).

[38] Lafortune G, Cortés Puch M, Mosnier A, Fuller G, Diaz M, Riccaboni A, Kloke-Lesch A, Zachariadis T, Carli E., & Oger A. (2021). Europe Sustainable Development Report 2021: Transforming the European Union to achieve the Sustainable Development Goals. SDSN, SDSN Europe and IEEP, Paris, France. Available online: https://sdgtransformationcenter.org/reports/europe-sustainable-development-report-2021 (accessed on November 2025).

[39] Eurostat. (2025). Adult participation in learning by sex. Eurostat, Eurostat, Luxembourg, Luxembourg. doi:10.2908/SDG_04_60.

[40] Republic of Lithuania. (2025). Law on Higher Education and Research. Republic of Lithuania, Vilnius, Lithuanian. Available online: https://e-seimas.lrs.lt/portal/legalAct/lt/TAD/TAIS.343430/asr (accessed on November 2025). (In Lithuanian).

[41] Saeima and Cabinet of Ministers of the Republic of Latvia. (2025). Law on Higher Education Reporter of the SAEIMA and Cabinet of Ministers of the Republic of Latvia, Latvian Gazette, Riga, Latvia. Available online: https://likumi.lv/ta/id/37967 (accessed on November 2025). (In Latvian).

[42] Riigi Teataja. (2019). Estonia Republic Higher Education Act (RT I, 19.03.2019, 12). State Gazette, Tallinn, Estonia. Available online: https://www.riigiteataja.ee/en/eli/525062020001/consolide (accessed on November 2025).

[43] Kancelaria Sejmu. (2018). Act on Higher Education and Science. Kancelaria Sejmu, Warszawa, Poland. Available online: https://isap.sejm.gov.pl/isap.nsf/DocDetails.xsp?id=WDU20180001668 (accessed on November 2025). (In Polish).

[44] Order No. V-661. (2017). On the approval of the minimum indicators of learning outcomes for persons applying for first-cycle and integrated study places in higher education institutions from 2020. Minister of Education, Science and Sport of the Republic of Lithuania. Available online: https://e-seimas.lrs.lt/portal/legalAct/lt/TAD/629ff9f28e8711e7a5e2b345b086d377/asr (accessed on November 2025).

[45] Valstybinis studijų fondas. (2025). Social scholarship. State Study Fund, Vilnius, Lithuanian. Available online: https://vsf.lrv.lt/lt/studentams/soc-stipendijos/ (accessed on November 2025). (In Lithuanian).

[46] Human Rights Guide (2025). Agency for the Protection of Rights of Persons with Disabilities under the Ministry of Social Security and Labour of the Republic of Lithuania: Supporting students with disabilities. Available online: https://www.zmogausteisiugidas.lt/en/themes/organisations-that-can-help-you/state-institutions/agency-for-the-protection-of-the-rights-of-person-with-disabilities (accessed on November 2025).

[47] Cabinet of Ministers of the Republic of Latvia. (2022). Amend-ments to Cabinet of Ministers Regulation No. 846 of 10 October 2006 "Regulations on Requirements, Criteria and Procedures for Admission to Study Programmes. Cabinet Regulation No. 771, Cabinet of Ministers of the Republic of Latvia, Vilnius, Lithuanian. Available online: https://tapportals.mk.gov.lv/structuralizer/data/nodes/26921429-3961-480a-b801-2264c35ded51/preview (accessed on July 2025).

[48] Service of the Republic of Poland. (2024). Matriculation exam: Exam conducted for graduates of secondary schools (high school, technical school, second-cycle school) – in order to obtain a certificate of maturity. Ministry of National Education, Warszawa, Poland. Available online: https://www.gov.pl/web/edukacja/egzamin-maturalny2 (accessed on November 2025). (In Polish).

[49] Service of the Republic of Poland. (2024). Student benefits in the 2024/2025 academic year. Service of the Republic of Poland, Warszawa, Poland. Available online: https://www.gov.pl/web/nauka/swiadczenia-dla-studentow-w-roku-akademickim-20242025 (accessed on November 2025). (In Polish).

[50] LAMA BPO. (2025). Association of Lithuanian Higher Education Institutions for Joint Admissions. LAMA BPO, Kaunas, Lithuanian. Available online: https://lamabpo.lt/ (accessed on November 2025). (In Lithuanian).

[51] State Digital Development Agency. (2025). Electronic application for undergraduate studies. Valsts digitālās attīstības aģentūra, Riga, Latvia. Available online: https://latvija.gov.lv/Services/39533 (accessed on November 2025). (In Latvian).

[52] SAISi (2025). Study Admission Information System, Ministry of Education and Research, Tallinn, Estonia. Available online: https://sais.ee/ContentPages (accessed on November 2025). (In Estonian).

[53] KVK. (2025). Admission rules. Klaipėda State College, Klaipėda, Lithuania. Available online: https://www.kvk.lt/wp-content/uploads/2025/02/KVK-studentu-priemimo-2025-metais-taisykles-1-tvirtinimas.pdf (accessed on July 2025). (In Lithuanian).

[54] University of Tartu. (2025). Application fee. University of Tartu, Tartu, Estonia. Available online: https://ut.ee/en/content/application-fee (accessed on November 2025).

[55] Estonian Aviation Academy. (2025). Application fee. Estonian Aviation Academy, Reola, Estonia. Available online: https://lennuakadeemia.ee/admissions/application-fee (accessed on November 2025).

[56] Tallinna Tehnikakõrgkool. (2025). Preparatory courses. Tallinna Tehnikakõrgkool, Tallinn, Estonia. Available online: https://www.tktk.ee/sisseastujale/ettevalmistuskursused/ (accessed on November 2025).

[57] TalTech. (2025). Entrance tests and admission to undergraduate studies. TalTech, Tallinn, Estonia. Available online: https://taltech.ee/sisseastuja/sisseastumine-ja-bakalaureuseoppe-vastuvott (accessed on November 2025). (In Estonian).

[58] University of Zielona Góra. (2025). Admission rules. University of Zielona Góra, Zielona Góra, Poland. Available online: https://rekrutacja.uz.zgora.pl/en/ (accessed on November 2025).

[59] Jagiellonian University. (2024). Summary of recruitment. Jagiellonian University, Kraków, Poland. Available online: https://rekrutacja.uj.edu.pl/documents/1458734/157265030/podsumowanie_rekrutacji_1s_SWJP_P.pdf (accessed on November 2025). (In Polish).

[60] Marginson, S. (2016). The worldwide trend to high participation higher education: dynamics of social stratification in inclusive systems. Higher Education, 72(4), 413–434. doi:10.1007/s10734-016-0016-x.