PROCEEDINGS OF INTERNATIONAL SCIENTIFIC CONFERENCE

DIGITAL COMPETENCIES IN HIGHER EDUCATION

September 18, 2025
LOGOS University College, Tirana, Albania

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TRENDS, CHALLENGES AND PERSPECTIVES

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LOGOS UNIVERSITY COLLEGE
September, 2025

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Vice Rector for Quality at the University of Sarajevo and a Professor at the Faculty of Electrical Engineering. Her research interests and teaching are focused on software engineering in biomedical and cognitive domains. She is highly motivated to learn about problem domains and committed to achieving a high level of user experience. In addition to teaching and research, she is engaged in various activities aimed at improving education in Bosnia and Herzegovina, especially through promoting student-centered and outcome-based learning and using software as educational content.

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Dr. Drenofci has devoted her efforts for last 20 years at the Albanian Disability Rights Foundation, to the activities in advocacy and lobbying for disability related policy and legislation adoption and implementation and offering of supportive services for people in need throughout the country. She is an expert in the area of social policies and collaborator in the formulation of policy framework for people with disabilities in Albania. She has directed ADRF contribution in several important legal initiatives. ADRF is acknowledged as the pioneer and leader of human rights-based approach to disability and it is one in the few organizations that offer models of supportive services like mobility means, supported employment, free legal aid for people in need in Albania. Blerta has an PhD in Social Sciences and has an academic background, being a teacher of University of Tirana since 2013. She has been the leader and the author of a lot of studies in the field of social policies in and outside the country. She has been involved as a consultant in the research and policy development by several international agencies. During the years 2014-2022, she has been involved in the development of the new reform for the assessment of disability in Albania, based on international standards.

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PROCEEDINGS OF INTERNATIONAL SCIENTIFIC CONFERENCE

DIGITAL COMPETENCIES IN HIGHER EDUCATION

TRENDS, CHALLENGES AND PERSPECTIVES

SEPTEMBER 18, 2025

Hosted by LOGOS University College

in collaboration with:

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- Polis University
- Public International Business College Mitrovica (IBCM)
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SUMMARY OF ACTIVITES

INTERNATIONAL SCIENTIFIC CONFERENCE
DIGITAL COMPETENCIES IN HIGHER EDUCATION
Trends, Challenges and Perspectives

Logos University College, Tirana, Albania
Thursday, September 18, 2025

9.00-9.30	Registration		
9.30-10.00	Open remarks		
	Ilia Ninka, rector, LOGOS Universty College		
	Gertiola Cepani, Director of Labour Market Services at 'National Employment and Skills Agency'		
	Konstantinos Giakoumis, HOMO DIGITALIS Project Coordinator		
	TOPIC	**AUTHOR(s)**	**OPPONENT**
	FIRST CONFERENCE TRACK **Digital Competences in Higher Education and the Labour Market**		
10.00-10.20	**1**. The Impact of Digital Transformation on Human Resource Management. Case Study: Albanian Universities During the Pandemic Period	Emira Spahaj, Edisela Mena, Malvina Hysa, Blerta Avdia	Elona Karafili
10.20-10.40	**2.** Barriers and Opportunities in Albanian Higher Education for Students with Disabilities: A Mixed-Methods Analysis	Blerta Drenofci (Çani), Valbona Nathanaili	Merima Muslić
10.40-11.00	**3.** The Digital Employment Gap in Albania: Challenges and Strategies for Higher Education	Gertjana Hasalla	Arberore Bicaj
	SECOND CONFERENCE TRACK **Institutional Strategies and Policy Development**		
11.00-11.20	**4**. Integrated Technical Assessment and Restoration Strategy for the "Topulli" House: Restoration Strategies, Revitalization Pathways and Advanced Digital Technologies	Nikolla Vesho, Panagiotis Kyriatsis, Ajla Gjoka, Lumturi Haska, Sara Ciba, Migena Gjoni, Ardis Duka, Romir Mazari	Konstantinos Giakoumis
11.20-11.40	**5.** The Role of MOOCs and Open Educational Resources in Higher Education: Applications in Teaching Medicine and Laboratory Science	Dorina Minxuri	Valbona Nathaniali

11.40 -12.00	**6.** Language Technologies and Digital Humanities for Low-Resource Languages and Communities	Arbana Kadriu, Lejla Abazi-Bexheti	Blerta Drenofci (Çani)
12.00-12.20	**Coffee break**		
12.20-12.40	**7.** The Cognitive–Digital Turn in Higher Education. *A Longitudinal Analysis of AI Engagement in an Architectural Design Studio*	Fulvio Papadhopulli, Megi Tafaj	Nikolaos Avouris
12.40-13.00	**8.** Defining a Strategic Action Plan for AI in Higher Education	Nikolaos Avouris	Valbona Nathaniali
13.00-13.20	**9**. Institutional Policies and Strategic Directions for Advancing Digital Competencies in Higher Education	Hajdin Berisha, Agron Hajdari, Bekim Samadraxha	Flora Krasniqi
THIRD CONFERENCE TRACK The intended and attained curriculum			
13.20-13.40	**10.** Digital Competencies in Social Sciences – A Pilot Study. *From Design to Practice: Teaching Approaches in the HOMO DIGITALIS Project*	Valbona Nathanaili, Blerta Drenofci (Çani), Konstantinos Giakoumis, Dušanka Bošković, Arbana Kadriu, Anisa Duka	Bujar Gallopeni
13.40-14.00	**11.** Enhancing Learning through Multimedia Cultural Heritage Applications: Managing Cognitive Load	Merima Muslić, Dušanka Bošković, Vensada Okanović, Selma Rizvić	Blerta Avdia
14.00-14.20	**12.** Integrating Digital Competencies into Higher Education Curricula. *A Case Study from LOGOS University College within the Homo Digitalis Project*	Juna Muça, Anxhela Laska, Elpiniqi Merkuri, Edvaldo Begotaraj	Emira Spahaj
14.20-15.40	**Lunch**		
20.00-22.00	Social Dinner and Awarding of Certificates of Participation and Presentation of Papers		

PART ONE:
DIGITAL COMPETENCES IN HIGHER EDUCATION AND THE LABOUR MARKET

BARRIERS AND OPPORTUNITIES IN ALBANIAN HIGHER EDUCATION FOR STUDENTS WITH DISABILITIES. A MIXED-METHODS ANALYSIS

Blerta **DRENOFCI (ÇANI)***
Valbona **NATHANAILI**

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Abstract

This study analyses enrolment patterns, academic experiences, and post-graduation outcomes of students with disabilities in Albanian higher education, situating its findings within the country's legislative framework and obligations under the United Nations Convention on the Rights of Persons with Disabilities (UNCRPD). Employing a mixed-methods design, data were collected from 129 students with disabilities enrolled in 16 higher education institutions and disaggregated by disability type, geographic location, age, gender, and field of study. The results indicate that students who are with visual disabilities constitute (48.1%) of all enrolments, followed by those with physical disabilities (15.5%), deaf students (7%), chronic illnesses (4.7%), and intellectual disabilities (2.3%). Enrolment is highly centralised in Tirana and Shkodër, while women with disabilities account for only 37% of the student population. Field representation remains skewed toward disciplines adaptable to visual impairments, with minimal participation in STEM and laboratory-intensive fields. Accessibility barriers, spanning physical infrastructure, digital learning environments, and transport, are widespread, and institutional mechanisms such as disability units, ICF-based assessments, and systematic accommodation procedures are largely absent. Transition to employment is constrained by low employer engagement, insufficient disability-inclusive career services, and weak coordination between education and labour market actors. Socio-economic disadvantage remains acute, with 96% of families of children with disabilities living in low-income conditions.

Keywords: students with disabilities, higher education, Albania, accessibility, inclusive education, employment transition, reasonable accommodation, UNCRPD.

ABOUT THE AUTHORS

BLERTA DRENOFCI (ÇANI)

Dr. Drenofci has devoted her efforts for last 20 years at the Albanian Disability Rights Foundation, to the activities in advocacy and lobbying for disability related policy and legislation adoption and implementation and offering of supportive services for people in need throughout the country. She is an expert in the area of social policies and collaborator in the formulation of policy framework for people with disabilities in Albania. She has directed ADRF contribution in several important legal initiatives. ADRF is acknowledged as the pioneer and leader of human rights-based approach to disability and it is one in the few organizations that offer models of supportive services like mobility means, supported employment, free legal aid for people in need in Albania. Blerta has an PhD in Social Sciences and has an academic background, being a teacher of University of Tirana since 2013. She has been the leader and the author of a lot of studies in the field of social policies in and outside the country. She has been involved as a consultant in the research and policy development by several international agencies. During the years 2014-2022, she has been involved in the development of the new reform for the assessment of disability in Albania, based on international standards.

VALBONA NATHANAILI

Dr. Nathanaili is currently a lecturer and researcher in the Department of Pedagogy and Psychology, LOGOS University College, Tirana, Albania, with an experience of more than 35 years in the field of academia and publication. She is a Bachelor in physics and a doctoral degree holders in the science of pedagogy, both from University of Tirana. Major areas of research over the last few years are the politics and reforms in Albanian Education System, methodology of teaching science, university pedagogy, the future of schooling and Recognition and Accreditation of Prior Learning gained after flexible learning paths. She is analyst, writers and contributor for different periodic Albanian newspaper and television outlets. Nathanaili, in collaboration with different HEIs, has been initiator and supporter of STEM national campaigns, to encourage girls to pursue careers in science, technology, engineering and math fields and promote women in those fields. Dr. Nathanaili has extensive experience in designing and directing research and capacity building projects.

EXECUTIVE SUMMARY

This study examines the enrolment patterns, academic experiences, and post-graduation outcomes of students with disabilities in Albanian higher education institutions, situating its analysis within the country's legal and policy commitments under the United Nations Convention on the Rights of Persons with Disabilities and domestic legislation such as Law No. 80/2015 on Higher Education and Law No. 93/2014 on Inclusion and Accessibility of Persons with Disabilities. Despite legislative progress, the findings reveal significant implementation gaps, including limited accessibility and lack of provision of reasonable accommodation, insufficient assistive technologies, inadequate faculty training, and the absence of systematic accommodation procedures. Data collected from 16 higher education institutions, representing 129 students with disabilities, indicate that almost half (48.1%) have visual impairments, while smaller proportions have physical disabilities (15.5%), deafness (7%), chronic illnesses (4.7%), or intellectual disabilities (2.3%). Enrolment is concentrated in Tirana and Shkodër, with women comprising only 37% of students with disabilities, reflecting a persistent gender gap. Study fields are predominantly those adaptable to visual impairments, whereas STEM and laboratory-based disciplines remain largely inaccessible.

The research highlights that accessibility, across the physical environment, digital platforms, and transportation, directly influences student participation, retention, and completion. However, many higher educational institutions in Albania lack disability units, structured evaluation processes aligned with the International Classification of Functioning, Disability and Health (ICF), and sustained capacity-building initiatives for staff. The transition from higher education to the labor market is further hindered by limited employer engagement, weak coordination between higher education institutions and employment agencies, and insufficient disability-inclusive career services. Socio-economic barriers persist, with 96% of families with children with disabilities living in low-income conditions, exacerbating educational and employment inequalities.

Policy recommendations include decentralizing accessibility resources to regional higher educational institutions, investing in assistive technologies for predominant disability types, diversifying field participation through adapted laboratory resources, and embedding universal design principles into institutional practices. Strengthening disability units, implementing ICF-based evaluations, and fostering sustained partnerships between them, employers, and government agencies are identified as essential for improving both educational and labor market outcomes. The study concludes that, without systemic reforms and coordinated action, Albania's higher education system will remain constrained in its capacity to function as an engine of economic and social inclusion for persons with disabilities.

DISABILITY AND EDUCATION IN ALBANIA

According to INSTAT (2023), 6.5% of Albania's population lives with some form of disability, a modest increase from 6.2% in 2011 (Voko, et.al, 2018). These individuals face numerous overlapping disadvantages due to infrastructural inaccessibility, lack of adapted learning materials, insufficient assistive technology, and persistent stigma (UNICEF

2018). The discrepancy between data from the Ministry of Education and INSTAT on the number of students with disabilities illustrates a lack of coherent national monitoring systems, a challenge also noted in Cungu & Sulçe (2019) in their assessment of disability statistics in Albania. While 94.3% of students with disabilities attend mainstream schools, participation sharply declines at the vocational and tertiary levels (Voko *et al.,* 2018). Only 1.3% of students with disabilities are enrolled in vocational schools, and the transition rate from secondary to higher education is an alarmingly low 27.36% (Giakoumis, 2021).

In Albania, education for persons with disabilities faces significant challenges despite a legal framework that, in alignment with Article 24 of the UN Convention on the Rights of Persons with Disabilities, mandates inclusive education for all children regardless of disability. As a signatory to the UNCRPD since 2013, Albania is obligated to ensure an inclusive education system. However, educational institutions do not have accessible entrances, lack adequate access to internal facilities, didactic tools, and other supported services (Sulaj et al. 2021; UNICEF 2018). Additionally, the qualifications and training of faculty staff remain insufficient. Vocational education, is under-resourced, offering little support for children with disabilities or the teachers assisting them (UNDP, 2021).

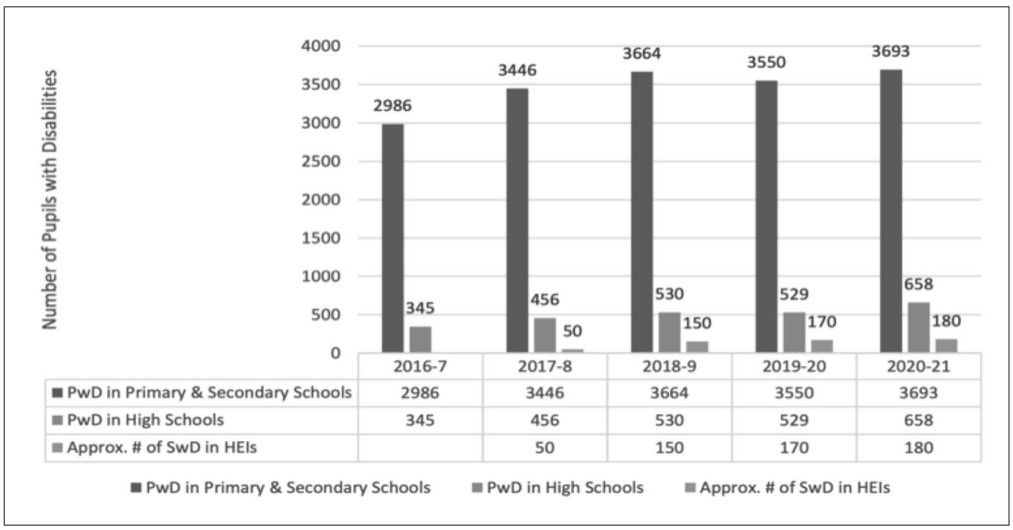

Fig. 1. Rates of students with disabilities from primary to tertiary education in Albania.
Source: Giakoumis, K. (2021) Analysis & Master-Plan to Address the Needs & Wants of Accessible Higher Education in the Western Balkans, pp.6-12.

Similarly, multidisciplinary commissions assessing educational needs are also constrained by frequent turnover, lack of training, and financial limitations, while families of children with disabilities receive minimal guidance post-compulsory education, reducing their access to higher education (UNDP 2021). An audit by the State Supreme Audit Institution also highlighted inadequate school infrastructure, underscoring the systemic barriers faced by students with disabilities ('Së Bashku' Foundation, 2024).

Despite legislative progress, significant gaps persist in the education of children with disabilities. Approximately 75.7% of children with disabilities attend school, compared to 93.1% of their non-disabled peers, and only 61.3% of children assessed by medical or multidisciplinary commissions are enrolled in pre-university education. Parental dissatisfaction is widespread, with concerns ranging from inadequate infrastructure and long distances to schools, to insufficient adaptation of teaching methods to their children's needs, and dissatisfaction with their child's overall academic progress. More than half (52.4 %) of children with disabilities face discrimination in educational environments, undermining their right to inclusive learning (Voko, et.al, 2018).

Socio-economic barriers further exacerbate these challenges: 96% of families with children with disabilities live in low-income conditions, often in large households of 4-6 members with high parental unemployment rates (Voko et.al, 2018). Furthermore, global trends show a shift in disability prevalence, with physical disabilities decreasing and neurodevelopmental and mental health-related disabilities rising (Kemp, 2013).

Despite Albania's ratification of the UNCRPD and legislative mandates such as Law No. 80/2015 on Higher Education, implementation deficiencies persist, resulting in a low transition rate of 27.36% from high school to university (Giakoumis, 2021, pp. 6-12). Data from recent reports highlight that persons with disabilities are less likely to complete tertiary education (see Fig. 1). Among 30 countries or areas, including Albania (highlighted below), 16% of persons without disabilities completed tertiary education, versus 6% with disabilities (United Nations Department of Economic and Social Affairs, 2024).

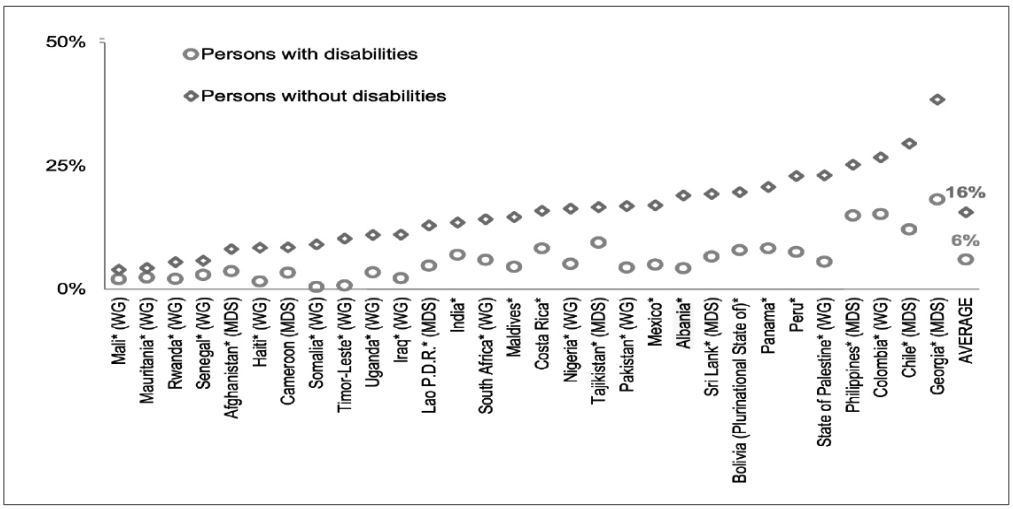

Fig. 2. Percentage of persons 25 years and older who completed tertiary education, by disability status in 30 countries in 2021 or latest year available.

Source: United Nations Department of Economic and Social Affairs (2024) Disability and Development Report 2024: Accelerating the realization of the Sustainable Development Goals by, for and with persons with disabilities. Advance Unedited Version. Available at: https://social.desa.un.org.

METHODOLOGY

This study adopts a mixed methods approach, combining quantitative and qualitative methodology. Firstly, descriptive quantitative research was used to identify and analyze enrolment trends among students with disabilities in Albanian higher education institutions. The database consists of records for 129 students with disabilities enrolled in 16 Albanian HEIs. Data were obtained from official communication with institutions and disaggregated by disability type, geographic location, age, gender, and institutional affiliation, typology of study. The sample represents the officially registered population of students with disabilities within the higher education system during the reporting period. All data were aggregated and anonymized to protect the privacy of individuals. No personally identifiable information was collected or reported. The analysis complies with relevant ethical guidelines for research on vulnerable populations in educational contexts (BERA, 2018). In the second stage of the analysis, a qualitative review was carried out on studies from both within and outside Albania, focusing on the main thematic areas that influence access to and the experience of higher education for students with disabilities. Additional data were drawn from national statistics and other official government sources.

ENROLMENT PATTERNS OF STUDENTS WITH DISABILITIES IN ALBANIAN HIGHER EDUCATION

Based on the survey results with 129 students with disabilities enrolled in higher education institutions, the following patterns were identified.

Disability Type Distribution

Nearly half of the students with disabilities enrolled in Albanian higher education institutions are visually impaired (48.1%; n=62), while physical disabilities account for 15.5% (n=20) of the total, students with hearing impairment comprise 7% (n=9), and those with chronic illnesses 4.7%. (n=6). Students with intellectual disabilities represent the smallest group, at 2.3% of enrolments (n=3). Nearly one fourth of participants did not declare their disability, unspecified disability (22.5%) (see Fig. 3). This distribution suggests that visual impairment is the predominant disability profile in Albanian higher education, indicating a systemic need for accessible formats, assistive technologies, and adapted instructional materials tailored to this group (Sulaj *et al.,* 2021).

Geographic Concentration

Findings indicate a pronounced geographic concentration, with Tirana accounting for 43.4% (n=56) of students with disabilities and Shkodër 20.9% (n=27). In other municipalities, enrolment is limited to fewer than ten students with disabilities per location. Such concentration likely reflects the availability of specialized services, inclusive infrastructure, and wider programme offerings in major urban centers, suggesting that students from smaller municipalities may face accessibility barriers or need to relocate to pursue higher education (Zenelaga, 2024).

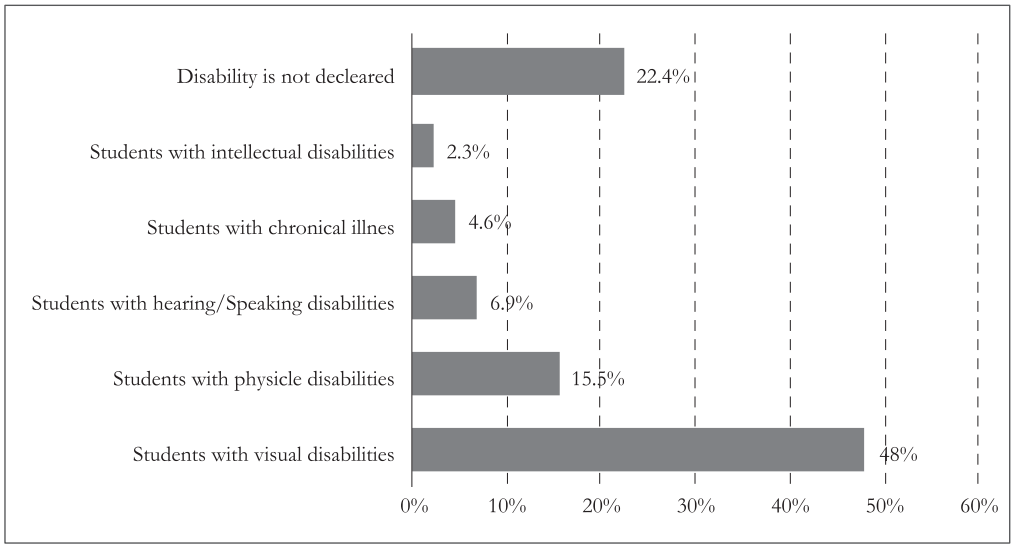

Fig. 3 Disability Typology

Age Structure

The largest proportion of students with disabilities are between 18-22 years old (35.7%, n=46), followed by those aged 23-30 (27.1%; n=35). Students aged 31-40 represent 23.3% (n=30), while 14% are over 41 years old (n=18) (see Fig. 4). The average age is 29.75 years. These figures indicate that while the transition from secondary to tertiary education functions for part of the students with disabilities population, a significant proportion are accessing higher education later in life, reflecting non-linear educational trajectories (Moriña, 2017).

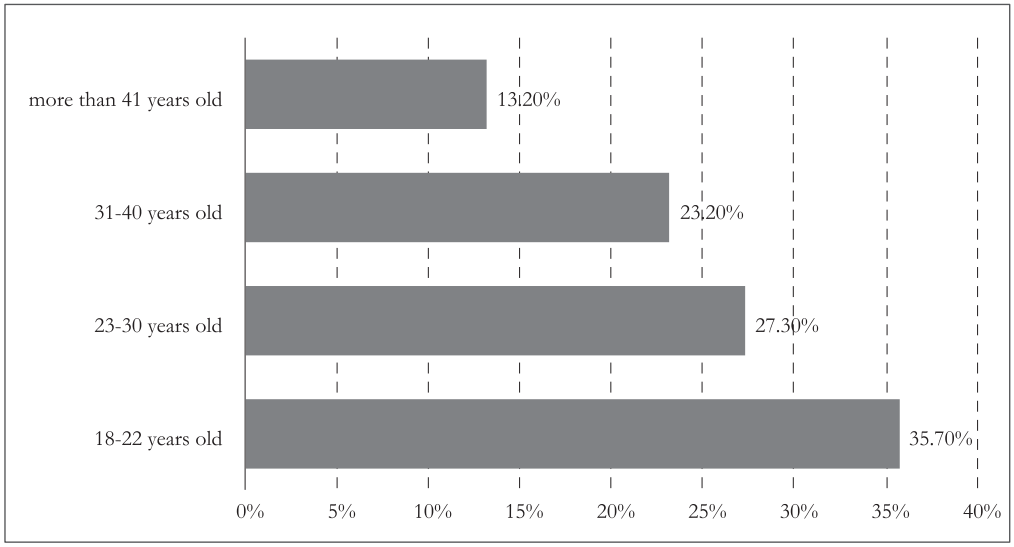

Fig.4 Age structure

Institutional Distribution and Field Implications

Enrolment is concentrated within a limited subset of institutions: The University of Tirana (23.3%; n=30) and the University "Luigj Gurakuqi" in Shkodër (22.5%; n=29) together account for nearly half of all students with disabilities. Other significant institutions include the University "Aleksandër Moisiu" Durrës (10.1%; n=13), University "Ismail Qemali" Vlore (7%; n=9), University of Arts (8.5%; n=11), and University "Fan Noli" Korçë (4.7%; n=6). Smaller and private institutions enroll only one or two students with disabilities. The field distribution suggests that visually impaired students are concentrated in disciplines conducive to screen-reader and Braille adaptation (e.g., law, literature, social sciences, education), while physical disabilities appear across broader fields due to more generalized mobility adaptations. The University of Arts stands out for its inclusive approach in creative disciplines. STEM and laboratory-intensive fields remain underrepresented, likely due to limited adapted equipment and inaccessible lab environments (Burgstahler, 2015; Rao, Edelen-Smith, & Wailehua, 2014).

Cross-Cutting Patterns

Visually impaired students dominate enrolment in both Tirana and Shkodër, positioning these cities as accessibility hubs. Physical disabilities are more common in smaller municipalities, likely due to proximity-based enrolment in local institutions. Very low representation of students with intellectual disabilities or dual sensory impairments across all fields, suggests persistent systemic barriers. Disciplines with high visual, manual, or lab requirements remain less accessible, reinforcing a concentration of students in fields where accommodations are more readily implemented.

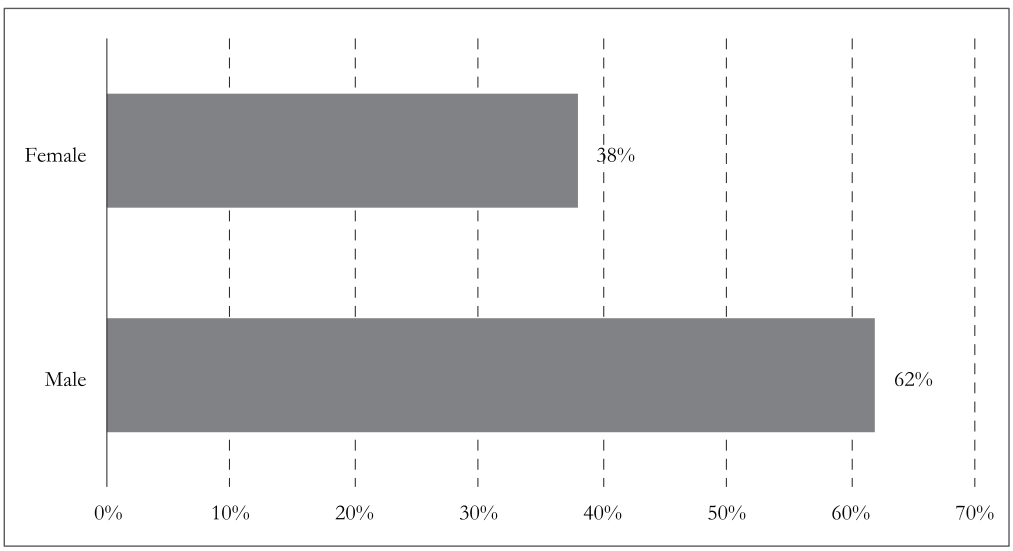

Fig. 5 Students with disabilities by Gender

Gender considerations

According to the survey results, women with disabilities represent nearly one-third (37%; $n = 48$) of the respondents (see Fig. 5). Despite this proportion, the data indicate a gender disparity in access to higher education, with fewer women than men with disabilities having the opportunity to pursue studies in Albanian higher education institutions. This finding highlights the intersectional challenges faced by women with disabilities, who may encounter overlapping barriers related to both gender and disability in accessing educational opportunities.

HIGHER EDUCATION ACCESS AND EXPERIENCE OF STUDENTS WITH DISABILITIES

The educational and career outcomes of graduates with disabilities have been a subject of growing interest within educational research. However, significant gaps remain, particularly in the context of developing countries like Albania. Several critical themes, based on other previous research in the f are highlighted below:

(i) Legal Framework and Policies Related to Higher Education for Students with Disabilities in Albania

Albania's legal and policy framework for the inclusion of students with disabilities in higher education is shaped by its commitment to both international conventions and domestic legislation. A cornerstone is the ratification of the United Nations Convention on the Rights of Persons with Disabilities in 2013, which obliges Albania to ensure equal access to tertiary education and to provide reasonable accommodation for students with disabilities, without discrimination. This international obligation is complemented by the Constitution of the Republic of Albania, which guarantees the right to education for all citizens without discrimination (Kushtetuta e Republikës së Shqipërisë, 1998, Art. No. 59).

At the national level, *Law No. 93/2014 "On Inclusion and Accessibility of Persons with Disabilities"* establishes the right of persons with disabilities to participate in all levels of education, including higher education, under equitable conditions. It mandates accessible infrastructure, learning materials, and supportive services. Additionally, *Law No. 80/2015 "On Higher Education and Scientific Research in Higher Education Institutions in the Republic of Albania"* provides the regulatory basis for universities to adopt policies promoting inclusivity, while Law No. 69/2012 *"On the Pre-University Education System"* supports the creation of a continuum of inclusive practices from primary through tertiary education.

Policy instruments such as the *National Strategy for Employment and Skills*[1] *(2023–2030)* and the *National Action Plan for Persons with Disabilities*[2] *(2021–2025)* also include measures aimed at improving the accessibility of higher education and supporting the transition of graduates with disabilities into the labor market. However, while Albania's legal architecture try to align broadly with European and international standards, the operationalization

[1] https://arkiva.financa.gov.al/wp-content/uploads/2023/10/National-Employment-and-Skills-Strategy-2030_EN.pdf
[2] https://shendetesia.gov.al/wp-content/uploads/2022/03/Plani-Kombetar-2021-2025_ENG.pdf

of these commitments is uneven across institutions. Implementation of legal and policy framework remains inconsistent. Reports have documented persistent gaps in physical accessibility, the provision of assistive technologies, and faculty training on inclusive teaching (SeBashku Foundation 2024).

Research indicates that many higher education institutions in Albania have produced internal regulations referencing inclusivity; yet these institutions often lack the resources, specialist staff, and systematic procedures to translate policy into practice (Giakoumis, 2021; Sulaj et.al, 2021; Zenelaga, 2024). Strengthening enforcement mechanisms, ensuring adequate funding, and building institutional capacity are therefore essential for ensuring the rights of students with disabilities in Albanian higher education.

(ii) Institutional Support in Higher Education for Students with Disabilities in Albania

Institutional support in higher education institutions is a multidimensional concept that determines whether students with disabilities can access, participate in, and complete their studies successfully. This support includes measures to ensure accessibility, the provision of reasonable accommodations, fostering an inclusive institutional culture, establishing specialized disability units, and employing structured assessment frameworks such as the International Classification of Functioning, Disability and Health. Studies identified social and institutional barriers, such as inaccessible facilities, bureaucratic hurdles, and faculty prejudice, as major impediments to inclusion. They argue most barriers are socially constructed, calling for systemic reforms to embrace inclusive principles (Strnadová *et al.,* 2015; Subu *et al.,* 2025).

The Role of Accessibility in Higher Education: Environment, Information & Communication, and Transport

Accessibility is a fundamental precondition for equity in higher education. When the physical campus, information and communication systems, and transport links are accessible, students with disabilities are more likely to enroll, persist, and graduate. When they are not, even strong disability rights laws and institutional goodwill, fail to translate into equal participation (Burgstahler, 2015; Fuller *et al.,* 2004; OECD, 2021; WHO, 2011).

Research consistently links accessible campus infrastructure to improved academic engagement, sense of belonging, and retention among students with disabilities (Fuller *et al.,* 2004; Moriña & Morgado, 2018). Barriers such as stairs, heavy doors, narrow corridors, poorly designed laboratories, and inaccessible residence halls reduce attendance, limit course/major choices, and constrain participation in research and extracurricular life (Holloway, 2001; Moriña, 2017). Universal Design and "Design for All" approaches such as wide circulation routes, step-free access, adjustable benches, tactile wayfinding, hearing loops, and quiet/sensory-friendly spaces, reduce the need for individual retrofits and benefit broader student populations (Burgstahler, 2015; Steinfeld & Maisel, 2012). Evidence shows that accessible interiors and emergency procedures reduce fatigue and strain, enabling students to allocate effort to learning rather than navigation (Clouder *et al.,* 2016; Madriaga, 2010).

Aside physical accessibility, digital accessibility has emerged as an equally critical dimension of educational inclusion. Empirical evidence indicates that inaccessible learning management systems, digital documents and video lectures significantly hinder notetaking, comprehension, and examination preparation for visually impaired students, students with hearing impairment, and those with specific learning disabilities (Fichten *et al.,* 2014; Kent *et al.,* 2018; Seale *et al.,* 2015). The provision of captioning and transcripts has been shown to not only facilitate access for students with hearing impairment but also to enhance comprehension and retention across the wider student population (Linder, 2016; Gernsbacher, 2015). Similarly, the adoption of screen-reader-compatible formats - characterised by appropriate heading structures, alternative text for images, and adherence to semantic mark-up, as well as accessible STEM notation and mathematics editors, together with the implementation of multiple means of engagement and assessment in line with Universal Design for Learning principles, are associated with improved course completion rates and higher levels of student satisfaction (Rose *et al.,* 2006; Rao *et al.*, 2014; Yenduri *et al.,* 2023).

Institutional processes and commitments play a critical role in advancing digital accessibility. Evidence suggests that clearly defined accommodation procedures, centralized disability support services, and systematic staff training are positively associated with the timely provision of alternative formats, the deployment of assistive technologies, and the implementation of appropriate assessment adjustments. These measures, in turn, are significant predictors of student persistence and retention (Getzel, 2008; Harrison *et al.,* 2019; Lombardi *et al.,* 2011). Without such systems, students expend disproportionate effort negotiating access rather than studying (Denhart, 2008; Seale *et al.,* 2015).

Mobility determines whether students can physically capitalize on educational opportunities. Transport research shows that inaccessible and unreliable mobility systems such as steep curbs, gaps between train and platform, unannounced route changes and lack of audio/visual information, contribute to lateness, absenteeism, missed labs/exams, and exclusion from internships and labour market placements (Lucas, 2012; Pineda & Corburn, 2020; Velho *et al.,* 2016). The availability of accessible public transportation, paratransit connections to campus, and barrier-free pedestrian infrastructure is positively correlated with increased class attendance and a wider selection of course enrolment options. (Fry *et al.,* 2020; Velho *et al.,* 2016).

Accessibility works through four overlapping mechanisms: (1) *time and energy redistribution:* less cognitive/physical load negotiating barriers leaves more capacity for learning (Denhart, 2008); (2) *predictability and autonomy:* reliable access reduces anxiety and increases self-determination (Shogren *et al.,* 2015); (3) *identity and belonging:* inclusive spaces and communications counter stigma and promote engagement (Moriña & Morgado, 2018; Madriaga, 2010); and (4) *assessment validity:* accessible formats ensure that tests measure learning outcomes rather than sensory/motor barriers (Harrison *et al.,* 2019; Rao *et al.,* 2014). The cumulative effect is higher retention and graduation, and better transitions to employment (OECD, 2021; WHO, 2011).

Studies document progress where universities embed universal design and align with digital accessibility standards, with measurable improvements in student satisfaction and retention (Kent *et al.,* 2018; Seale *et al.,* 2015). In Albania and other Western Balkan countries, evidence points to partial advances such as improved entrances and ad hoc adjustments, alongside persistent gaps in building infrastructure, in digital platforms (lack of captioning/screen-reader compatibility), and in consistent transport links to campuses (Giakoumis, 2021; Sholla, 2020).

Toto and Domi (2023) assessed the physical accessibility of public university infrastructure in Albania for students with disabilities. The study identified significant shortcomings, including inadequate ramps, elevators, and signage, as well as non-compliance with accessibility standards. The findings indicated that many facilities fail to meet even minimal requirements, creating barriers to participation and inclusion. The authors recommended urgent infrastructure upgrades, enforcement of accessibility regulations, and integration of universal design principles to ensure equitable access to higher education for students with disabilities in Albania.

Reasonable Accommodation in Teaching, Lectures, and Exams

Reasonable accommodation is a cornerstone of inclusive higher education and a central requirement of the United Nations Convention on the Rights of Persons with Disabilities (CRPD, Article 2, 24). It refers to *"necessary and appropriate modification and adjustments… to ensure persons with disabilities can enjoy or exercise all human rights and fundamental freedoms on an equal basis with others"* (United Nations, 2006). In higher education, reasonable accommodation bridges the gap between the standard academic environment and the individual needs of students with disabilities, enabling them to participate fully without lowering academic standards (Madaus *et al.,* 2010; Burgstahler, 2015; Harrison *et al.,* 2019).

Extensive evidence shows that when reasonable accommodations are available and effectively implemented, they improve retention, academic achievement, self-efficacy, and post-graduation employment outcomes for students with disabilities (Getzel, 2008; Lombardi *et al.,* 2011; Shogren *et al.,* 2015; Rodríguez-Hernández, C. F., & Piñeros-Ramos, M. 2024). In contrast, delays, denials, or inconsistent provision of accommodations can lead to academic failure, withdrawal, or diminished career trajectories (Fuller *et al.,* 2004; Denhart, 2008). Accommodations address both direct barriers (e.g., inaccessible labs, exams) and indirect ones (e.g., inflexible attendance policies, time-bound assessments), supporting the principle that equality sometimes requires differential treatment (Quinn, 2013; Seale *et al.,* 2015).

Studies identify a common range of accommodations, including: (i)*Assessment modifications:* extended time, alternate formats (oral, digital, Braille), separate rooms; (ii) *Instructional adaptations:* lecture capture, provision of notes, sign language interpretation, real-time captioning (CART), tactile diagrams; (iii) *Learning environment adjustments:* ergonomic furniture, quiet study rooms, adjustable lab equipment; (iv) *Technology-based accommodations:* screen readers, speech-to-text software, adapted lab tools; (v) *Policy flexibility:* attendance waivers for medical needs, flexible deadlines. (Harrison *et al.,* 2019; Moriña, 2017; Rao *et al.,*

2014). Research emphasizes that these should be anticipatory rather than solely reactive, embedded within institutional processes (Burgstahler, 2015; Yenduri *et al.,* 2023).

Despite legal mandates, implementation is often hampered by: (i) *Faculty awareness and attitudes:* Positive faculty attitudes correlate strongly with students' satisfaction and self-reported learning outcomes (Lombardi *et al.,* 2011; Sniatecki *et al.,* 2015). Negative attitudes or misconceptions about fairness can delay or reduce accommodation quality (Hong *et al.,* 2018). (ii) *Administrative processes:* Complex documentation requirements, limited disability service staffing, and inconsistent inter-departmental coordination can cause delays (Cook *et al.,* 2009; Getzel, 2008). (iii) *Typology-related resource disparities:* Research shows that large public universities often have centralized disability units and more resources, while small private or non-university tertiary colleges may lack trained staff or infrastructure for comprehensive accommodations (Moriña & Morgado, 2018; Holloway, 2001).

In Albania, reasonable accommodations are legally guaranteed, but inconsistently implemented. Provision often depends on the goodwill of individual faculty members rather than standardized institutional protocols (Sholla, 2020; Cungu & Sulçe, 2019). This results in uneven access to essential adjustments such as exam modifications or accessible course content. Faculty training on how to implement accommodations effectively is rare, leading to inconsistent practices across departments and universities.

Culture within Higher Education Institutions

Institutional culture is a decisive factor in shaping inclusive learning environments. Positive attitudes and inclusive pedagogical practices among faculty and students correlate with improved academic engagement and social participation for students with disabilities (Lombardi *et al.,* 2011; Moriña & Morgado, 2018). Conversely, stigma, low expectations, and ableist perceptions contribute to exclusion and marginalization (O'Shea & Meyer, 2016).

Institutional culture within higher education institutions plays a decisive role in shaping the inclusion and success of students with disabilities, influencing not only access, but also the quality of their academic and social experiences. Culture in this context refers to the shared values, norms, attitudes, and practices that guide interactions, decision-making, and pedagogical approaches within higher education institutions (Tierney, 1988; Schein, 2010). An inclusive institutional culture is characterized by proactive engagement with diversity, commitment to equity, and the integration of Universal Design for Learning principles into teaching and assessment (Burgstahler, 2015; Rao, Edelen-Smith, & Wailehua, 2014). Studies have shown that faculty attitudes, peer relationships, and leadership priorities significantly affect students with disabilities willingness to disclose their needs and seek accommodations (Fuller, Healey, Bradley, & Hall, 2004; Lombardi, Murray, & Gerdes, 2011; Hong, Haefner, & Slekar, 2018). In settings where disability is framed through a social rather than a deficit model (Oliver, 1996; Shakespeare, 2013), students with disabilities report greater belonging, participation, and academic achievement. However, in Albania, while legal frameworks align with the United Nations Convention on the Rights of Persons with Disabilities, cultural change within higher education institutions, remains uneven; barriers

persist due to limited faculty training, scarce disability support units, and enduring stigma (Zenelaga, 2024; Fondacioni Sebashku 2024; Sulaj et al. 2021). Research emphasizes that leadership commitment, sustained professional development, active student participation in governance, and peer awareness initiatives are critical strategies for transforming institutional culture into one that fully supports inclusion (Seale, 2014; Moriña, 2017; UNDP, 2015). Without such a shift from compliance-driven measures to values-driven practice, the potential of higher education institutions to act as catalysts for equity and social justice for students with disabilities will remain unrealized.

In Albania, faculty and peer attitudes towards disability are influenced by broader societal stigma. More than half of students with disabilities report experiencing discrimination in educational settings (Voko, Kulla, & Flagler, 2018). Disability awareness campaigns within higher education institutions are scarce, and training programs for academic staff on inclusive teaching remain the exception rather than the rule (Sholla, 2020). This lack of systemic cultural change limits the effectiveness of accessibility and accommodation measures.

Disability Units

The establishment of centralized disability units or offices is considered best practice internationally, serving as hubs for coordinating accommodations, providing assistive technologies, and supporting faculty in implementing inclusive practices (Getzel, 2008; Sniatecki *et al.,* 2015). Such units also play a role in monitoring institutional compliance with disability legislation and policies.

Disability centers within higher education institutions serve as pivotal structures for facilitating the full inclusion and participation of students with disabilities, by providing specialized support services, advocating for accessibility, and fostering institutional change. These centers typically function as centralized hubs that coordinate accommodations such as assistive technologies, note-taking services, alternative examination arrangements, and sign language interpretation, while also serving as a point of liaison between students, faculty, and administrative units (Collins & Mowbray, 2005; Getzel & Thoma, 2008). In many international contexts, disability centers adopt a dual role: meeting individual needs through case management and driving systemic change by influencing institutional policies and promoting Universal Design for Learning (Burgstahler, 2015; Rao, Edelen-Smith, & Wailehua, 2014). Research shows that the presence of such centers is associated with improved student retention, increased satisfaction with academic experiences, and higher rates of disclosure of disability status, which is essential for accessing formal accommodations (Lombardi, Murray, & Gerdes, 2011; Hong, Haefner, & Slekar, 2018).

In European higher education, disability centers often operate within a legal framework informed by the United Nations Convention on the Rights of Persons with Disabilities and EU accessibility directives[3], ensuring that institutional responsibilities extend beyond

[3] https://eur-lex.europa.eu/eli/dir/2019/882/oj/eng

compliance to active inclusion (Moriña & Morgado, 2018). However, in Albania, the establishment of disability centers within universities remains limited and uneven, with most institutions lacking dedicated offices or trained staff to manage disability-related services (Giakoumis, 2021; Sulaj, 2021).

ICF Evaluation

The International Classification of Functioning, Disability and Health (ICF) offers a biopsychosocial framework for assessing disability, emphasizing the interaction between individual impairments, activity limitations, and environmental barriers (World Health Organization, 2001). Its application in higher education can support individualized accommodation planning and institutional accessibility strategies (Bickenbach *et al.,* 2015).

Evaluation processes for students with disabilities, at the point of entry into higher education, are critical for ensuring that appropriate accommodations, supports, and learning pathways are identified from the outset. Internationally, best practices emphasize a holistic, individualized assessment that considers functional abilities rather than solely medical diagnoses, aligning with the International Classification of Functioning, Disability and Health (ICF) framework promoted by the World Health Organization (WHO, 2001). This approach allows universities to tailor reasonable accommodations such as assistive technologies, adapted materials, or alternative assessment formats, based on a student's actual learning and participation needs (Harrison, 2021; Moriña, 2017).

Effective entry evaluations typically combine documented evidence of disability (e.g., medical certificates, psychoeducational assessments) with self-reported needs and interactive interviews conducted by trained disability service staff (Getzel, 2008; Lombardi, Murray, & Gerdes, 2011). In countries such as the United Kingdom and Australia, disability officers or university disability centers use structured intake forms, standardized needs assessment tools, and collaborative planning sessions with academic departments to ensure timely provision of supports (Kent *et al.,* 2018). This early-stage evaluation process not only facilitates accessibility but also fosters trust, encouraging students to disclose their needs without fear of stigma (Cole & Cawthon, 2015). Although Albania's Law No. 93/2014 endorses the biopsychosocial model, the use of ICF-based evaluations in higher education institutions is limited. Assessments are typically conducted at the pre-university level and not transferred or updated upon entry into higher education (UNDP, 2021). This gap disrupts the continuity of support and reduces the ability of universities to proactively address accessibility and accommodation needs.

Capacity Building

Faculty training is a critical component of building inclusive higher education environments for students with disabilities. Research demonstrates that when university teachers receive targeted professional development on inclusive education, disability awareness, accessibility, reasonable accommodation and the use of assistive technologies, students with disabilities report higher satisfaction, increased engagement, and improved academic outcomes (Moriña,

2017; Lombardi *et al.,* 2011; Rao & Tanners, 2011). Such training often includes practical strategies for adapting course content, creating accessible learning materials, implementing Universal Design for Learning principles, and providing reasonable accommodations in assessment and classroom activities (Burgstahler, 2015; Cook *et al.,* 2009).

Systematic faculty training also reduces the reliance on ad hoc or informal accommodations, ensuring that inclusive practices are embedded into standard teaching processes rather than dependent on individual goodwill (Lombardi *et al.,* 2011). Furthermore, evidence from international programs shows that training which combines disability awareness with hands-on experience in accessible teaching tools leads to sustained changes in teaching practices (Hong *et al.,* 2018; Svendby, 2024).

In Albania, formalized training programs for university lecturers on disability inclusion are rare and often delivered through short-term, donor-funded projects rather than embedded in institutional policy (Sholla, 2020; Giakoumis, 2021). Faculty preparedness to implement inclusive practices varies widely across HEIs, contributing to inconsistencies in the provision of accommodations (Cungu & Sulçe, 2019; Sulaj et al. 2021). While some universities have included disability-related sessions in general pedagogical training, these are usually optional and not comprehensive. The absence of mandatory, continuous professional development on inclusive education limits the capacity of faculty to anticipate and address the diverse learning needs of students with disabilities, resulting in a reactive rather than proactive approach to inclusion (UNICEF Albania, 2022).

(iii) Transition to the Labour Market for Graduates with Disabilities

The transition from higher education to the labour market is a critical time for graduates with disabilities, shaping their economic independence, social inclusion, and long-term well-being. Globally, this process is influenced by systemic, institutional, and individual factors, including the availability of targeted employment services, employer attitudes, workplace accessibility, and the strength of policy frameworks linking education and employment (ILO, 2008; OECD, 2009). In Albania, these challenges are compounded by gaps in institutional preparedness, limited employer awareness, and insufficient integration between higher education institutions and the labour market (UNDP, 2021).

Employment Barriers

Research consistently shows that graduates with disabilities experience higher unemployment rates, underemployment, and job mismatches compared to their non-disabled peers (OECD, 2021; Schur *et al.,* 2013). Barriers include employer bias and misconceptions about the cost and feasibility of accommodations (Bruyère *et al.,* 2005), limited workplace accessibility (Fry *et al.,* 2020), and a lack of targeted job placement and career counselling services (Lindsay *et al.,* 2015).

Effective employment transitions often depend on career services that are disability-inclusive, offering individualized guidance, accessible job postings, mentorship programs, and internship opportunities (Janković *et al.,* 2021; Madaus, 2006). However, studies in

both high and middle-income countries show that many higher education institutions fail to provide such tailored services, resulting in prolonged job searches and higher attrition from the labour force (García-González *et al.,* 2022).

In Albania, employer awareness and readiness to hire graduates with disabilities remain low (Sholla & Zisi, 2021). While the National Agency for Employment and Skills reported that 525 persons with disabilities were trained and employed in 2024, the data are not disaggregated by education level, obscuring the outcomes for university graduates (MSHMS, 2024). In addition, university career services rarely integrate disability-specific employability support, and coordination with employers to create accessible internships is sporadic (Giakoumis, 2021).

Vocational Training and Pathways

International evidence highlights the value of vocational education and training (VET) in facilitating labour market entry for persons with disabilities, particularly when programs are designed to meet both employer needs and the functional capacities of participants (Butterworth *et al.,* 2012; Leicht-Deobald *et al.,* 2022). Successful models incorporate workplace simulations, soft skills training, and structured partnerships between VET providers, higher education institutions, and employers (Lindsay *et al.,* 2018).

The World Bank (2021) and UNESCO (2020) emphasize that integrating VET with higher education pathways enhances flexibility and supports lifelong learning for persons with disabilities, enabling upward mobility in the labour market.

In Albania, participation of students with disabilities in vocational training remains exceptionally low, only 1.2% of VET enrolments in 2020–2021 (UNDP 2021). Curricula are not adapted to the needs of learners with disabilities, and practical placements are rare. Moreover, weak integration between VET and higher education systems means that graduates from vocational programs have limited pathways to further study and higher-skilled employment (Cungu & Sulçe, 2019; UNDP 2021).

Employer Engagement and Inclusive Hiring Practices

Employer engagement is essential to improving employment outcomes for graduates with disabilities. Evidence shows that sustained partnerships between universities and employers, combined with financial incentives and public awareness campaigns, can significantly increase recruitment rates (Buciuni & Pisano, 2018; Lindsay *et al.,* 2019). The adoption of inclusive recruitment practices, such as accessible job applications, alternative interview formats, and transparent accommodation policies, has been linked to higher retention rates for employees with disabilities (Shaw *et al.,* 2021).

In Albania, employer engagement in inclusive hiring remains underdeveloped. While some organization or private companies have participated in EU-funded disability employment projects, these initiatives are often short-term and lack scalability (Sholla & Zisi, 2021). Public sector employment for graduates with disabilities is also limited, despite quotas established in legislation (Law No. 15/2019 on Employment Promotion).

(iv) Economic and Social Inclusion of Graduates with Disabilities

Higher Education is a critical driver of economic empowerment and social participation for persons with disabilities. It contributes by enhancing human capital, expanding social networks, fostering civic engagement, and enabling participation in knowledge-based economies (OECD, 2021; WHO, 2011). Tertiary education increases employability, earnings potential, and career mobility, thereby reducing poverty and economic dependence (Becker, 1994; Psacharopoulos & Patrinos, 2018). For persons with disabilities, these benefits can be amplified: a university degree can mitigate some of the systemic discrimination in the labor market by signaling skills and competencies to employers (Baldwin & Johnson, 2006; Schur *et al.,* 2014).

Economic inclusion is realized when graduates with disabilities have equitable access to decent work, fair wages, and career advancement. Research shows that in high-income countries, tertiary education reduces the disability employment gap more than secondary or vocational training alone (Houtenville & Kalargyrou, 2012; Lindsay *et al.,* 2018). Furthermore, higher education is associated with reduced reliance on disability benefits and greater financial independence (Jones, 2008; Madaus *et al.,* 2010).

Social inclusion encompasses participation in community life, political engagement, cultural activities, and social networks. Higher Education fosters social capital through peer interaction, exposure to diverse perspectives, and participation in extracurricular activities (Trowler, 2010; Hall & Healey, 2005). For students with disabilities, accessible campus environments and inclusive pedagogies can facilitate the development of identity, leadership skills, strengthening their capacity to influence policy and practice in society (Moriña, 2017; Seale, 2014).

Despite the potential of higher education to promote inclusion, disparities persist in educational attainment, graduate outcomes, and post-study trajectories between students with and without disabilities. Students with disabilities are less likely to complete higher education programs, more likely to take longer to graduate, and more likely to study part-time due to accessibility barriers, health-related interruptions, or inadequate accommodations (Richardson, 2001; Fuller *et al.,* 2004; Lombardi *et al.,* 2011). After graduation, they face higher unemployment rates, are overrepresented in low-paying jobs, and are underrepresented in leadership roles (Schur *et al.,* 2014; Lindsay *et al.,* 2018). The employment gap is wider for women with disabilities and for those from minority ethnic or rural backgrounds, pointing to intersecting inequalities (Jones, 2008; OECD, 2021).

In Albania, higher education has the potential to empower persons with disabilities economically and socially, but systemic and institutional gaps undermine this potential (Sholla & Zisi, 2021). Accessibility issues in HEIs, insufficient provision of assistive technologies, and a lack of inclusive career services limit the effectiveness of higher education as a pathway to labour market participation (UNICEF Albania, 2022).

While the Law No. 15/2019 on Employment Promotion includes measures to encourage hiring persons with disabilities, enforcement is inconsistent, and higher education graduates are not a specific focus of these policies. This disconnect between education and employment policy results in underutilization of the skills and qualifications of graduates with disabilities.

In Albania, disparities are reinforced by limited job opportunities for graduates with disabilities, weak employer engagement, and the lack of integrated data systems to track employment outcomes (Cungu & Sulçe, 2019; Giakoumis, 2021). Poverty rates remain high: 96% of families with children with disabilities live in low-income conditions (Voko, et.al., 2018), reflecting structural exclusion throughout the life course. NGO-led initiatives have piloted mentorship and employment programs for graduates with disabilities, but these remain small-scale and dependent on external funding (Sholla & Zisi, 2021). Without national-level, sustained programs linking higher education institutions, employers, and government agencies, the economic and social inclusion potential of higher education for persons with disabilities will remain unrealized.

POLICY AND SERVICE PROVISION IMPLICATIONS

The analysis identifies priorities that require further studies but also coordinated intervention by policymakers, higher education institutions, and relevant state agencies to address systemic barriers, expand equitable participation, and strengthen institutional capacity for disability inclusion in higher education.

The findings highlight key priorities for policy and service provision:

- *Specialized support for dominant disability types:* The prevalence of blindness necessitates investment in assistive technologies, tactile resources, and trained personnel.
- *Decentralization of services:* The concentration of students with disabilities in Tirana and Shkodër underscores the need to equip regional universities with basic accessibility infrastructure and training.
- *Field diversification:* Targeted interventions, such as adapted laboratory equipment and curricular adjustments, are essential for inclusion in STEM, health sciences, and technical fields.
- *Institutional capacity building:* Reliance on a few "accessibility islands" risks deepening inequality; minimum accessibility standards should be implemented across all higher educational institutions.
- *Pathways for underrepresented groups:* The minimal participation of students with intellectual and dual sensory disabilities calls for outreach, preparatory programmes, and inclusive admission policies
- *Networking with employment institutions and business:* Sustained programs linking higher education institutions, employers, and government agencies in order to realize the economic and social inclusion potential of higher education for persons with disabilities.
- *Accessibility and Reasonable Accommodation:* Higher education institution should prepare, adopt, implement operational procedures to realize accessibility in environment, information, communication and transport and reasonable individual adaptation based on the needs of students with disabilities. (viii). Capacity Building: Disability rights training for teaching, administrative staff and students; disability units within higher education institutions with trained responsible staff. (ix) Biopsychosocial evaluation: Building the procedures for evaluation of students with disabilities based on ICF recommendations.

ETHICAL CONSIDERATIONS

This study was conducted in accordance with established ethical standards for research in higher education and the social sciences. Confidentiality and anonymity were strictly maintained: no identifying information was collected, and data were reported only in aggregate form to prevent attribution to individuals or institutions. Access to raw data was restricted to the authors, ensuring compliance with the principles of integrity, autonomy, and data protection under the General Data Protection Regulation (GDPR, Regulation (EU) 2016/679).

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Altogether, the case-studies in this volume trace a roadmap for higher education in the Western Balkans that amalgamates tradition and innovation, strives to pursue equitable access to digital opportunities, and positions regional universities as active contributors to Europe's wider digital transformation.
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