

**NEURODIVERSITY AFFIRMING APPROACHES FOR INCLUSIVE EDUCATION****Mitu De<sup>1,2\*</sup> and Indrani Basu<sup>3</sup>**<sup>1</sup>Associate Professor, Department of Botany, Gurudas College, Kolkata, India 700 054.<sup>2</sup>President&Head of Research and Academic Studies Unit (Hony),  
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**Abstract**

The presence of learners with disabilities and special educational needs in regular education presents enormous pedagogical challenges for education systems around the world. 21st century education systems have a clear need for teachers who are sufficiently competent and motivated to know how to include children with disabilities (and those from other marginalized groups) in all classrooms. The challenge becomes acute with students with invisible disabilities. When a disabled child does get the opportunity to receive a quality education, doors are opened. Education enables them to secure other rights throughout their lifetime, fostering better access to jobs, health and other services. In order to develop the skills, experience and confidence to be inclusive of all children, teachers need to learn about and practice inclusive education. Teachers must be competent enough to understand neurodiversity and recognize different educational needs of the disabled students and use appropriate teaching strategy. Teacher education has a crucial role to play in ensuring that classroom teachers are prepared for the challenges of educating all students with disabilities. This paper discusses the need of trained teachers who understand neurodiversity and equity and strive hard to make inclusive education a reality.

**Keywords:** Neurodiversity, equity, professional preparation, neurodiversity affirming approaches, inclusive education.

**Introduction**

The right to education is universal and expands to all children, youth and adults with or without disabilities. When a disabled child does get the opportunity to receive a quality education, doors are opened. This enables them to secure other rights throughout their lifetime, fostering better access to jobs, health and other services. For education to play this role as ‘an enabling right’, it must be of high quality, available equitably, built to tackle discrimination and allow each child to flourish according to their own talents and interests [1]. Education paves the way for individuals with disabilities to gain a valued role in society. Inclusion embodies ‘how’ the education system can accommodate children with diverse learning needs, constituting the promotion, where feasible, the processes of achievement, acceptance and participation in mainstream school classrooms of children with diverse learning needs [2 -3]. In recent years, human rights frameworks have begun to inform a

vision for delivering on the right to education for disabled children, and articulating what this might look in practice. Education enables the individual to have a valued role in the community. The concept of neurodiversity embodies a strengths-based model that shifts the focus away from the challenges of students with neurological differences in favour of finding ways to work with the strengths of the student to enable them to participate and experience educational success.

### **Concept of Neurodiversity in Education**

Neurodiversity is a scientific concept arising from brain imaging. A number of brain studies have shown that people with learning or thinking differences are “wired” differently than their peers. In other words, some children are born with brains that think, learn and process information differently than others. Neuro-divergent students, like all students, deserve fit-for-purpose learning experiences, and should not hold responsibility for educating their educators about their differences.

Neurodiversity is a term used to describe neurological differences in the human brain. From this perspective, the diverse spectrum of neurological difference is viewed as a range of natural variations in the human brain rather than as a deficit in individuals. These differences are often diagnosed as neurological conditions such as acquired illness or brain injury, Autism Spectrum Disorder (ASD), Attention Deficit Hyperactivity Disorder (ADHD), dyscalculia, dyslexia, dyspraxia, intellectual disability, mental health, and Tourette syndrome.

Education can be a powerful tool to unify the students with disabilities and those without them [4]. Inclusive education is not simply catering for the needs of students with disabilities instead it is reframing the teaching role that encourages teachers to respond to individual differences, including cultural, linguistic, cognition, physicality, emotional or social needs of students [5].

### **Inclusive education**

Inclusive education is defined as the concept that students with disabilities, regardless of the nature and extent of their disability, should be educated with age-appropriate peers in regular classrooms (with needed supplementary aids and services) in the neighbourhood school [6]. Over the years there have been numerous acts of legislation that have advocated students with special needs to be out of isolated educational environments and into classrooms with their regular education counterparts. Originating from the Salamanca World Conference on Special Needs Education, which Ainscow and Cesarin 2006 referred to as “the most significant international document that has ever appeared in the field of special education”, inclusive education received widespread recognition across the world [7]. The right of children with special needs to attend a regular school has its genesis in many international statements, the most recent being the United Nations Convention for the Rights of Persons with Disabilities.

The United Nations Educational, Scientific and Cultural Organization (UNESCO; 2005) characterizes as ‘Inclusion is a process [8]. It is not a single goal but an ongoing effort to find ever better ways to address the needs of children in a classroom. Inclusion acknowledges that human differences are normal and that not all children learn in the same manner. Tailoring instruction to meet individual student needs is at the heart of inclusive education, and it has become the foundation of most current pedagogical approaches.

### **The disabled student population**

According to the Indian Ministry of Social Justice and Empowerment, 1.67% of India's population between the age of 1 and 19 suffer from at least some form of a disability. There are 12 million children living with disabilities in India and 35.39% of all people with disabilities in the country are children. There are 'special needs schools' for students with special educational needs (SEN). There are more than 2,500 special needs schools for children with disabilities in India. A few are supported by the government while a vast majority of such schools are run by NGOs and private institutions.

### **Present condition**

Many countries do not have enough teachers, let alone enough teachers who have received sufficiently high quality pre- and in-service training and access to continuing professional development. The lack of well-prepared and motivated teachers impacts on the enrolment, participation and achievement of all children – but can be particularly detrimental to the education of children from marginalized groups, who may need some extra encouragement or assistance to reach their educational potential.

Children with disabilities are one of the most excluded groups in education. Universal school *design*, adapted learning materials, and better data are all crucial. However, the key to effective learning lies *especially* with teachers. Understanding Neurodiversity and accommodating diverse learning needs lies at the heart of inclusive education. Inclusive education has been internationally recognized as a philosophy for attaining equity, justice and quality education for all children, especially those who have been traditionally excluded from mainstream education for reasons of disability, ethnicity, gender or other characteristics.

### **Understanding Neurodiversity in the Classroom**

Current trends in education are moving toward more inclusive educational experiences for children with disabilities, alternative learning styles, and differentiated instructional practices to support all students to succeed [9]. So that implies that all teachers and classrooms must be equipped with the supports needed for children with special needs (CWSN). Education in general and post-secondary education in particular, is a predictor of gainful employment in meaningful occupations, opening opportunities for career development, hence for quality of life [10].

Teachers are often simply not trained or supported to teach children with disabilities, which makes these children among the most marginalized in terms of educational opportunity and attainment. That means these students are not being given the chance to become empowered as individuals and support their communities. Education enables the individual to have a valued role in the community. So, when students cannot access education, they fail to develop a valued role in society. They miss out on the opportunities that an educated person can get.

In recent times there has been a lot of research based on the lived experience of neurodivergent students [11]. Dialogues have provided the opportunities to understand different perspectives and being accommodating to different approaches and learning styles [12].

### **Role of Teacher education and Professional Preparation Programs**

Pre-service teacher education has a positive impact on improving teachers' knowledge of disabilities, knowledge of inclusive pedagogical approaches, attitudes toward disabilities, and self-efficacy for creating inclusive settings. Teachers are key players in support for inclusion.

But teachers may start to use different techniques of teaching only when the disability of the student is ascertained. So, it is imperative to provide practical exposure to the trainee teachers. If trainee teachers were to spend some weeks in a special needs school as part of their curriculum they would gain an insight to identify children with special needs (CWSNs). Likewise, if trainee teachers pursuing special D. Ed/B. Ed spend some weeks in a mainstream school the experience would be enriching. The in-service teachers should have a means to update their knowledge and hone their skills by means of refresher courses, workshops etc.

### **Challenges for Teachers in an Inclusive Classroom with Neurodivergent Students**

New teachers in the mainstream school very often no idea how to handle the students with disabilities; whose educational challenges may range from learning deficits to behavioral disturbance disorders. The inclusion of pupils with social, emotional and behavioural difficulties in inclusive classroom can be particularly challenging for teachers and teachers need to be properly trained and prepared to face such challenges.

The behaviours displayed by the students could be because of the inherent disability in the student and the lack of appropriate support in the classroom. Invisible Disabilities like (ASD) autism spectrum disorder, auditory processing disorders or learning disorders viz. dyslexia, Dyslexia, Dysgraphia, Dyscalculia, and Dyspraxia could be the cause. Or other disorders like Learning Disability, ADHD (attention deficit hyperactivity disorder) and/or psychiatric disabilities like bipolar disorder, schizophrenia among students could result in unusual behaviours.

To deal with the situation the teachers must be competent enough to understand the underlying cause of these behaviours and then use appropriate teaching strategy. Teacher education has a crucial role to play in ensuring that classroom teachers are prepared for the challenges of educating all students with disabilities. It is imperative to prepare teachers for inclusion in all curricular plans for pre-service teachers and also for teachers in services. The teacher certification programs in India are short of sufficient courses in special education to prepare general education teachers for inclusive classrooms.

### **Dealing with invisible disabilities like autism spectrum disorder (ASD), learning disability in the classroom:**

Students with autism spectrum disorder (ASD) and learning disability in educational institutions have no external markers that will aid in identification. It is only by observing their learning style and behaviour that teachers will be able to come to a conclusion. As ASD is a spectrum disorder no two students will be alike and their supports would vary too.

To address the educational needs of learners having invisible Disability, like Learning disability or autism, it is essential to ensure timely identification, assessment and remediation. It is widely recognized that students with ASD require attitudinal and social support to be truly integrated into a general education classroom.

Students with autism spectrum disorders (ASD) often demonstrate unusual and challenging behaviours, and they do not always respond to methods of discipline employed in the classroom environment. Often, children and youth with ASD engage in challenging/interfering behaviours because they are unable to use appropriate communication or social skills to get their wants or needs met [13].

### **Neurodiversity-affirmative teaching-learning environment**

A neurodiversity affirming approach in teaching-learning environment is one which appreciates the preferences, interaction styles and communication priorities of neurodivergent individuals, and places the same value on these as the preferences, interaction styles and communication priorities of neurotypical individuals. The concept of neurodiversity embodies a strengths-based model that shifts the focus away from the challenges of students with neurological differences in favour of finding ways to work with the strengths of the student to enable them to participate and experience educational success [14].

Successful, inclusive education needs to cater to the naturally occurring variability that is an inevitable part of humanity. Neurodiversity-affirmative classrooms will be characterised by universal design features and flexibility, with teachers adopting and iterating small changes with the potential to benefit everyone. Those same teachers will find ways to focus on the complementary contributions made by the range of people in the class, and shift away from a constant focus on individual achievement, measured against narrow standards. Pupils in such schools will become accomplished self-advocates, who understand their needs, and feel no shame in asking for help.

Creation of neurodiversity affirmative environments in the classrooms can evolve compassionate pedagogies, including universal design for learning and strengths-based approaches [15 – 17].

### **Providing Equity and reasonable accommodationsto neurodivergent students in the mainstream classroom**

Lipsky and Gartner define inclusion [18] as "the provision of services to students with disabilities, including those with severe impairments, in the neighbourhood school, in age-appropriate general education classes, with the necessary support services and supplementary aids (for the child or the teacher) both to assure the child's success - academic, behavioural, and social - and to prepare the child to participate as a full and contributing member of the society." A significant aspect in the above definition is often lost while trying to incorporate inclusive education viz. "with the necessary support services and supplementary aids (for the child or the teacher) both to assure the child's success." Support services for different types of disability will vary. Furthermore, these support systems may vary from student to student with disability like autism. For example, visual supports are helpful for persons with ASD by providing static messages to assist with organization and difficulty with recall. A child with ASD may prefer a visual mode for learning as they may have difficulties in processing auditory information. With a visual display, the child has time to see all the possibilities, has time to process the message, and has time to check the options as often as he or she needs before making a decision. But visual supports will be different for different students with ASD.

The presence of learners with disabilities and special educational needs in regular education presents enormous pedagogical challenges for education systems around the world. It has been variously stated that inclusive education systems develop schools based on a child-centered pedagogy capable of successfully educating all children. It is no longer uncommon for teachers to have a class with a diverse range of learning preferences and abilities, including children with different cognitive abilities, hyperactivity, and emotional difficulties. With such a complex combination, maintaining a balance between equity, delivering a fair and excellent education to all, and catering to individual learning needs has made a teacher's job extremely challenging [19]. Teachers need supportive policies and frameworks to provide

quality learning experiences to all students and build on their diverse strengths. For inclusive education or specialised education to be successful, teacher professional development and support are critical.

Teacher education for personalised education and other methods that address diversity in the classroom need to be supported on a system level. This requires policies that embrace neurodiversity, as well as legislations and funding schemes such as reform in assessment arrangements, school structure, class size, training and professional development, with a strong focus on rigorous evidence. Teachers can also be supported by professional learning networks, their community, parents and other experienced stakeholders such as foundations or NGOs. Such a whole-of-society effort can help teachers feel more prepared when working in neurodiverse classrooms.

### **Importance of quality Teacher Education**

Teacher education is the key to making inclusive education systems possible. Research worldwide has established that Pre-service teacher education has a positive impact on improving teachers' knowledge of disabilities, knowledge of inclusive pedagogical approaches, attitudes toward disabilities, and self-efficacy for creating inclusive settings [20 – 22]. Previous research has established that teachers are key players in support for inclusion [23]. But teachers may start to use different techniques of teaching only when the disability of the student is ascertained. So, it is imperative to provide practical exposure to the trainee teachers. If trainee teachers were to spend some weeks in a special needs school as part of their curriculum, they would gain an insight to identify children with special needs (CWSNs). Likewise, if trainee teachers pursuing special B. Ed spend some weeks in a mainstream school the experience would be enriching. The in-service teachers should have a means to update their knowledge and hone their skills by means of refresher courses, workshops etc.

### **Need for trained teachers for neuro- divergent students**

The increase in the number of children with ASD and the range of abilities among those children has brought with it a host of questions and concerns on how to provide an appropriate education in the least restrictive environment to children on the spectrum. This can be achieved only if the nature of impairment and its implications are kept in mind during the education process [24].

### **Role of trained teachers and social inclusion**

Teachers play a significant role in making education more inclusive, through their approach to learners, the methods and materials they use, their ability to welcome diversity and see it as strength, and their capacity to adapt and respond to challenges and diverse learning needs. The inclusive teacher recognizes individual differences and implements learning strategies for all.

Teacher education is viewed to be pivotal in developing the affirmative attitudes and skills required for successful inclusion, with formal educational training being identified as one of the main factors that promote an inclusive attitude. In the evaluation of UNESCO funded project 'Special needs in the classroom' the researchers concluded that *“relatively small changes in schooling, supported by better teacher preparation, can facilitate the education of many children with disabilities and make better arrangements for many others who*

*experience difficulties in learning*. Small changes could start in changing attitudes of teachers towards the disabled students or the flexibility to modify the teaching procedure to suit the students' unique needs.

The teachers can bring about a change in attitude by her/his skill and own behaviour, towards the student with disability. It is imperative to prepare teachers for inclusion in all curricular plans for pre-service teachers and also for teachers in services. Teacher education is viewed to be pivotal in developing the affirmative attitudes and skills required for successful inclusion, with formal educational training being identified as one of the main factors that promote an inclusive attitude [3]. Just as no two students are exactly alike; no two students learn in exactly the same way.

Everyone has preferred way of learning which needs to be kept in mind while teaching children in an inclusive class. By changing from a deficit orientation to a diversity perspective, and by creating positive ecosystems within which students with learning differences can learn according to their strengths rather than their weaknesses, we can help these students become who they are truly meant to be [25]. Teachers and other school staff need to be familiar with the various modifications of classroom instruction that can be used to ensure that all children, including those with disabilities (both visible and invisible), can learn and reach their fullest potential.

## **Conclusion**

For inclusive education to succeed and social inclusion of students with disabilities be a reality then it is vitally important that teachers, principals and other education stakeholders maintain a positive attitude towards inclusion. They must be firmly convinced of the benefits that inclusive practices bring to all children. Even if inclusive education is mandated by law, it will never succeed without the enthusiastic support of its practitioners. Successful inclusive education happens primarily through accepting, understanding, and attending to student differences and diversity, which can include physical, cognitive, academic, social, and emotional.

The pre-service teacher training degree programs needs to incorporate many changes like making inclusive pedagogy a significant part of the pedagogy courses, student teaching in inclusive classrooms, visit to special schools, learning to work in collaboration with other professionals and fellow colleagues and addressing special needs in group setting instead of one-to-one mode after pulling the child with special needs out of the regular. In service teachers should also be encouraged to get additional training to understand the practice the art of 'education for all.' Teachers need to use neurodiversity affirming approaches so that there is real inclusion in the classrooms of mainstream schools, colleges, universities and other institutions of higher learning.

## **Conflicts of Interest**

The authors declare that there are no conflicts of interest regarding the publication of this work.

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