



INCLUSIVE EDUCATION AND EQUAL ACCESS FOR STUDENTS WITH DISABILITIES: EFFECTS OF INSTITUTIONAL AND SOCIAL SUPPORT

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ABSTRACT

Inclusive education aims to ensure that students with disabilities can access, participate in, and benefit from educational environments on equitable terms. Meaningful inclusion extends beyond enrolment and depends on accessible institutions, supportive relationships, inclusive teaching practices, and appropriate accommodations. This review examines how institutional support and social support influence equal access, participation, belonging, academic development, and well-being among students with disabilities. It also considers the roles of teachers, leadership, curriculum, digital accessibility, and emerging technologies in strengthening inclusive education. The reviewed literature addresses institutional policies, disability support services, reasonable adjustments, teacher attitudes, professional development, inclusive pedagogy, accessible learning environments, social support, assistive technologies, Artificial Intelligence (AI), and Virtual Reality (VR). The evidence indicates that effective inclusion requires coordinated structural and interpersonal support. Accessible resources, inclusive leadership, trained educators, reasonable adjustments, and specialist services can reduce institutional barriers, while support from peers, teachers, and families can strengthen participation, confidence, belonging, and academic self-efficacy. Digital and emerging technologies may further improve educational access when they are affordable, accessible, and implemented responsibly. Inclusive education is therefore most effective when institutional structures, social relationships, pedagogy, accessibility, and technology operate together to support equitable participation and improved educational experiences for students with disabilities.

1. Introduction

Inclusive education ensures equitable learning possibilities for people with disabilities in schools and higher education institutions. Not only does it involve placing students with disabilities in regular classes but it also stresses their participation, accessibility, sense of belonging and equal learning and social opportunities. Inclusion education is recognized by Jardinez and Natividad (2024) as one of the major ways of reaching educational equity; meanwhile, Fernández-Batanero et al. (2022) state that people with disabilities still face obstacles in regard to institutional structures, inaccessible materials, and lack of participation. Thus, admission to any educational institution cannot ensure inclusive experience.

The institutional support impacts the educational opportunities of students with disabilities greatly. Accessible infrastructure, accommodations, disability services, proper resources, and administrative support help increase their participation and independence. The impact of institutional support on the experiences of students with disabilities is demonstrated in Munjanja and Hendricks (2025). The role of leadership is crucial as well in terms of allocating resources, collaboration, and fostering inclusive climate and is stressed by DeMatthews et al. (2020). Shortage of staff makes it difficult for such students to get equitable educational opportunities (Mason-Williams et al., 2020).

Social support is as essential because participation depends on relationships with teachers, peers, families, and even other groups. Dickinson et al. (2023) pay attention to social support in relation to students with disabilities and their parents and discuss its significance during the times of educational disruption. Social and pedagogical support is helpful for enhancing inclusion in regular educational settings (Bystrova et al., 2021) and relationships are likely to help enhance participation of students with visual impairments (Manitsa & Doikou, 2022). Social support can promote academic self-efficacy via psychological resources like hope (Mana et al., 2022).

The role of teacher competence and attitude in shaping an inclusive environment should be noted as well. Teachers influence classroom interaction, assessment procedures, curricular adaptations, and instructional processes. Positive attitude is able to enhance participation of learners with learning disabilities (Kamran et al., 2023) and proper teacher preparation can promote the implementation of inclusive education (Ginja & Chen, 2023). Teachers' agency can help teachers adapt practice depending on learners' characteristics (Li & Ruppert, 2021).

Digital accessibility is becoming an increasingly relevant concept in the realm of inclusive education. ICT might facilitate access to information and help develop alternative forms of communication (Budnyk & Kotyk, 2020). However, the problem of the digital divide may worsen existing differences in case access to technology or knowledge about how to use it is not enough (Memon & Memon, 2025). The ability of faculty members to work with the concept of digital accessibility is crucial (Bong & Chen, 2024). Artificial Intelligence (AI), virtual reality, and related technologies may also support personalized and accessible learning experiences (Chalkiadakis et al., 2024; Melo-López et al., 2025). The existing research covers issues like inclusive policies, teacher training, access to technology, institution's services, and social support, yet all these dimensions are considered independently from each other. At the same time, there is a lack of literature on how structural support of the institution and interpersonal support of social nature interact in affecting students with disabilities in terms of access, participation, sense of belonging, learning development, and well-being. There is a lack of cohesion in evidence that spans multiple education levels, types of disabilities, countries and digital learning environments. The review intends to analyze factors of inclusive education and access from institutional, social, pedagogical, and technological perspectives.

2. Conceptual Foundations of Inclusive Education and Equal Access

Inclusion in education is built on the premise that children with disabilities ought to learn, participate, and develop within educational settings which respond to their diverse needs. Inclusion goes beyond enrolment or physical placement since it includes participation, accessibility, social inclusion, and equitable learning. Inclusiveness in education has been defined by Jardinez and Natividad (2024) as an educational approach which aims at promoting educational equity despite the difficulties associated with its implementation. Somad et al. (2024) also underscore the need to ensure that inclusive education policies are aligned with inclusive practices and institutions. According to Leijen et al.

(2021), an inclusive system should be designed for accommodating all learners and not a particular group. Understanding the conceptual basis of special educational needs and disability is important because inclusion ought to respond to diverse learning and support needs rather than disability which is viewed as homogenous (Wearmouth, 2022). Equal participation within higher education relies on accessible learning material, assessment processes, institutional provisions and physical environments (Fernández-Batanero et al., 2022).

Equality, equity, accessibility, and participation stand for various, yet interrelated aspects of inclusion. While equality stands for similar educational rights of all students, equity takes into account the differences in students' support needs to ensure equal participation (Bunbury, 2020). Therefore, reasonable adjustments, assistive technology, and other tools might be required for equitable participation. Additionally, accessibility implies that all educational resources, technology, infrastructure, and institutional services should be usable for students with varying functional needs. According to Beyene et al. (2023), access to higher education should imply accessibility of the resources rather than just admission into an institution. Moreover, structured support models can also contribute to inclusion in terms of participation, support needs, and quality of life of students with disabilities (Gonzalo et al., 2024). Participation is important since students can be enrolled into an institution without being included in academic and social aspects of the university life. Thus, according to Mansouri et al. (2022), educational placement affects both the academic and social aspects of students with severe support needs. The major concepts of inclusive education and equal access are presented in Table 1.

Table 1. Core Concepts Underpinning Inclusive Education and Equal Access

Concept	Meaning in Inclusive Education	Key Focus	Educational Implication	Common Barriers	Expected Outcome	Supporting Reference
Inclusive education	Learning together in responsive settings	Participation and belonging	Remove academic and social barriers	Segregation; rigid practices	Better inclusion	(Jardinez & Natividad, 2024; Leijen et al., 2021)
Equality	Same educational rights	Non-discrimination	Provide equal opportunities	Exclusion; unequal treatment	Equal opportunity	(Dreyer et al., 2020)
Equity	Support based on individual need	Fairness	Provide tailored support	Uniform approaches	Fair participation	(Bunbury, 2020)
Accessibility	Usable learning environments and resources	Barrier removal	Make systems and materials accessible	Physical; digital barriers	Better access	(Beyene et al., 2023)

Participation	Active educational involvement	Engagement	Encourage academic and social involvement	Isolation; low engagement	Higher participation	(Fernández-Batanero et al., 2022)
Social inclusion	Acceptance and belonging	Social connection	Strengthen peer and teacher support	Stigma; isolation	Better belonging	(Shpigelman et al., 2022)
Reasonable adjustment	Adaptation to individual needs	Accommodation	Modify teaching and assessment	Inflexible procedures	Equitable participation	(Bunbury, 2020)
Institutional support	Formal services and resources	Policies and services	Provide coordinated disability support	Limited resources	Better educational experience	(Munjanja & Hendricks, 2025)
Social support	Support from peers, teachers, and families	Relationships	Strengthen emotional and practical support	Weak support networks	Better well-being	(Dickinson et al., 2023; Mana et al., 2022)

Inclusive disability also involves considerations of identity, stigma, and perceived ability. Shpigelman et al. (2022) point out that access, stigma, identity, and power are factors that may influence the experiences of disabled students in higher education. The importance of the voices of students lies in the fact that formal institutional inclusion does not necessarily coincide with actual inclusion. For instance, Rodríguez Herrero et al. (2020) emphasize the need to consider the perspectives of students with intellectual disabilities, whereas Dreyer et al. (2020) note the challenges that students with learning disabilities experience.

The rights-based perspective and the social perspective on inclusion do not burden students with responsibility for their inclusive education, but rather the institution and its structure. Thus, Kauffman et al. (2021) prove that policies affect the implementation of educational rights. Love and Beneke (2021) stress the significance of structural inequality and social justice in education. The agency of teachers also plays a crucial role since teachers are the agents who interpret institutional requirements and apply them in classrooms considering the variety of learners (Li & Ruppar, 2021). Inclusive education should therefore be understood as a shared responsibility involving institutions, teachers, students, families, and wider social systems.

3. Institutional Support for Students with Disabilities

3.1 Institutional Policies and Administrative Support

Inclusive education policies provide a formal framework for ensuring that there is inclusivity through clear responsibilities, procedures to ensure support, access, and means to address the needs of students. Policies that seek to facilitate inclusivity must move beyond general commitments to concrete

practices that can then be put in place regarding teaching, assessment, student services, and the overall campus environment. As Ileri et al. (2020) indicate, policy approaches are critical for facilitating inclusive education, especially when there is clear definition of responsibilities and processes within an institution. Further, as Sulasmi and Akrim (2020) point out, management approaches are critical for ensuring organizational and facilitation of inclusive education in primary schools. As shown by Munjanja and Hendricks (2025), students' experience at schools is a result of actual support and not just the policies that may be in place.

Administrative support is important in ensuring that accommodations, disability services, learning materials, and communication among students, teachers, and support providers are coordinated. Poor coordination of these processes may hamper student participation. As indicated by Kauffman et al. (2021), larger policy structures have an impact on the operation of educational rights and support systems.

3.2 Disability Support Services and Reasonable Adjustments

The provision of disability support services serves as an important means of translating institutional promises into practice in support of the learners. Disability support services may entail academic accommodations, provision of accessible learning materials, assistive resources, assessment accommodation, counseling, and individual guidance. According to Munjanja and Hendricks (2025), proper institutional support may influence the experience of students by facilitating access and minimizing unnecessary obstacles.

Reasonable adjustments are critical since, despite equality, not all learners participate equally in their studies. As stated by Bunbury (2020), reasonable adjustments in higher education can make for an inclusive curriculum as long as they are appropriate and adequate to the needs of a particular learner. Availability of educational resources is crucial since inaccessible materials or institutional systems may limit participation despite admission (Beyene et al., 2023).

3.3 Educational Leadership and Inclusive Institutional Culture

Leadership is critical for the adoption of inclusion as part of an institutional culture. School and institutional leaders define the institution's priorities, distribute resources, coordinate professional services, and set expectations for inclusiveness. DeMatthews et al. (2020) note that principal leadership is an important component of an inclusive school which serves students with disabilities. Leadership that emphasizes collaboration and collective responsibility can help ensure consistent support in classrooms and other services.

Inclusive leadership plays an important role in helping organizations become responsive to learners' needs, which leads to success. According to Óskarsdóttir et al. (2020), inclusive leaders of schools are able to increase the level of achievements of all learners. Leadership therefore connects policy, staff practice, resource provision, and student support within a common institutional framework.

3.4 Human Resources and Specialist Support

The availability of human resources is very important for the provision of an inclusive education system. There might be a need for specialists such as special education teachers, support staff, counselors, accessibility experts, and others. Shortages in special education personnel are listed as one of the main barriers to providing equal opportunities by Mason-Williams et al. (2020). The lack of professionals can result in extra workload, less personalized help, and poor collaboration between the general and specialist education systems.

Furthermore, teacher well-being is related to the capacity of an institution as well. Social support can have an impact on well-being of special education teachers as found by Wu et al. (2020), while Fu et al. (2022) link work engagement and social support with turnover intentions. Therefore, professional well-being plays a role not only in personal success but also in ensuring stability and effectiveness of inclusive services.

3.5 Institutional Accountability and Sustainable Support

Accountability for institutions demands continuous consideration regarding whether policies and services create access and participation. Formal inclusiveness can be constrained by resource shortages, lack of staff roles definition, or inconsistency of accessibility measures. According to Shutaleva et al. (2023), inclusivity in education can become sustainable only due to the interdependence of institutional context, teachers, and children with special educational needs.

The notion of institutional support can be considered as an integrated system consisting of policy, leadership, services, staffing, accessibility, and accountability as factors influencing the educational process of students. Figure 1 below presents the interdependence of the listed institutional elements and their contribution to the development of equitable access, participation, belonging, and learning of students with disabilities.

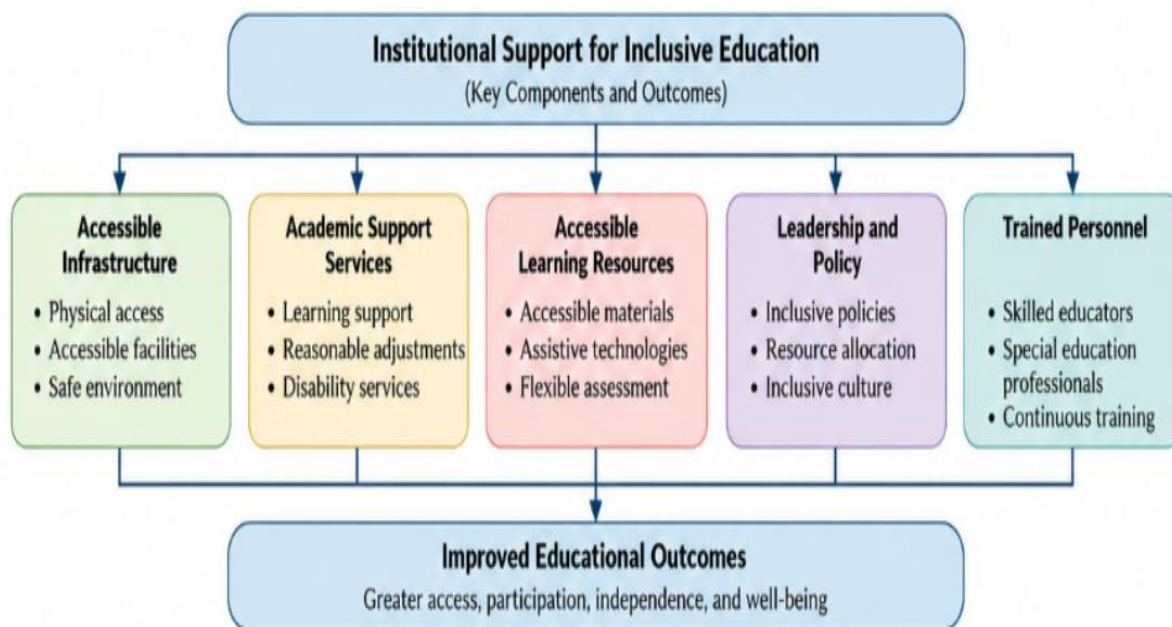


Figure 1. Institutional Support Pathways for Inclusive Education and Equal Access

4. Social Support and the Inclusive Educational Experience

Social support is one of the most important aspects of inclusive education because children with special needs usually need supportive interactions in order to engage with education and social activities. Social support from educators, peers, family members, and communities within institutions can boost self-confidence and educational engagement. According to Dickinson et al. (2023), social support was essential for children with special needs and their parents during disruptions of education. Bystrova et al. (2021) also mentioned the importance of social and pedagogical support within general secondary education.

Peer interactions are among the elements of belonging and social participation in education systems. Good peer interaction can help children with disabilities to feel accepted and included, while low social interaction can exacerbate their feeling of isolation. Social support was identified by Manitsa and Doikou (2022) as one of the factors influencing the educational experience of children with visual impairments. Supportive peer and teacher relationships can therefore influence both participation and emotional adjustment.

Support from teachers can serve both an academic and interpersonal purpose. Teachers are able to offer advice, encouragement, learning help, and individualized response. Positive attitudes of teachers can help in improving the quality of inclusion, especially in case of children with mild learning disabilities (Kamran et al., 2023). Social support is also associated with psychological effects. Mana et al. (2022) have shown that social support and hope can affect academic self-efficacy of higher education students, thus indicating that social support can enhance confidence in academic skills.

Family support remains relevant regardless of the level of education as families typically offer advocacy, communication, decision-making, and continuity of support. High level of family involvement can be helpful in handling transitions and accessing services. Therefore, social support should be considered as a multidimensional system rather than one source of help. The major types of social support and its role in inclusion are outlined in Table 2.

Table 2. Forms of Social Support and Their Contribution to Inclusive Education

Source of Support	Main Role	Type of Support	Common Barrier	Educational Effect	Psychosocial Effect	Reference
Peers	Promote belonging	Emotional; social	Isolation; stigma	Better participation	Greater acceptance	(Manitsa & Doikou, 2022)
Teachers	Support learning and adjustment	Academic ; emotional	Negative attitudes; limited time	Improved engagement	Higher confidence	(Kamran et al., 2023)
Family	Support continuity and advocacy	Practical; emotional	Limited involvement	Better access to support	Greater security	(Dickinson et al., 2023)
School community	Create inclusive relationships	Social; organizational	Weak inclusive culture	Better participation	Stronger belonging	(Bystrova et al., 2021)
Institutional networks	Connect students with services	Informational; practical	Fragmented support	Improved service access	Reduced stress	(Munjanja & Hendricks, 2025)
Social relationships	Strengthen academic confidence	Emotional; motivational	Weak support networks	Better academic engagement	Higher self-efficacy	(Mana et al., 2022)
Disability-specific support	Address individual needs	Specialized; social	Limited specialist access	Better educational participation	Greater independence	(Manitsa & Doikou, 2022)

Social support works best when various sources work in tandem. A student may need academic help from his/her teachers, emotional support from friends and family members, and practical advice from institutional sources. Social support in isolation may make inclusion less effective even when each source of support is individually available. A supportive social setting can help boost engagement, sense of belonging, self-confidence, and participation.

5. Teachers, Leadership, and Capacity for Inclusive Education

5.1 Teacher Attitudes Toward Inclusion

The attitudes of teachers play a crucial role in determining whether the inclusion of learners in education will be meaningful or just formal inclusion. With good attitudes, it becomes easier to engage learners in class, become flexible, and accommodate learners of different abilities; on the other hand, negative attitudes might work to keep learners excluded or with lower expectations. Kamran et al. (2023) demonstrate how teachers' attitudes impact inclusion for learners with mild disabilities. Ginja and Chen (2023) equally find teacher attitudes to be one of the factors that are critical in facilitating inclusive education for children with disabilities. Social support can further contribute to developing positive attitudes towards inclusion and self-efficacy of pre-service special education teachers (Elwakil, 2024). Teacher beliefs therefore shape everyday decisions about participation, instructional support, and classroom interaction.

5.2 Teacher Training and Professional Development

Teachers should have knowledge about disability, differentiated instruction, accessibility, classroom accommodations, and suitable ways of supporting children. Teachers' initial education does not always ensure them enough experience to work with children who have special needs. Inclusive practices are strengthened by teacher training according to Ginja and Chen (2023), and professional development in digital pedagogies can enhance the teachers' competencies and self-efficacies regarding inclusive teaching as shown by Shi et al. (2025). In higher education, teachers can also face challenges related to their understanding and ability to create inclusive learning environments as a result of lack of professional preparation and institutional support (Altes et al., 2024). Continuous professional learning is therefore important as educational environments, technologies, and student needs change.

5.3 Teacher Agency and Inclusive Pedagogy

Teacher agency is defined as the ability of the teachers to interpret the requirements of the education and make decisions that will meet the needs of the learners. According to Li & Ruppar (2021), teacher agency is a key feature of inclusive education due to the fact that it enables the teachers to change the methods of teaching, organizing the classroom environment, assessments, and the type of support in response to the needs of the learners. Inclusive practices can then be implemented in practice as opposed to being rigid processes.

5.4 Teacher Well-Being and Professional Support

Those teachers who bear the responsibility of inclusion and special education teaching will be under high levels of emotional and professional stress. The provision of social and organizational support will enable teachers to keep themselves healthy and engaged at work. According to Wu et al. (2020), social support was linked to the well-being of special education teachers, taking into account the emotional labor approach. Also, Fu et al. (2022) draw the connection between social support, subjective well-being, work engagement, and turnover intention in special education teachers.

5.5 Leadership for Sustainable Inclusive Education

Leadership links teacher capacity with institutional policy, resources, and organizational culture. In their work on the importance of principals in the development of effective inclusive schools, DeMatthews et al. (2020) indicate that principals contribute to inclusive school environments by providing support, coordination, and expectations for teachers. The same applies to Óskarsdóttir et al. (2020), who mention the role of inclusive school leadership in improving the performance of all students. Leadership can enhance teacher capacity through providing professional development, collaboration, resources, and joint responsibility. The attitude of teachers, their preparation, agency, professional support, and leadership are interrelated components rather than independent factors. The interplay and role of these components in inclusive classrooms are presented in Figure 2.

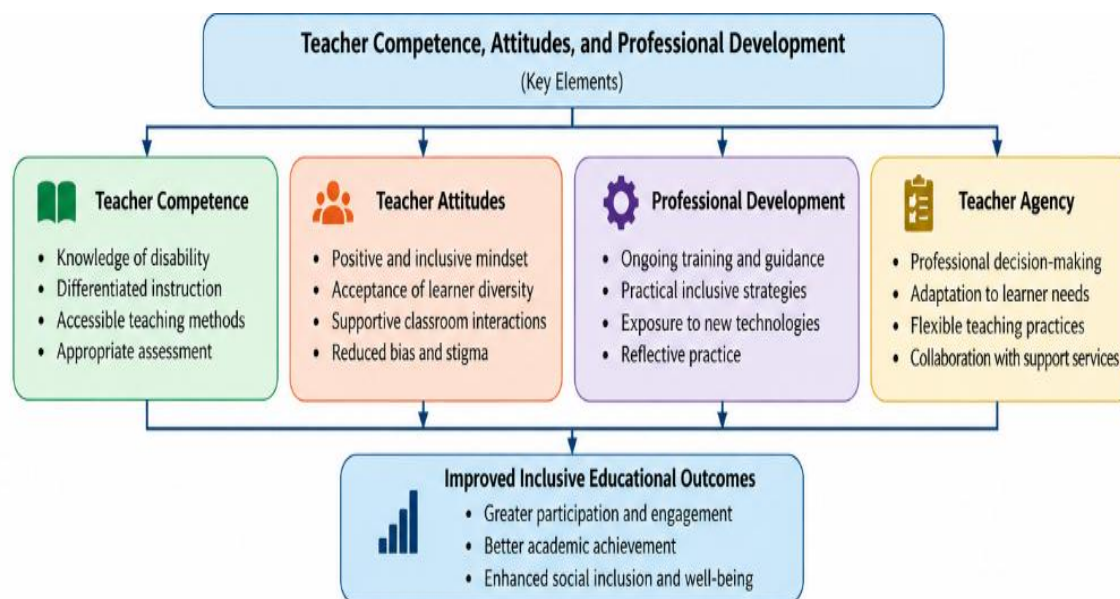


Figure 2. Teacher and Leadership Capacity Pathways for Inclusive Education

6. Inclusive Curriculum, Pedagogy, and Accessible Learning Environments

It is crucial to have an inclusive curriculum and pedagogical practices in order to ensure that learners with disabilities can engage in learning processes, and not merely be physically present in the learning environment. The design of the curriculum should take into consideration different learning needs, different communication needs, different assessment methods, and availability of instructional materials. According to Akintayo et al. (2024), an inclusive curriculum design should address learner needs and promote social improvement. Differentiated teaching approaches, modified materials, and differentiated assessment can help overcome barriers to engagement.

Reasonable adjustments are especially useful for students with disabilities in situations where the standard teaching/assessment approach creates barriers to learning. According to Bunbury (2020), reasonable adjustments can contribute to the inclusiveness of a higher education curriculum if they are made in response to individual needs. These might be extra time allowed for completing work, a different method of assessment used, modified learning activities, accessible documents, or rearrangements in the classroom setting. Their main goal is not to decrease academic standards but to remove barriers to demonstration of abilities.

Availability of learning resources also impacts the quality of participation. Beyene et al. (2023) argue that participation in higher education is greatly associated with availability and accessibility of learning resources. Learning materials need to be made accessible in different formats that will cater to students with different sensory, cognitive or physical disabilities. Faculty skills impact on how the accessible learning resources will be used in the teaching process especially in digital learning settings (Bong & Chen, 2024). Teacher skills are required for inclusive instruction as teachers will have to adjust their methods depending on the diversity of learners. Ginja and Chen (2023) emphasize the significance of preparing teachers as well as their attitudes to enable them to facilitate an inclusive environment while Li and Ruppert (2021) note the role of teacher agency in enabling teachers to react to learner needs.

Educational placement may also influence academic and social achievements. As per Mansouri et al., (2022), there was variation in outcomes between children with profound support needs across various educational placements, suggesting that the quality of support within the educational placement plays as critical a role as the placement itself. Early identification and early support would help make inclusion more effective especially where there is need for special devices or intervention. Early identification and early intervention are emphasized by Hunt (2021) as key in the area of assistive technology for inclusion. Table 3 summarizes the main components of the curriculum and the learning environment.

Table 3. Inclusive Curriculum, Pedagogy, and Accessible Learning Environment Components

Component	Main Purpose	Key Practice	Common Barrier	Expected Benefit	Supporting Reference
Inclusive curriculum	Address diverse learner needs	Flexible content and learning activities	Rigid curriculum	Better participation	(Akintayo et al., 2024)
Reasonable adjustments	Remove individual barriers	Adapt assessment and teaching	Inflexible procedures	Fairer participation	(Bunbury, 2020)
Accessible resources	Improve usability of learning materials	Provide accessible formats	Inaccessible materials	Better learning access	(Beyene et al., 2023)
Inclusive pedagogy	Respond to learner diversity	Differentiate instruction	Limited teacher preparation	Improved engagement	(Ginja & Chen, 2023)
Teacher agency	Enable responsive teaching	Adapt methods to student needs	Restricted flexibility	More effective inclusion	(Li & Ruppar, 2021)
Educational placement	Support academic and social participation	Match support with learner needs	Inadequate support within placements	Better academic and social outcomes	(Mansouri et al., 2022)
Early intervention	Address needs before barriers increase	Early identification and assistive support	Delayed identification	Improved access and participation	(Hunt, 2021)

7. Digital Accessibility and Emerging Technologies in Inclusive Education

7.1 Information and Communication Technology in Inclusive Education

The use of Information and Communication Technology (ICT) may increase access to educational resources and facilitate communication and flexible engagement for learners with disabilities. The paper by Budnyk and Kotyk (2020) explains how ICT may contribute to educational inclusiveness as they increase the access to learning resources and alternative learning methods. The use of digital tools is especially effective when they are made available and accessible to different people.

7.2 Digital Divide and Educational Equity

Digital inclusion becomes limited if there is no access to computers or the Internet, as well as to appropriate programs and digital literacy. The digital divide plays a significant role in educational inequity and is recognized by Memon and Memon (2025). Moreover, Matsieli and Mutula (2024) emphasize the importance of linking digitalization in higher education with educational equity.

7.3 Assistive Technologies and Digital Accessibility

Technology may address barriers to inclusive education arising from difficulties in communication, vision, hearing, mobility, and information processing. According to Hunt (2021), early detection and early intervention in the use of assistive technologies are critical in fostering inclusive education. The competence of the educators is also vital since accessible technologies may not be maximized where the instructors do not have the competencies necessary for the use of the technologies effectively. Bong and Chen (2024) point out the necessity to enhance faculty competencies on digital accessibility.

7.4 Artificial Intelligence and Inclusive Learning

The use of artificial intelligence for personalization and adaptation of learning is receiving attention. Melo-López et al. (2025) indicate that artificial intelligence may foster inclusive education through personalized learning processes, adaptive assistance, and accessible applications. The use of artificial intelligence also presents challenges in terms of bias, privacy issues, unequal access, and accessibility.

7.5 Virtual Reality and Immersive Learning

Immersive technologies like VR are capable of providing alternative interaction methods for learning environments to students who have disabilities. Chalkiadakis et al. (2024) note that AI and VR technologies can become emerging technologies, which might aid in achieving educational inclusion. The success of these technologies is contingent upon having proper interfaces, support and consideration of sensory, physical and cognitive needs.

7.6 Future Inclusive Learning Environments

Digital learning environments are increasing opportunities to participate in learning outside traditional and even online classrooms. Yeganeh et al. (2025) present an idea of a multi-layered metaverse classroom that would be capable of providing immersive and inclusive learning. These environments might enable personalization and interaction as well as flexible participation but their value is determined by issues of affordability, usability and accessibility. Digital accessibility is possible because of the interplay of technology, teacher skills, institution and availability of students. Figure 3 provides an illustration of how digital technologies can support inclusive learning through accessible usage.

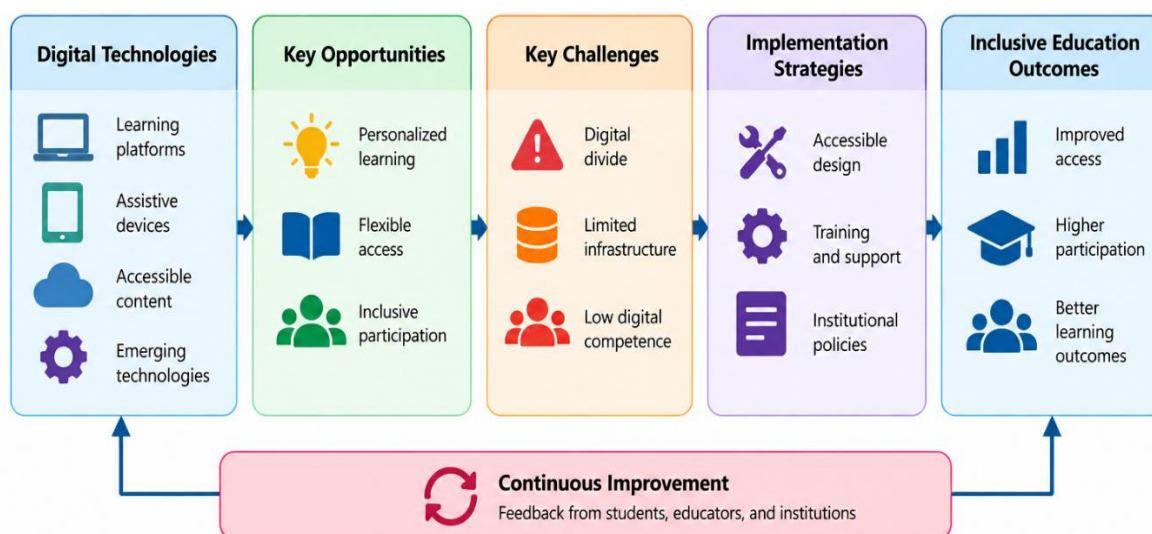


Figure 3. Digital Accessibility and Emerging Technology Pathways for Inclusive Education

8. Barriers, Outcomes, and Strategies for Strengthening Equal Access

The inclusion of students with disabilities is still impacted by several institutional, social, cultural, physical, and technological barriers. While inclusion policies are in place, students still experience

exclusion due to lack of accessible environment, poor support services, negative attitude, or poor accommodation. Shaw (2024) identifies persistent problems associated with inclusion of disabled students in higher education, while Dreyer et al. (2020) point at unmet needs of those with learning disabilities. These barriers imply that mere enrolment of students cannot be considered as equal participation in the education process.

Institutional barriers are related to lack of resources, uneven implementation of practices, poor integration of support services, and insufficient number of specialists. According to Munjanja and Hendricks (2025), support provided by institutions affects the life of disabled students directly. Lack of staff limits access to specialists and makes it difficult for institutions to meet individual needs (Mason-Williams et al., 2020). Hence, effective policies need proper resources and responsibilities to produce tangible changes.

Social and attitudinal barriers can limit participation despite the presence of physical and academic access to institutions. The stigma associated with a disability, stereotypes, negative expectations, and low perception of individuals with disabilities can affect peer relations, teacher attitude, and willingness of the students to seek assistance. According to Shpigelman et al. (2022), stigma, identity, and power dynamics are some of the critical factors that determine the experiences of people with disabilities. Cultural beliefs may also affect assumptions about disability and participation in learning, and thus, make inclusion a function of societal values (Alam & Mohanty, 2023).

Physical and digital accessibility are some of the other factors that are relevant to equal access. Inaccessibility of the learning environment, learning materials, technologies, and the digital environment can prevent participation by the learners. Beyene et al. (2023) highlight the significance of accessible learning materials, whereas according to Memon and Memon (2025), digital inequalities still remain a barrier to inclusion in education. Technology can be used to eliminate barriers only when there are appropriate devices, connectivity, and digital support for the learners.

The provision of proper institutional and social support can facilitate effective engagement, inclusion, academic self-confidence, and academic continuity. Social support is associated with academic self-efficacy according to Mana et al. (2022), while its significance for students with disabilities and their families is highlighted by Dickinson et al. (2023). Inclusion in the educational context requires the implementation of comprehensive strategies encompassing infrastructure, relationships, teaching, institutional support, and policy. Barriers, educational consequences, and approaches to ensuring equal opportunities are discussed in Table 4.

Table 4. Barriers, Effects, and Strategies for Strengthening Equal Access

Barrier Type	Main Barrier	Effect on Students	Institutional Response	Social/Pedagogical Response	Expected Outcome	Supporting Reference
Institutional	Weak support systems	Limited service access	Strengthen disability services	Improve coordination	Better participation	(Munjanja & Hendricks, 2025)
Staffing	Shortage of specialists	Reduced individualized support	Recruit and retain specialists	Strengthen staff collaboration	Improved support quality	(Mason-Williams et al., 2020)
Attitudinal	Stigma and low expectations	Reduced confidence and participation	Promote inclusive culture	Positive teacher and peer attitudes	Greater belonging	(Shpigelman et al., 2022)

		ion				
Cultural	Beliefs about ability	Unequal opportunities	Equity-focused policies	Challenge stereotypes	Fairer participation	(Alam & Mohanty, 2023)
Physical	Inaccessible environments	Restricted mobility and access	Improve infrastructure	Provide practical assistance	Greater independence	(Beyene et al., 2023)
Digital	Limited devices or connectivity	Reduced digital participation	Expand digital access	Provide digital support	Better learning access	(Memon & Memon, 2025)
Academic	Inflexible teaching and assessment	Limited learning participation	Provide reasonable adjustments	Use flexible pedagogy	Improved engagement	(Bunbury, 2020)
Social	Weak peer or family support	Isolation and lower confidence	Build support networks	Strengthen peer and family involvement	Better well-being	(Dickinson et al., 2023)
Psychological	Low academic self-efficacy	Reduced persistence	Provide academic guidance	Strengthen encouragement and support	Greater confidence	(Mana et al., 2022)

Equal access thus needs to take into account both structural and interpersonal forms of barrier. Institutional change will help in enhancing accessibility and service delivery, but inclusion, healthy relationships, and social support will enhance participation and sense of belonging. Integration of all these factors is necessary in making formal access into effective participation in education.

9. Limitations and Future Directions

The literature available is based on different levels of education, different types of disabilities, and different national contexts and institutional settings, thus complicating comparative analysis across studies. Different definitions of inclusion, accessibility, support, and educational outcomes used in research can also be the cause of inconsistencies in the body of evidence. There are several studies that concentrate on specific categories of students or institutional settings, thus making generalization across all students with disabilities impossible.

Further research should investigate how institutional and social support work together to affect participation, academic success, sense of belonging, self-efficacy, and well-being of students with disabilities. Longitudinal research will show whether the provision of support results in the

achievement of positive educational outcomes for the period longer than one academic year. More research should be conducted involving perspectives of students with disabilities. Students with visible and non-visible disabilities at various levels of education should be included in the research along with their socioeconomic and cultural backgrounds. Further comparative studies may reveal the effectiveness of some of the forms of support in various educational systems. It is necessary to conduct a greater number of scientific studies in terms of emerging technologies. There is a need for evaluation of Artificial Intelligence (AI), Virtual Reality (VR), assistive technology, and immersive learning in terms of accessibility, usability, affordability, and effectiveness in education. In addition, it is essential to investigate the question of the possibility of increasing barriers to inclusive education with the help of the use of emerging technologies or, vice versa, reduction of existing barriers. Further research should focus on the study of integrated models in which all the above factors interact. Such approaches could provide a clearer understanding of how inclusive education can move from formal access toward meaningful participation and equitable educational outcomes.

10. Conclusion

Inclusive education entails much more than ensuring attendance to regular schooling institutions. The true nature of inclusion is predicated upon students with disabilities' ability to actively engage in the process of education, as well as their participation in all activities within an environment that is both accessible and responsive to their individual needs. It is argued in this paper that both institutional and social support play an essential role in reaching such an environment. Institutional support involves inclusive policies, good leadership, reasonable accommodations, access to educational materials, specialist provision, and adequate staffing. Social support helps foster a sense of belonging, confidence, academic self-efficacy and emotional wellbeing among students with disabilities through relationships with teachers, peers, families and members of wider educational communities. Teacher attitudes, professional development, inclusive teaching, and leadership will help ensure that inclusive policies will be put into practice. Curriculum accessibility and flexible assessments can further help enhance the participation of students, as will use of digital technologies, assistive technology, Artificial Intelligence and immersive learning environments. Inclusive education should thus be seen as an integrated system in which structures, social relations, teaching processes, access, and technology work in conjunction with each other. Improving upon these aspects can enable educational systems to shift from inclusion as mere formality towards genuine participation, independence, sense of belonging, and equitable educational outcomes for children with disabilities.

References

1. Akintayo, O. T., Eden, C. A., Ayeni, O. O., & Onyebuchi, N. C. (2024). Inclusive curriculum design: Meeting the diverse needs of students for social improvement. *International Journal of Applied Research in Social Sciences*, 6(5), 770-784.
2. Alam, A., & Mohanty, A. (2023). Cultural beliefs and equity in educational institutions: exploring the social and philosophical notions of ability groupings in teaching and learning of mathematics. *International Journal of Adolescence and Youth*, 28(1), 2270662.
3. Altes, T. K., Willemse, M., Goei, S. L., & Ehren, M. (2024). Higher education teachers' understandings of and challenges for inclusion and inclusive learning environments: A systematic literature review. *Educational Research Review*, 43, 100605.
4. Beyene, W. M., Mekonnen, A. T., & Giannoumis, G. A. (2023). Inclusion, access, and accessibility of educational resources in higher education institutions: exploring the Ethiopian context. *International Journal of Inclusive Education*, 27(1), 18-34.
5. Bong, W. K., & Chen, W. (2024). Increasing faculty's competence in digital accessibility for inclusive education: a systematic literature review. *International Journal of Inclusive Education*, 28(2), 197-213.
6. Budnyk, O., & Kotyk, M. (2020). Use of information and communication technologies in the inclusive process of educational institutions. *Journal of Vasyl Stefanyk Precarpathian National University*, 7(1), 15-23.
7. Bunbury, S. (2020). Disability in higher education—do reasonable adjustments contribute to

- an inclusive curriculum?. *International Journal of Inclusive Education*, 24(9), 964-979.
8. Bystrova, Y., Kovalenko, V., & Kazachiner, O. (2021). Social and pedagogical support of children with disabilities in conditions of general secondary educational establishments. *JETT*, 12(3), 101-114.
 9. Chalkiadakis, A., Seremetaki, A., Kanellou, A., Kallishi, M., Morfopoulou, A., Moraitaki, M., & Mastrokourou, S. (2024). Impact of artificial intelligence and virtual reality on educational inclusion: A systematic review of technologies supporting students with disabilities. *Education Sciences*, 14(11), 1223.
 10. DeMatthews, D., Billingsley, B., McLeskey, J., & Sharma, U. (2020). Principal leadership for students with disabilities in effective inclusive schools. *Journal of Educational Administration*, 58(5), 539-554.
 11. Dickinson, H., Smith, C., Yates, S., & Tani, M. (2023). The importance of social supports in education: survey findings from students with disability and their families during COVID-19. *Disability & Society*, 38(8), 1304-1326.
 12. Dreyer, L., Mostert, Y., & Gow, M. A. (2020). The promise of equal education not kept: Specific learning disabilities—The invisible disability. *African journal of disability*, 9(1), 1-10.
 13. Elwakil, F. R. (2024). The effect of social support on attitudes towards inclusive education and self-efficacy among pre-service special education teachers in Egypt. *Journal of Research in Special Educational Needs*, 24(3), 612-626.
 14. Fernández-Batanero, J. M., Montenegro-Rueda, M., & Fernández-Cerero, J. (2022). Access and participation of students with disabilities: The challenge for higher education. *International journal of environmental research and public health*, 19(19), 11918.
 15. Fu, W., Pan, Q., Zhang, C., & Cheng, L. (2022). Influencing factors of Chinese special education teacher turnover intention: Understanding the roles of subject well-being, social support, and work engagement. *International Journal of Developmental Disabilities*, 68(3), 342-353.
 16. Ginja, T. G., & Chen, X. (2023). Conceptualising inclusive education: the role of teacher training and teacher's attitudes towards inclusion of children with disabilities in Ethiopia. *International Journal of Inclusive Education*, 27(9), 1042-1055.
 17. Gonzalo, Ó., Heras, I., Castillo, J. L., Meza, C., & Verdugo, M. Á. (2024). Impact of the Quality of Life Supports Model on the inclusion of students with disabilities in higher education: A scoping review. *Research in Developmental Disabilities*, 154, 104850.
 18. Hunt, P. F. (2021). Inclusive education: The case for early identification and early intervention in assistive technology. *Assistive Technology*, 33(sup1), S94-S101.
 19. Ireri, B. R., King'endo, M., Wangila, E., & Thurania, S. (2020). Policy strategies for effective implementation of inclusive education in Kenya. *International Journal of Educational Administration and Policy Studies*, 12(1), 28-42.
 20. Jardinez, M. J., & Natividad, L. R. (2024). The Advantages and Challenges of Inclusive Education: Striving for Equity in the Classroom. *Shanlax International Journal of Education*, 12(2), 57-65.
 21. Kamran, M., Siddiqui, S., & Adil, M. S. (2023). Breaking barriers: The influence of teachers' attitudes on inclusive education for students with mild learning disabilities (MLDs). *Education Sciences*, 13(6), 606.
 22. Kauffman, J. M., Ahrbeck, B., Anastasiou, D., Badar, J., Felder, M., & Hallenbeck, B. A. (2021). Special education policy prospects: Lessons from social policies past. *Exceptionality*, 29(1), 16-28.
 23. Leijen, Ä., Arcidiacono, F., & Baucal, A. (2021). The dilemma of inclusive education: inclusion for some or inclusion for all. *Frontiers in Psychology*, 12, 633066.
 24. Li, L., & Ruppert, A. (2021). Conceptualizing teacher agency for inclusive education: A systematic and international review. *Teacher Education and Special Education*, 44(1), 42-59.
 25. Love, H. R., & Beneke, M. R. (2021). Pursuing justice-driven inclusive education research: Disability critical race theory (DisCrit) in early childhood. *Topics in early childhood special*

- education, 41(1), 31-44.
26. Mana, A., Saka, N., Dahan, O., Ben-Simon, A., & Margalit, M. (2022). Implicit theories, social support, and hope as serial mediators for predicting academic self-efficacy among higher education students. *Learning Disability Quarterly*, 45(2), 85-95.
 27. Manitsa, I., & Doikou, M. (2022). Social support for students with visual impairments in educational institutions: An integrative literature review. *British Journal of Visual Impairment*, 40(1), 29-47.
 28. Mansouri, M. C., Kurth, J. A., Lockman Turner, E., Zimmerman, K. N., & Frick, T. A. (2022). Comparison of academic and social outcomes of students with extensive support needs across placements. *Research and Practice for Persons with Severe Disabilities*, 47(2), 111-129.
 29. Mason-Williams, L., Bettini, E., Peyton, D., Harvey, A., Rosenberg, M., & Sindelar, P. T. (2020). Rethinking shortages in special education: Making good on the promise of an equal opportunity for students with disabilities. *Teacher Education and Special Education*, 43(1), 45-62.
 30. Matsieli, M., & Mutula, S. (2024). COVID-19 and digital transformation in higher education institutions: Towards inclusive and equitable access to quality education. *Education Sciences*, 14(8), 819.
 31. Melo-López, V. A., Basantes-Andrade, A., Gudiño-Mejía, C. B., & Hernández-Martínez, E. (2025). The impact of artificial intelligence on inclusive education: A systematic review. *Education Sciences*, 15(5), 539.
 32. Memon, F. N., & Memon, S. N. (2025). Digital divide and equity in education: Bridging gaps to ensure inclusive learning. In *Impact of digitalization on education and social sustainability* (pp. 107-130). IGI Global Scientific Publishing.
 33. Munjanja, E. C., & Hendricks, E. A. (2025). Views of students with disabilities on how institutional support shapes their experiences. *African Journal of Disability (Online)*, 14, 1-8.
 34. Óskarsdóttir, E., Donnelly, V., Turner-Cmuchal, M., & Florian, L. (2020). Inclusive school leaders—their role in raising the achievement of all learners. *Journal of Educational Administration*, 58(5), 521-537.
 35. Rodríguez Herrero, P., Izuzquiza Gasset, D., & Cabrera Garcia, A. (2020). Inclusive education at a Spanish University: The voice of students with intellectual disability. *Disability & Society*, 36(3), 376-398.
 36. Shaw, A. (2024). Inclusion of disabled Higher Education students: why are we not there yet?. *International Journal of Inclusive Education*, 28(6), 820-838.
 37. Shi, Y. R., Sin, K. F. K., & Wang, Y. Q. (2025). Teacher professional development of digital pedagogy for inclusive education in post-pandemic era: Effects on teacher competence, self-efficacy, and work well-being. *Teaching and Teacher Education*, 168, 105230.
 38. Shpigelman, C. N., Mor, S., Sachs, D., & Schreuer, N. (2022). Supporting the development of students with disabilities in higher education: Access, stigma, identity, and power. *Studies in Higher Education*, 47(9), 1776-1791.
 39. Shutaleva, A., Martyushev, N., Nikonova, Z., Savchenko, I., Kukartsev, V., Tynchenko, V., & Tynchenko, Y. (2023). Sustainability of inclusive education in schools and higher education: Teachers and students with special educational needs. *Sustainability*, 15(4), 3011.
 40. Somad, A., Haryanto, S., & Darsinah, D. (2024). Inclusive education for special needs students in Indonesia: A review of policies, practices and challenges. *JMKSP (Jurnal Manajemen, Kepemimpinan, Dan Supervisi Pendidikan)*, 9(2), 1024-1035.
 41. Sulasmi, E., & Akrim, A. (2020). Management construction of inclusion education in primary school. *Talent Development and Excellence*, 12(1), 334-342.
 42. Wearmouth, J. (2022). *Special educational needs and disability: the basics*. Routledge.
 43. Wu, T. J., Wang, L. Y., Gao, J. Y., & Wei, A. P. (2020). Social support and well-being of Chinese special education teachers—An emotional labor perspective. *International Journal of Environmental Research and Public Health*, 17(18), 6884.

44. Yeganeh, L. N., Fenty, N. S., Chen, Y., Simpson, A., & Hatami, M. (2025). The future of education: A multi-layered metaverse classroom model for immersive and inclusive learning. *Future Internet*, 17(2), 63.