

STRATEGIC PLAN FOR ADAPTATION OF THE UNIVERSITY FOR PEOPLE WITH DISABILITIES

Irina POGHOSYAN, *French university in Armenia*

E-mail: irina.poghosyan@pers.ufar.am

ORCID: 0009-0004-6833-512X

DOI: 10.24234/miopap.v13i1.134

ABSTRACT

This article examines the main directions for adapting the university environment for persons with disabilities based on a comparative analysis of European practices in inclusive higher education and an assessment of their potential application in the Republic of Armenia. The study clarifies the scientific problem of translating general inclusive-education principles into an operational university-level strategy and proposes an integrated framework combining physical and digital accessibility, assistive technologies, adapted educational materials, social and psychological support, staff training, transferability assessment and measurable monitoring indicators. The analysis shows that the creation of an inclusive educational environment requires a systematic approach rather than isolated measures and should include the modernisation of infrastructure, the improvement of information systems, the development of institutional support mechanisms and the assessment of financial and organisational readiness. Based on the examined international experience, a strategic plan for the adaptation of universities is proposed, incorporating short-term, medium-term and long-term measures aimed at improving the accessibility and quality of higher education for persons with disabilities. It may therefore be concluded that the successful implementation of inclusive policies in Armenian universities requires a comprehensive combination of infrastructural, technological, organisational and social transformations aimed at ensuring equal access to educational opportunities and promoting the full participation of persons with disabilities in university life.

Keywords: *inclusive education; persons with disabilities; higher education; accessible educational environment; digital accessibility; assistive technologies; university infrastructure; social support; inclusive policy; Republic of Armenia.*

1. INTRODUCTION

The overarching objective of this strategic plan is to establish conditions that ensure full accessibility and inclusivity within the university environment for students, faculty and staff with disabilities. The University seeks to eliminate existing barriers and implement contemporary solutions that promote equal participation of all categories of users in the educational process, research activities and working life. In pursuit of this objective, the institution will draw upon the best practices and

strategies that have been successfully implemented by leading European universities. These strategies will encompass not only the enhancement of physical and digital accessibility, but also the promotion of cultural and social inclusion at all levels of university life.

The scientific problem addressed in this study is the insufficient translation of general inclusive-education principles into an operational university-level strategy for the Armenian higher education context. Existing studies and policy documents describe legal commitments, European approaches and separate support measures, but they do not sufficiently connect these elements with the institutional, infrastructural and financial conditions of Armenian universities. The novelty of the study therefore lies in the development of an integrated strategic framework that links accessibility audits, digital adaptation, assistive technologies, staff training, student support and monitoring mechanisms into a phased model for university adaptation.

The methodological basis of the study is a comparative documentary analysis of legal acts, international standards, university practices, reports and academic publications related to inclusive higher education. The international examples, primarily European, were selected because they represent different models of accessibility policy: regulatory infrastructure standards, digital accessibility initiatives, institutional disability-support services, pedagogical support and partnership-based inclusion. The comparison was conducted according to the following criteria: relevance to higher education, applicability to different categories of disability, feasibility of phased implementation, institutional responsibility, financial sustainability and potential adaptation to the Armenian context. This approach makes it possible to identify not only successful practices, but also the conditions under which they may be transferred.

2. ANALYSING THE CURRENT STATE

The Law of the Republic of Armenia on Education of Persons with Special Educational Needs, which was adopted in 2014 by the National Assembly, guarantees the right to inclusive education for all citizens, including persons with disabilities (National Assembly of the Republic of Armenia, 2014). It enshrines the right of persons with disabilities to receive education at all levels, including higher education, taking into account their individual needs and conditions. The UN Convention on the Rights of Persons with Disabilities and the European Social Charter form the basis for international policy aimed at ensuring equal opportunities for persons with disabilities in education. The Law 'On Amendments and Additions' to the Law 'On General Education' (HO-200-N) (National Assembly of the Republic of Armenia, 2014) stipulates the introduction of inclusive education in 100% of educational organisations in Armenia by August 1, 2030. This includes the development and implementation of models and programmes oriented to the needs of students with disabilities. A three-stage assessment of students' needs has been introduced, which allows for accurate identification. The overarching objective of this system is to devise bespoke learning plans and provide support to students with special needs at all levels. A key element of this initiative involves the provision of physical accessibility, including the

installation of ramps, the widening of doorways, and the adaptation of learning materials. The reorganisation of the educational environment has necessitated a substantial financial investment. One of the key factors driving this change was the engagement with public opinion and stereotypes, with the aim of overcoming discrimination and establishing equitable conditions for all students, irrespective of their physical, mental or social differences (Melkumyan, 2018). By 2021, there were 1243 inclusive schools in Armenia with 7998 students with special educational needs. However, it was not possible to find similar information and monitoring on the accessibility of inclusive education in the Republic of Armenia. The current statistics indicate that approximately 3% of students enrolled in higher education institutions in Armenia are persons with disabilities (Simonyan, 2017). Nevertheless, despite the positive changes, access to higher education for persons with disabilities is limited mainly by sensory and motor impairments.

The assessment of the current situation in Armenian higher education institutions indicates that accessibility remains uneven and insufficiently monitored. Available publications show progress in the development of inclusive education at the school level, while comparable evidence for universities is limited and fragmented (Melkumyan, 2018; Simonyan, 2017). In practice, higher education institutions may differ substantially in the availability of ramps and lifts, accessible sanitary facilities, tactile navigation, adapted digital resources, assistive technologies and trained support personnel. Institutional capacity is also constrained by the absence of unified monitoring instruments, limited specialised staff, competing infrastructure priorities and the need for regular maintenance of accessibility solutions. Financial constraints are therefore a central factor: many adaptations require not only one-time investment, but also continuous funding for software licences, equipment renewal, staff training and student-support services. For this reason, the proposed plan begins with an evidence-based institutional audit before large-scale implementation.

3. MAIN AREAS OF ADAPTATION

3.1. INFRASTRUCTURAL CHANGES

The provision of ramps and lifts in all buildings of educational institutions is intended to ensure accessibility for students, faculty and staff with disabilities. In accordance with Russian standards (SP 59.13330.2016), ramps must be installed at each building entrance, meeting specific slope and safety requirements. The width of ramps in Russia is set at 0.9 metres, which can, on occasion, prove to be inadequate for wheelchairs with a width of up to 1.2 metres. The data for Russian standards is provided here, as no analogous standard was identified for the Republic of Armenia. Disabled lifts must be a minimum of 1.7m x 1.5m and provide accessibility for people with pushchairs. Furthermore, lifts should be equipped with appropriate buttons, signals and control panels for people with hearing or visual impairments, and have sufficiently spacious wheelchair accessible cabins. In the UK, the BS 8300:2009 + A1:2010 standard places significant emphasis on design flexibility, with ramps permitted to vary in

slope depending on the height of the lift, thereby enhancing adaptability. The width of ramps is stipulated as 1.2 metres, aligning with international standards. Additionally, the standard imposes supplementary requirements on lifts, stipulating that they must meet the maximum requirements for individuals with disabilities. In the German legal framework, specifically the Bauordnung für Berlin 2016, stringent design criteria are stipulated for ramps and lifts. These criteria include a maximum slope of 6 per cent for ramps and the requirement for their length to be proportionate to the lift. Moreover, the law stipulates the provision of at least two lifts for disabled individuals in public buildings, including educational institutions. In contrast, the United States (International Building Code 2018) sets a different standard. Its ramps are designed with a slope of no more than 5%, and rest areas are mandatory every 9 metres to improve facilities for people with disabilities. Lifts must be of standard size for wheelchairs, with a doorway of 1.2 metres. The implementation of such solutions contributes to the creation of an inclusive environment and equal opportunities for all participants in the educational process.

A research article (Regec, Pastierikova, 2016) examines e-accessibility in Czech and Slovak universities for students with visual impairment, focusing on the accessibility of information in electronic format, including the use of technologies and methodologies that facilitate access for such students. The study analysed more than 5,300 digital documents posted on the platforms of 106 universities in the Czech Republic and Slovakia in 2014 and 2015. The study utilised 15 distinct assistive technologies and tools to assess content accessibility, with the objective of identifying best practices for enhancing the availability of e-resources for visually impaired individuals within higher education institutions. The analysis revealed that none of the universities attained full accessibility levels for their e-content, with only four institutions (three private universities in the Czech Republic and one public institution in Slovakia) demonstrating accessibility levels above 90 per cent. These universities exhibited superior performance, attributable to their more effective integration of assistive technologies and adherence to international standards. The article goes on to state that accessibility is not limited only to the technical characteristics of the sites, but also includes the competences of students in using assistive technologies and the quality of support provided by the universities. In the article under consideration, the authors refer to several significant European projects supported by the European Commission, which are aimed at improving the accessibility of information for visually impaired people. Among these projects is the Web Accessibility Initiative (WAI), which is actively working on the creation of global accessibility standards for web content, e.g. WCAG 2.0, WCAG 2.2, WCAG 3.0 (World Wide Web Consortium, 2023) Design for All (WAI-DA), which seeks to increase the participation of European organisations in the implementation of web accessibility standards, Europe 2002 and Europe 2005, initiatives that aimed to achieve full accessibility for people with disabilities at EU level, including all web resources of public institutions. Another paper (Yue, 2024) analyses European practices in the education system in Finland and their application to optimise the educational outcomes of students with hearing impairment. In Finland, there is a model of inclusive education, in which children with hearing impairment are educated in regular schools with additional support. This is actively supported at the national level and includes

individualised education plans and various support mechanisms. Furthermore, students with hearing impairment in Finland have access to modern educational technologies, including cochlear implants, which have significantly enhanced their capacity to engage in conventional educational activities. Audiovisual teaching aids, including sound amplification systems, are utilised in conjunction with special pedagogical methods to provide support to students with hearing impairments. The employment of sign language interpreters and other assistive technologies is also a prominent feature.

In the report entitled 'Trends 2024. European higher education institutions in times of transition' (European University Association, 2024), the question of how to create an accessible educational environment for students with disabilities is discussed. The report emphasises the importance of tactile and information elements for people with hearing and visual impairments. Specifically, tactile walkways and floor signs, featuring relief stripes, cones, and materials of specific colours, assist visually impaired individuals in identifying different types of pavement surfaces through touch or residual vision. Additionally, tactile stickers with pertinent information are affixed to railings, aiding in orientation. These indicators can be installed at various levels and are engineered to withstand substantial loads, including exposure to the external environment, a crucial consideration for both indoor and outdoor use. A significant component of this infrastructure is tactile-sound schemes, which incorporate buttons to play audio messages, thereby assisting visually impaired individuals to navigate indoor environments and locate specific destinations. Another notable aspect is the incorporation of Braille into signs affixed to various objects, such as door handles and lavatory facilities, among others.

The report also stipulates that educational organisations should provide at least one accessible toilet cubicle per floor for students with low mobility, with the inclusion of folding support handrails and swivelling or tilting seats to enhance the usability of these facilities for individuals with disabilities. These measures are designed to ensure a safe and comfortable environment for individuals with mobility impairments. Additionally, there should be designated recreational areas that cater to the needs of students with disabilities. These designated areas offer opportunities for rest and recuperation at any time, a factor that is especially salient for students with disabilities who may experience elevated levels of physical exertion in the course of their studies.

3.2. EDUCATIONAL AND INFORMATION TECHNOLOGIES

European universities are actively introducing a variety of digital resources, such as audio books, subtitled videos and e-textbooks, with a view to removing barriers to education and rendering educational processes more inclusive (European Agency for Development in Special Needs Education, n.d.). One example of effective use of ICT for students with disabilities is the e-Learning Development Centre (ELDC) initiative in Estonia. The project, which was initiated in 2000, focuses on creating accessible and flexible forms of learning that support all students, including those with disabilities. The key activities of the ELDC include digitalisation and the recording of learning materials for students with visual impairments. The Primus programme (2008-2013), supported by the European Social Fund, has

developed specialised resources and services to support students with special educational needs, including the creation of adapted digital courses for visually impaired students. For instance, the ECHO 360 system is employed to record lectures and create accessible formats for students with hearing and visual impairments, thereby significantly enhancing the accessibility of materials.

As of 2010, the number of users of the Blackboard and Moodle platforms in Estonia had reached more than 69,000 people. The Blackboard Vista platform, which is utilised in more than 39 Estonian universities, has more than 39,000 users and offers 1,800 courses (Watkins, Tokareva, Turner, (2011). In Spain, the EU4ALL project was implemented to create accessible and adapted courses for students with different types of disabilities (EU4ALL, n.d.). The courses are meticulously designed to accommodate memory impairments, cognitive difficulties and perceptual challenges, with materials presented in audio or video format with subtitles and easy-to-understand texts. A key element of the project is the DotLrn learning platform, which empowers educators to tailor courses to the specific needs of students with disabilities. The EU4ALL project places particular emphasis on the accessibility of learning materials in various formats, including concise lessons, video lessons accompanied by subtitles, and materials rendered in an accessible format for students with dyslexia.

Special software tools such as JAWS and NVDA for visually impaired students and Roger Pen and Ava for hearing impaired students are also employed. In Estonia, for example, projects of digitalisation of teaching materials are closely related to the introduction of such technologies. Also based on this approach, special courses are being created to train teachers to use these technologies in teaching.

Furthermore, university libraries are being equipped with special teaching materials, including Braille books, voiced textbooks (using DAISY Reader), tactile graphics and illustrations. The development of adapted examination materials, including alternative forms of testing for students with motor and cognitive disabilities, using programmes such as Dragon NaturallySpeaking and Ghotit Real Writer, promotes equal opportunities in assessment. The installation of induction loops such as Univox Loop and Ampetronic in classrooms and conference rooms helps students with hearing impairments. Furthermore, the development of mobile applications with accessibility features such as voice assistants (Apple VoiceOver, Google TalkBack) and campus navigation assists students with disabilities in improving their mobility and orientation on campus. The introduction of tactile maps and navigation applications such as BlindSquare and Seeing AI facilitates travel around the university campus for students with visual impairments.

3.3. SOCIAL AND PSYCHOLOGICAL SUPPORT

European universities have established specialised support services for students with disabilities, with the aim of ensuring equal access to the educational process and providing the necessary adaptations. In Italy, since 1999, each university has been obliged to appoint a disability commissioner. In France, universities have Mission Handicap departments that coordinate support for students with disabilities. Students disclose their needs at the time of admission, and a support plan is subsequently developed for

them, including academic accommodations (e.g., extra time in exams) (Université de Strasbourg, n.d.). In many European countries, such as Sweden, the UK and Ireland, institutions are required to provide pedagogical support for students with disabilities and appoint inclusion officers. The EUni4All-Network project, part of the Erasmus+ programme, has established a network of inclusive universities with the aim of developing standards of support for students with disabilities and disseminating best practice (EUni4All-Network, n.d.).

In the context of higher education systems in various countries, the provision of psychological support for students with disabilities has emerged as a significant component of the Studierendenwerk system in Germany, where counselling and assistance in adapting to the learning process are offered. In Spain, the ONCE Foundation operates a career mentoring programme for students with disabilities, aiming to facilitate their transition into professional life. In Ireland, Trinity College provides a supported learning programme for students with intellectual disabilities, encompassing mentoring and psychological support. Various forms of mentoring are also being developed, where experienced professionals help students with disabilities to adapt to the learning process and career. Many universities have mandatory training for teachers on inclusive education, for example, Sweden has introduced a mandatory module for new lecturers on pedagogical support for students with disabilities. In the UK, many universities run workshops on inclusive teaching and the National Education Quality Agency has developed guidance for universities. The European Commission's Disability Rights Strategy places significant emphasis on the training of educators in inclusive education, including the utilisation of assistive technology. In Poland, funding for inclusion has been allocated to support the development of inclusive education, including the training of staff.

In the field of disability studies, student associations have emerged as key actors in promoting inclusivity and accessibility within higher education settings. In Germany, the AStA (Allgemeiner Studierendenausschuss) has been instrumental in organising awareness events and inclusive sports competitions, endeavouring to enhance the quality of life for students with disabilities. Similarly, the Disabled Students Campaign in the UK has been a prominent advocate for policy reforms, aiming to ensure that university policies are inclusive and conducive to the academic success of students with disabilities. The ExchangeAbility programme, initiated in 2010 as a component of the Erasmus Student Network, has been a significant initiative in promoting accessibility for students with disabilities in academic mobility. The programme's volunteers assist in removing barriers faced by students with disabilities, thereby promoting their participation in exchange programmes. In Europe, numerous scholarships and grants are available for students with disabilities. For instance, in Poland, scholarships are available to students with disabilities, compensating them for the additional costs associated with their studies. In other countries, such as Germany and France, students with disabilities can receive discounts on tuition fees and specialised grants. The Erasmus+ programme also provides additional funding for students with disabilities participating in international exchange programmes, thereby

facilitating greater mobility. Moreover, grants from organisations such as the ONCE Foundation in Spain and Google Europe support students with disabilities at master's and doctoral levels.

The success of inclusive programmes is contingent on effective partnerships between universities and disability organisations. For instance, the ONCE Foundation in Spain runs mentoring programmes for students with disabilities, while Masaryk University in the Czech Republic collaborates with the Teiresiás Centre to provide guidance on accessibility issues. The European Network of Inclusive Universities, established under the EUni4All project, facilitates knowledge exchange and the dissemination of best practices among universities. International projects such as DECIDE have facilitated the establishment of disability support centres in universities in the Eastern Partnership and Balkan countries, for example. In Austria, universities cooperated with the Österreichischer Behindertenrat to improve accessibility on campuses, which led to the creation of new guidelines for inclusion.

3.4. TRANSFERABILITY OF INTERNATIONAL PRACTICES TO ARMENIA

International practices should be transferred to Armenian universities selectively, rather than mechanically. The most realistic measures for adaptation are those that can be introduced in stages and adjusted to institutional resources: accessibility audits based on checklists, mobile or modular infrastructure solutions, WCAG-based website improvement, accessible learning materials, disability-support coordinators, teacher training, partnerships with disability organisations and gradual procurement of assistive technologies. These practices are appropriate because they do not require all universities to reach the same level immediately, but they establish common minimum standards and allow institutions to prioritise the most urgent barriers.

The principal risks of transferability are insufficient financing, limited technical expertise, weak interdepartmental coordination, low awareness among staff and the possibility that equipment will be purchased without adequate maintenance or training. These risks may be reduced through pilot projects, external grants, Erasmus+ cooperation, state co-financing, partnerships with non-governmental organisations and the inclusion of accessibility costs in regular university budgets. Institutional readiness should be assessed before implementation by examining management commitment, available technical staff, student-support capacity, digital infrastructure and the willingness of academic departments to adapt teaching and assessment practices.

A SWOT-based interpretation of the proposed strategy shows that the strengths of Armenian universities include the existence of inclusive-education legislation and growing public attention to equal access; the weaknesses include fragmented data, limited funding and uneven infrastructure; the opportunities include international cooperation, donor support, digital transformation and the use of European experience; and the threats include delayed investment, maintenance costs, resistance to organisational change and the risk of formal compliance without real accessibility. This strategic

assessment supports a phased model in which universities first diagnose barriers, then implement priority adaptations, and finally institutionalise monitoring and quality assurance.

4. IMPLEMENTATION PHASES

1. Short-term measures (1-2 years):

- 1.1. Audit of infrastructure accessibility. Conduct an audit using the "Accessible Environment" methodology with the involvement of experts from public organizations.
- 1.2. Use checklists to assess physical accessibility (ramps, doorframe width, tactile navigation) and digital resources (website accessibility according to WCAG 2.1 standards).
- 1.3. Immediate changes to infrastructure: Install mobile ramps in buildings without elevators; mark tactile paths with polyurethane coatings; adapt the website for students with visual impairments.
- 1.4. Development of methodological materials for teachers and implementation of guidelines for adapting educational materials.

2. Medium-term measures (3-5 years):

- 2.1. Equipping with adaptive technologies: Purchase equipment such as inductive systems for the hearing impaired, Braille displays; implement software for students with dyslexia to manage computers.
- 2.2. Staff training, workshops, and professional development courses.
- 2.3. Development and implementation of scholarship programs for students.

3. Long-term measures (5+ years):

- 3.1. Create an Inclusion Council with the participation of students, staff, and NGOs.
- 3.2. International cooperation within the Erasmus+ Inclusive Campus programs, partnership with the Global Disability Innovation Hub and other international initiatives to exchange experience in promoting inclusivity.
- 3.3. Development of educational technologies: develop AI tutors for personalized learning, implementation of biometric stress monitoring systems for students with mental impairments.

Monitoring and evaluation indicators:

Infrastructure accessibility indicators: share of audited university buildings; share of entrances, classrooms, libraries, laboratories and sanitary facilities meeting accessibility requirements; number of tactile navigation elements installed; number of priority barriers removed each year.

Digital accessibility indicators: percentage of university websites and learning-management-system pages meeting WCAG requirements; share of electronic learning materials available in accessible formats; number of courses with subtitles, audio materials or alternative text formats.

Assistive technology indicators: number of students using assistive devices or specialised software; availability of induction loops, Braille displays, screen readers and speech-to-text tools; average time required to provide requested adaptations.

Institutional support indicators: number of trained teachers and administrative staff; number of students receiving individual support plans; availability of a disability-support coordinator or unit; student satisfaction with accessibility and support services.

Outcome indicators: retention and graduation rates of students with disabilities; participation in academic mobility, research and extracurricular activities; number of complaints related to accessibility; annual progress against the accessibility audit plan.

5. CONCLUSIONS

The study demonstrates that the adaptation of Armenian universities for persons with disabilities should be understood not as a set of isolated infrastructural improvements, but as an integrated institutional transformation. The principal scientific finding is that physical accessibility, digital accessibility, assistive technologies, academic support, psychological support, staff training and monitoring mechanisms must be planned as mutually connected elements of one strategic framework. The original contribution of the study is the proposed phased model for transferring selected European practices to the Armenian higher education context, taking into account legal obligations, institutional capacity, financial limitations and implementation risks. The practical implication is that universities should begin with a systematic accessibility audit, define measurable indicators, introduce priority adaptations, and then embed inclusion into governance, budgeting and quality-assurance procedures. For future research, the framework should be tested through institutional surveys, campus observations and comparative evaluation of Armenian universities, which would make it possible to measure the effectiveness of specific accessibility measures and refine national policy for inclusive higher education.

ACKNOWLEDGMENTS

The author used ChatGPT (OpenAI) and Grammarly exclusively for language editing, stylistic improvement, and formatting support. All scientific content, literature selection, analysis, interpretations, and conclusions presented in this article are solely the responsibility of the author.

REFERENCES

EUni4All-Network. (n.d.). EUni4All-Network project. <https://www.euni4all-network.com/this-project>

11

European Agency for Development in Special Needs Education. (n.d.). ICTs in education for people with disabilities: Review of innovative practice. <https://www.european-agency.org/sites/default/files/ICTs-in-Education-for-people-with-disabilities.pdf>

- European University Association.** (2024). Trends 2024. <https://www.eua.eu/publications/reports/trends-2024.html>
- Melkumyan, Y. G.** (2018). Inclusive education and creating an accessible educational environment. *Herald of Social Sciences*, (1), 137–152.
- National Assembly of the Republic of Armenia.** (2014). On making additions and amendments to the Law of the Republic of Armenia “On General Education” (Draft law). https://www.parliament.am/draftreading_docs5/2/K-037_DR2.pdf
- Regec, V., & Pastierikova, L.** (2016). Impaired visual perception and selected aspects of e-accessibility at universities and colleges. In *International Conference on Political Science, International Relations and Sociology* (pp. 1–9). <https://doi.org/10.15405/epsbs.2016.05.03.1>
- Simonyan, E. S.** (2017). Inclusive education in Armenian higher education institutions. Contemporary problems and prospects for the development of pedagogy and psychology.
- SP 59.13330.2016.** (2016). Accessibility of buildings and structures for people with limited mobility: Updated edition SNiP 35-01-2001. <https://docs.cntd.ru/document/456054199>
- Université de Strasbourg.** (n.d.). Disability support. <https://en.unistra.fr/campus-life/campus-facilities/disability-support>
- Watkins, A., Tokareva, N., & Turner, M.** (2011). ICTs in education for people with disabilities: Review of innovative practice. UNESCO Institute for Information Technologies in Education & European Agency for Development in Special Needs Education. <https://www.european-agency.org/sites/default/files/ICTs-in-Education-for-people-with-disabilities.pdf>
- World Wide Web Consortium.** (2023). Web Content Accessibility Guidelines (WCAG) 2.2. <https://www.w3.org/TR/WCAG22/>
- Yue, J.** (2024). Educational strategies for students with hearing impairment: An international perspective and developmental path analysis. *Journal of Education, Humanities and Social Sciences*, 45, 229–235. <https://drpress.org/ojs/index.php/EHSS/article/view/28503>