INCLUSION FOR LEARNERS WITH MULTIPLE DISABILITIES: BARRIERS AND STRATEGIES

Susanna MURADYAN, *PhD, Associate professor, Chair of Special Pedagogy and Psychology, Faculty of Special and Inclusive Education, Khachatur Abovyan Armenian State Pedagogical University,* ***Republic of Armenia***
E-mail: *muradyansusannav@gmail.com*
Karine GRIGORYAN, *Master's Student, Faculty of Special and Inclusive Education, Khachatur Abovyan Armenian State Pedagogical University,* ***Republic of Armenia***
E-mail: *karinegrigoryan365@gmail.com*

DOI: 10.24234/se.v10i1.91

ABSTRACT

The study explores barriers that affect the meaningful inclusion of learners with multiple disabilities in mainstream schools and considers practical strategies for reducing those barriers. Fieldwork was carried out in ten mainstream schools in Ararat Region, Armenia. A qualitative research design was used, combining structured observation, questionnaires, and semi-structured interviews. The study drew on the perspectives of teachers, school leaders, support specialists, parents, and learners with multiple disabilities. Physical accessibility was examined through a structured observation checklist, while the use of reasonable accommodations, assistive technologies, and social participation was investigated through questionnaires and interviews. The findings show that inclusion is constrained by several interconnected factors. Physical accessibility was uneven across schools, with major gaps in adapted sanitary facilities, vertical access, and accessible information. Reasonable accommodations were often partial rather than comprehensive, and assistive technologies were not consistently available or used. Social participation was affected by teacher preparedness, peer acceptance, parental factors, community attitudes, and systemic conditions. The findings suggest that effective inclusion cannot be achieved through isolated measures. It requires coordinated work on the physical environment, individualized accommodations, assistive technology, professional development, family-school cooperation, and inclusive school culture.

Keywords: *inclusive education, multiple disabilities, physical accessibility, reasonable accommodation, assistive technology, social participation, mainstream schools*

INTRODUCTION

Inclusive education is not simply a question of where a learner is educated. Its central concern is whether every learner can participate, learn, communicate, and belong within the life of the school. This distinction is particularly important for learners with multiple disabilities, whose participation may be

limited by a combination of physical, sensory, communication, cognitive, and social barriers. A school may be formally inclusive while still leaving a learner dependent on others for movement, unable to access learning materials, or socially isolated from classmates.

Current international approaches describe inclusion as a continuing process of identifying and removing barriers to learning and participation (Ainscow, 2020; Booth & Ainscow, 2011). UNESCO (2020) similarly emphasizes that education systems should adapt to learner diversity rather than expect learners to fit unchanged structures. This perspective shifts attention from the learner's impairment to the interaction between individual needs and the educational environment.

Armenia has moved toward universal inclusive education, creating an important policy basis for the participation of children with diverse educational needs in mainstream schools. Yet implementation remains uneven. In practice, inclusion may be weakened by inaccessible school buildings, limited reasonable accommodations, insufficient assistive technology, uneven professional preparedness, and social attitudes that restrict participation. These barriers become particularly significant when a learner has more than one disability and therefore requires coordinated rather than single-purpose support.

The purpose of the present study is to identify the main barriers encountered by learners with multiple disabilities in mainstream schools and to examine strategies that may support their more effective inclusion. The analysis focuses on three closely related areas: physical accessibility; reasonable accommodations and assistive technologies; and social barriers within the school and the wider community. The research question is: What are the main barriers to the inclusion of learners with multiple disabilities in mainstream schools, and what strategies may contribute to their meaningful educational participation?

The study shows that the barriers identified in the participating schools are interconnected. Physical accessibility is often partial, accommodations are frequently incomplete, and social participation is influenced by professional confidence and attitudes. These findings indicate that inclusion is strongest when environmental, technological, pedagogical, and social supports are planned as parts of one system rather than as separate interventions.

LITERATURE REVIEW

The contemporary literature on inclusive education increasingly treats participation as the central criterion of inclusion. Booth and Ainscow (2011) conceptualize inclusion through the development of inclusive cultures, policies, and practices, while Ainscow (2020) stresses that schools need to use evidence about exclusion and participation to guide improvement. In this view, barriers are not fixed characteristics of learners; they arise when educational environments, expectations, or practices fail to respond to diversity.

For learners with multiple disabilities, this interaction between the individual and the environment is particularly complex. A learner may need support in several areas at the same time for example, mobility, vision, communication, and learning. As a result, an accommodation that addresses only one need may not be sufficient. Meaningful participation requires a coordinated understanding of how the

learner moves through the school, accesses information, communicates, interacts with others, and completes learning tasks.

Physical accessibility remains one of the most visible conditions of inclusion. However, accessibility cannot be reduced to the presence of a ramp at the entrance. A learner must also be able to move through corridors, use sanitary facilities, reach classrooms on different floors, understand signs, and safely use common spaces. The European Agency for Special Needs and Inclusive Education (2022) places accessibility within a wider systemic approach in which school organization, leadership, resources, and learning environments work together to support participation.

Reasonable accommodations are equally important because the same educational environment does not provide equal access for all learners. Adaptations may involve the organization of space, the format of learning materials, teaching procedures, communication supports, assessment practices, or the use of assistive technologies. The purpose is not to lower educational expectations but to remove barriers that prevent the learner from demonstrating knowledge and participating on an equitable basis.

Assistive technology can support access to communication, information, mobility, vision, hearing, cognition, and learning. The World Health Organization and UNICEF (2022) emphasize that access to appropriate assistive products remains highly unequal worldwide. They also note that technology is most effective when provision includes assessment, appropriate selection, training, maintenance, and follow-up. In education, this means that a device should not be viewed as a stand-alone solution. Its value depends on whether it is suitable for the learner, compatible with classroom activities, and understood by the people who support its use.

The source material examined in this study identifies a range of potentially useful technologies, including screen readers, text-to-speech functions, electronic books, high-contrast displays, adapted keyboards, audio description, and communication-supporting tools. Their educational relevance lies in enabling learners to perform tasks more independently and to take a more active role in classroom interaction.

Social and attitudinal barriers are less visible than architectural barriers, but they can be equally restrictive. Teacher expectations, confidence, peer attitudes, parental trust, and community perceptions shape a learner's experience of school. Florian (2019) argues that inclusive education depends on teaching approaches that extend opportunities to all learners rather than separating those who are perceived as different. This requires teachers to work collaboratively with special educators, psychologists, speech and language specialists, administrators, and families.

Taken together, the literature suggests that inclusion for learners with multiple disabilities should be understood as a multidimensional process. Physical access, educational adaptation, technology, professional competence, and social acceptance are interdependent. The research problem addressed here is therefore the gap between formal placement in a mainstream school and actual participation in its academic and social life.

METHODOLOGY

RESEARCH DESIGN

The study followed a qualitative research design, supported by descriptive quantitative summaries of selected findings. This approach was appropriate because the research sought to understand both observable conditions in schools and the experiences of people directly involved in the inclusion process. Data were collected through structured observation, questionnaires, and semi-structured interviews. Descriptive statistics were used to summarize frequencies and proportions, while qualitative material was examined thematically (Creswell, 2014).

SETTING AND PARTICIPANTS

The research was conducted in ten mainstream schools in Ararat Region, Armenia, where inclusive education is implemented and learners with special educational needs are enrolled. The thesis reports that the schools were selected from the region's mainstream schools through a random procedure. The broader fieldwork included 100 teachers, 30 specialists from the territorial pedagogical-psychological support system, 10 school directors, and 10 learners with multiple disabilities who were beneficiaries of the "For You" charitable public organization. Parents and other educational stakeholders were also involved in the questionnaire and interview components of the study.

Including participants with different roles made it possible to examine inclusion from several perspectives. Teachers and school leaders could describe organizational and instructional conditions; specialists could comment on support needs and accommodations; parents could reflect on everyday participation and family-school cooperation; and the experiences of learners with multiple disabilities provided the practical context for interpreting environmental barriers.

DATA COLLECTION

Data collection was organized around three domains. First, the physical environment of each school was examined using a structured observation checklist. The checklist covered the entrance and surrounding area, ramps, door width and thresholds, corridors, stairs, lifts or lifting platforms, adapted sanitary facilities, and information signs. Measurements and photographs were used to document the observed conditions and compare them with relevant accessibility requirements.

Second, questionnaires were used to explore how teachers, specialists, and parents perceived the availability and use of reasonable accommodations and assistive technologies. The questions addressed both the supports that were available and the difficulties encountered when trying to use them in everyday educational settings.

Third, semi-structured interviews and observations were used to examine social participation. Attention was given to interactions in lessons and extracurricular activities, participation in group work and play, relationships with peers, and the experiences of adults supporting learners with multiple disabilities.

DATA ANALYSIS

The observation data were organized by accessibility domain and summarized using percentages. Questionnaire responses were reviewed descriptively to identify general patterns. Interview and observation material relating to social participation was analyzed thematically. Recurrent barriers were grouped into five broad categories: teacher-related factors, peer acceptance, parental factors, community attitudes, and systemic or policy-related conditions.

ETHICAL CONSIDERATIONS

School administrations were approached before data collection, and permission to conduct the study was obtained. Participants were informed about the purpose of the research and provided oral consent. The names of the participating schools are not reported in order to preserve anonymity and confidentiality. The research topic and procedure were discussed and approved within the relevant academic structures of the Faculty of Special and Inclusive Education at Khachatur Abovyan Armenian State Pedagogical University.

RESULTS

PHYSICAL ACCESSIBILITY

The observations showed that physical accessibility was uneven across the ten schools. Some accessibility elements were present, but they did not consistently form a continuous accessible route through the school. This distinction is important: a learner may be able to enter the building but still be unable to use a toilet independently, reach another floor, or navigate information without assistance.

Table 1. Physical accessibility indicators in the participating schools

Accessibility indicator	Accessible / compliant (%)	Incomplete / inaccessible (%)
Entrance and surrounding area	35	65
Ramps compliant with standards	42	58
Door width and thresholds	34	66
Corridor accessibility	63	37
Adapted sanitary facilities	22	78
Lifts and lifting platforms	5	95
Accessible information signs	30	70

Corridors were the most accessible element, with 63% meeting the assessed criteria. By contrast, lifts or lifting platforms were available in only 5% of cases, and adapted sanitary facilities in 22%. Accessible information signs were recorded in 30% of the observed settings. The findings therefore point to fragmented rather than comprehensive accessibility. In practical terms, this means that the independence of a learner with mobility or sensory needs may depend on assistance even when some adaptations are already in place.

REASONABLE ACCOMMODATIONS AND ASSISTIVE TECHNOLOGY

The data on reasonable accommodations reveal a similar pattern. The thesis reports that 599 learners (67.2%) received only partial accommodations, while 148 learners (16.6%) received none. This suggests that support is often available in some form, but is not always sufficiently comprehensive or individualized to address the learner's full educational needs.

Assistive technology was recognized as important, although attitudes toward its role were not uniform. Sixty percent of the surveyed teachers and support specialists considered communication-supporting assistive technologies important for learners with multiple disabilities, whereas 40% did not attribute the same level of importance to them. The study also found that learners who used communication-supporting technologies were more able to communicate independently with teachers and peers and to take part in classroom activities.

The examples documented in the thesis include audio description, accessibility settings on computers and mobile devices, electronic books with text-to-speech functions, large-print or high-contrast keyboards, screen readers, external displays, and communication-supporting technologies. The findings suggest that the effectiveness of these tools depends on how well they match the learner's needs and how consistently they are incorporated into everyday teaching.

SOCIAL BARRIERS

The thematic analysis of social barriers identified five recurring categories. Teacher professional and psychological preparedness accounted for the largest share of the identified barriers (30%). Peer non-acceptance represented 25%, parental factors 20%, community-level sociocultural stereotypes 15%, and systemic or educational-policy problems 10%.

Table 2. Relative distribution of major social barriers

Barrier	**Relative share (%)**
Teacher professional and psychological unpreparedness	30
Peer non-acceptance	25
Parental factors	20
Community sociocultural stereotypes	15
Systemic and educational-policy problems	10

The prominence of teacher-related factors is noteworthy. The qualitative material suggests that uncertainty, limited professional confidence, low expectations, and fear of not being able to meet complex needs may influence how learners are included in classroom activities. Peer non-acceptance can further restrict opportunities for friendship and participation. Parental factors were linked to trust, communication, and involvement in school life, while community stereotypes reflected broader social attitudes toward disability. The systemic category included gaps in resources, professional support, coordination, and implementation.

DISCUSSION

The findings make clear that the barriers experienced by learners with multiple disabilities do not occur independently. They form a chain. A physically inaccessible environment may restrict movement; limited accommodation may reduce access to learning; inadequate technology may restrict communication; and negative expectations may further reduce participation. This pattern is consistent with the broader understanding of inclusion as the removal of barriers rather than the simple placement of a learner in a mainstream setting (Ainscow, 2020; Booth & Ainscow, 2011).

The physical-accessibility results illustrate why isolated adaptations are not enough. A ramp can improve entry to a building, but it does not create meaningful access if the learner cannot reach upper floors, use sanitary facilities, or move independently through internal spaces. Accessibility therefore needs to be planned as a continuous route. This also has implications for dignity and autonomy: dependence on adult assistance for basic movement can affect the learner's experience of participation even when academic support is available.

The findings on accommodations and assistive technology point to a second important issue: availability does not necessarily mean effective use. A partially adapted task or an unused device may have limited value. The WHO and UNICEF (2022) framework is relevant here because it treats assistive technology as a process that includes assessment, selection, training, and follow-up. In schools, this requires coordination between teachers, specialists, families, and, where possible, the learner. Technology should solve a real participation problem rather than simply be present as equipment.

The social findings are equally significant. Teacher professional and psychological preparedness emerged as the largest category of social barriers. This does not mean that teachers alone are responsible for inclusion. Rather, it points to the need for systems that give teachers practical knowledge, collaborative support, and realistic opportunities to plan for learner diversity. Florian (2019) argues for approaches that extend learning opportunities to everyone, and such approaches are difficult to sustain when teachers work in isolation or lack access to specialist support.

Peer relationships also deserve deliberate attention. A learner may be physically present in a classroom yet remain socially excluded. Structured cooperative learning, peer-support practices, classroom discussions about diversity, and teacher modeling of respectful interaction can help create a stronger sense of belonging. Family-school cooperation is similarly important because trust and shared decision-making influence the consistency of support across settings.

Overall, the study supports a systemic approach to inclusion. Physical accessibility, reasonable accommodation, assistive technology, professional development, and social participation should be planned together. Improving one domain while leaving others unchanged may produce only partial inclusion.

RECOMMENDATIONS

Schools should conduct comprehensive accessibility audits that examine the full route of participation, including entrances, internal movement, sanitary facilities, vertical access, classrooms,

information signs, and surrounding areas. Improvement plans should be prioritized according to the barriers that most directly limit learner independence.

Reasonable accommodations should be linked to individual educational needs and reviewed regularly. Adjustments should include not only physical changes but also flexible learning materials, communication supports, teaching procedures, and assessment arrangements.

Assistive technologies should be selected on the basis of functional need and real educational tasks. Training and follow-up should be provided for teachers, specialists, families, and learners so that technology can be used consistently across school, home, and digital environments.

Professional development should combine knowledge about multiple disabilities with practical work on inclusive pedagogy, communication support, assistive technology, collaborative planning, and attitudes toward learner capability.

Schools should invest in peer inclusion through cooperative activities, supported peer interaction, and explicit work on acceptance and respect for diversity. Families should be involved as active partners in assessment, planning, and evaluation of support.

At the system level, monitoring should focus not only on enrollment or the presence of individual adaptations but also on whether learners can participate, communicate, move independently, and make educational progress.

CONCLUSIONS

The study shows that learners with multiple disabilities in mainstream schools face barriers across several domains at the same time. Physical accessibility was incomplete in most of the assessed areas, particularly in relation to adapted sanitary facilities and access between floors. Reasonable accommodations were frequently partial, and assistive technologies were not consistently available or fully integrated into educational practice. Social participation was also affected by professional preparedness, peer attitudes, family factors, community stereotypes, and systemic conditions.

These findings suggest that meaningful inclusion requires more than isolated accommodations. It depends on the coordinated development of accessible environments, individualized support, appropriate technology, professional competence, family partnership, and inclusive relationships within the school community. When these elements reinforce one another, learners with multiple disabilities have a stronger opportunity to participate as active members of the educational process.

The study has several limitations. It was conducted in ten schools in one region of Armenia, so the findings should not be generalized to all schools in the country. Some data are based on participant perceptions and descriptive summaries rather than standardized outcome measures. In addition, the study did not examine the long-term effect of particular accommodations or technologies on academic and developmental outcomes. Future research would benefit from a larger and more geographically diverse sample, stronger direct participation of learners with multiple disabilities in the research process, and longitudinal evaluation of specific inclusive practices.

REFERENCES

Ainscow, M. (2020). *Promoting inclusion and equity in education: Lessons from international experiences*. Routledge.

Angrosino, M. (2005). *Doing ethnographic and observational research*. SAGE.

Booth, T., & Ainscow, M. (2011). *The index for inclusion: Developing learning and participation in schools (3rd ed.)*. Centre for Studies on Inclusive Education.

Creswell, J. W. (2014). *Research design: Qualitative, quantitative, and mixed methods approaches (4th ed.)*. SAGE.

European Agency for Special Needs and Inclusive Education. (2022). *Inclusive education systems: Policy and practice*. European Agency for Special Needs and Inclusive Education.

Florian, L. (2019). On the necessary co-existence of special and inclusive education. *International Journal of Inclusive Education*, *23*(7–8), 691–704. https://doi.org/10.1080/13603116.2019.1622801

Graham, L. J. (2023). *Inclusive education for the 21st century: Theory, policy and practice*. Routledge.

Mitchell, D. (2014). *What really works in special and inclusive education: Using evidence-based teaching strategies (2nd ed.)*. Routledge.

Slee, R. (2018). *Inclusive education isn't dead, it just smells funny*. Routledge.

UNESCO. (2020). *Global education monitoring report 2020: Inclusion and education*. All means all. UNESCO.

UNICEF. (2021). *Inclusive education: Every child has the right to learn*. UNICEF.

World Health Organization, & UNICEF. (2022). *Global report on assistive technology*. World Health Organization.