

PROMOTING A NEURODIVERSITY-AFFIRMING CULTURE IN SCHOOLS: THEORETICAL PERSPECTIVES ON THE DEVELOPMENT OF STUDENTS' ATTITUDES AND DIRECTIONS FOR INTEGRATIVE INTERVENTION

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Abstract

The development of neurodiversity-affirming school cultures requires attention not only to educational practices and environmental adaptations but also to the attitudes and social behaviors of students. This theoretical paper examines the mechanisms through which the students' attitudes toward neurodiversity may contribute to the development of a neurodiversity-affirming school culture. Drawing on the neurodiversity paradigm, the neurodiversity-affirming perspective, Intergroup Contact Theory, the Theory of Planned Behavior, Social Learning Theory, and constructivist perspectives on learning, the paper proposes an integrative theoretical framework linking students' knowledge, attitudes, social norms, intergroup contact, cooperation, perceived behavioral control, and inclusive behavior. The analysis suggests that attitudinal development is embedded within broader social and environmental processes and that positive attitudes alone may not necessarily translate into inclusive behavior. Meaningful intergroup contact, cooperative learning, accurate and non-stereotypical information inclusive social norms, adult modeling and increased predictability, competence, and autonomy may represent complementary mechanisms supporting inclusive participation and social belonging. The proposed framework conceptualizes the development of a neurodiversity-affirming school culture as a reciprocal process involving changes in individual attitudes, peer relationships, classroom practices, and wider school norms. The paper concludes by outlining directions for integrative school-based interventions and future empirical research.

Keywords: "neurodiversity"; "attitudes"; "neurodiversity-affirming"; "neurodiversity-affirming school culture"

Introduction

Diversity represents a fundamental characteristic of contemporary society, and schools constitute one of the primary contexts in which children and adolescents encounter, explore, and learn to value differences among people. In this context, diversity refers not only to cultural, social, or individual differences, but also to the ways in which people perceive and process information, communicate, learn, and interact with their environment. The neurodiversity perspective brings precisely this variability in neurological functioning to the forefront, proposing a reconsideration of how differences between individuals are understood and, consequently, how these differences are addressed within educational settings.

Within the traditional deficit-centered paradigm, the characteristics of neurodivergent children are often interpreted predominantly in relation to norms of functioning considered typical. Consequently, difficulties related to communication, self-regulation, attention, sensory processing, or learning may become the primary reference points through which the child is defined. The neurodiversity paradigm proposes a shift in perspective, whereby neurological variations are viewed as part of human diversity and because of the interaction between individual characteristics and the features of the developmental environment, while their integration into neurotypical contexts becomes an educational objective. This shift in perspective does not imply disregarding the difficulties or support needs of neurodivergent children; rather, it involves reconsidering the relationship between individual characteristics and the environment in which children learn and develop. In the school context, this change in perspective has implications that extend beyond the individual adaptation of the educational process.

The inclusion of a neurodivergent student cannot be reduced to their mere physical presence in the classroom; rather, it involves participation, social interaction, a sense of belonging, and recognition of their value as a member of the school community. In this process, peers' attitudes represent an important factor. The ways in which students understand neurodivergence, respond to different behaviors, and relate to neurodivergent peers can either facilitate or, conversely, constrain their participation in classroom life.

In this regard, the concept of a *neurodiversity-affirming* approach offers a relevant perspective for developing an educational climate in which neurological differences are not merely tolerated, but recognized and valued. Such an approach involves promoting non-stigmatizing representations of neurodivergence, respecting individual characteristics, and creating contexts in which every student can participate in school life without being required to conform to a single model of functioning. Therefore, developing a *neurodiversity-affirming* culture involves both transforming educational practices and influencing the ways in which students think, feel, and act in relation to neurological differences.

From this perspective, fostering attitudes that are supportive of neurodiversity becomes an important component of inclusive education. Knowledge and understanding of neurodiversity, positive contact and cooperation among students, the modeling of inclusive behaviors by adults, and the development of group norms based on respect and acceptance of differences may represent

mechanisms through which schools contribute to reducing stereotypes and stigmatization and to developing more inclusive social relationships.

The present paper aims to theoretically examine how a *neurodiversity-affirming* culture can be promoted in schools and the mechanisms through which such a culture may contribute to the development of students' attitudes toward neurodiversity. To this end, the neurodiversity paradigm and the *neurodiversity-affirming* approach are examined, alongside the characteristics of attitude formation and several relevant theoretical frameworks for understanding attitudinal change, including intergroup contact theory, social learning theory, and the principles of inclusive education. The analysis also seeks to identify educational approaches that may contribute to developing a school culture in which neurodiversity is recognized as a natural component of human diversity. The central question guiding the theoretical inquiry is: *Through what mechanisms are students' attitudes toward neurodiversity related to the development of a neurodiversity-affirming school culture?*

Theoretical foundation

1. THE NEURODIVERSITY PARADIGM AND THE NEURODIVERSITY-AFFIRMING PERSPECTIVE

1.1. The Concept of Neurodiversity: Conceptual Delimitations

Over the past decades, the conceptualization of neurological and neurodevelopmental differences has undergone a significant shift, from a perspective predominantly centered on deficit and normalization toward one that recognizes the diversity of cognitive and neurological functioning. In this context, the neurodiversity paradigm has emerged, viewing neurological variations as part of human diversity and proposing a more nuanced examination of the relationship between individual characteristics and the environment in which individuals live and learn (Dwyer, 2022; Botha et al., 2024).

In a broad sense, the concept of neurodiversity refers to the diversity existing across human brains and patterns of neurocognitive functioning. It is important to distinguish between the terms *neurodiversity* and *neurodivergence*. Neurodiversity refers to neurological variation within the population, whereas the term *neurodivergent* is used to describe individuals whose patterns of neurocognitive functioning differ from those considered predominant or “neurotypical.” Depending on the definition adopted, this category may include autistic individuals and individuals with ADHD, dyslexia, dyspraxia, or other forms of neurodevelopmental difference (Botha et al., 2024).

From a historical perspective, neurodiversity is frequently associated with the work of Judy Singer and with literature emerging in the late 1990s. However, recent research emphasizes that neurodiversity theory cannot be attributed to a single individual. Botha et al. (2024) argue that ideas associated with neurodiversity were developed collectively, particularly within autistic and neurodivergent activist communities during the 1990s. This clarification is relevant because it highlights the social, cultural, and political dimensions of the paradigm and the importance of

placing the lived experiences of neurodivergent people at the center of the definition and development of the field.

The neurodiversity paradigm does not imply denying the difficulties associated with different neurodevelopmental conditions, nor does it eliminate the need for specialized support. Rather, it challenges the assumption that neurological difference should be understood exclusively as an individual deficit that needs to be corrected or eliminated. As an alternative, it promotes inclusive functioning, individualized consideration of each person, and the alignment of educational and developmental approaches and environmental conditions with the individual's personal characteristics. This involves considering both the person's individual characteristics and the demands, norms, and barriers present within the environment. Such a shift in perspective is particularly relevant to education, where the school environment may either facilitate or, conversely, exacerbate difficulties related to participation and learning (Dwyer, 2022; Fletcher-Watson & Happé, 2019).

1.2. From the Deficit Paradigm to the Neurodiversity Paradigm

The traditional perspective on neurodevelopmental conditions has been strongly influenced by the medical model and by a deficit-centered conceptualization. Within this approach, differences in behavior, communication, sensory processing, or executive functioning are primarily interpreted as problems located at the individual level. Consequently, the objective of intervention becomes the reduction of symptoms, the correction of behaviors considered atypical, and the approximation of the individual to dominant norms of functioning.

The neurodiversity paradigm is more closely associated with the social model of disability, according to which disability is not determined exclusively by individual characteristics, but also by the physical, social, and attitudinal barriers present within society. Rejection, overprotective attitudes, and the lowering or absence of expectations, whether originating from adults or from the peer group, may intensify differences in functioning and contribute to long-term maladjustment. Applied to education, this perspective entails shifting the focus from the question, "What needs to be changed in the student?" to the question, "What can be changed in the educational environment so that the student can participate and learn?" Accordingly, adapting teaching methods, the sensory environment, communication modalities, and academic demands become an important component of inclusion.

Furthermore, individual development cannot be reduced to the acquisition of information; it also involves the development of a broad range of social skills, including communication, social acceptance, negotiation, empathy, and a sense of safety, among others, upon which long-term quality of life may depend. The school years represent a particularly important period for the development of these social skills, and their acquisition cannot take place independently of meaningful engagement with the social environment. The mere physical presence of a neurodivergent student in a mainstream classroom, without genuine interactions with peers, cannot be equated with inclusion. For the educational environment to be genuinely inclusive, it must provide developmental opportunities in this domain as well. An inclusive school therefore involves

not only access to education, but also participation, belonging, opportunities for learning, and social relationships based on respect.

This shift in perspective is also supported by research examining the experiences of neurodivergent students. A recent systematic review of the positive experiences of autistic students in mainstream schools identified three major dimensions: understanding and acceptance by others, the availability of environments adapted to individual needs, and opportunities for students to exercise autonomy in managing their own needs (Mc Kinlay, 2025). Research on educational accommodations indicates that pedagogical and psychosocial adjustments to the environment may contribute to improving the functioning and participation of autistic students, although the empirical evidence regarding the effectiveness of different accommodations remains heterogeneous and requires further development (Leifler et al., 2021).

1.3. The Neurodiversity-Affirming Perspective in Education

The concept of *neurodiversity-affirming* refers to an orientation that translates the principles of the neurodiversity paradigm into the ways in which neurodivergent individuals are understood, supported, and valued. The neurodiversity-affirming perspective does not regard conformity to a neurotypical model as an implicit educational objective; rather, it shifts the focus toward recognizing neurological differences, respecting individual identity and autonomy, reducing barriers to participation, and ensuring the conditions necessary for learning, communication, and social interaction (Wagland et al., 2025).

In the educational context, this perspective can be understood as a set of principles and practices through which schools seek to create an accessible and respectful environment for students with different patterns of neurocognitive functioning. This involves not only adapting tasks and environments to individual needs but also reconsidering the norms through which certain behaviors are defined as “normal,” “appropriate,” or “problematic.” From this perspective, the behaviors and communication styles of neurodivergent students should be interpreted in relation to their individual characteristics and the demands of their environment, avoiding the assumption that any deviation from neurotypical norms constitutes a deficit that needs to be corrected.

A central characteristic of the neurodiversity-affirming perspective is the distinction between *support and normalization*. Educational support aims to reduce barriers and increase students’ access to and participation in educational experiences, whereas normalization explicitly or implicitly involves modifying students’ behavior so that it approximates a neurotypical standard.

An affirming approach does not exclude educational or therapeutic interventions, nor does it imply that all difficulties associated with neurodivergence should be disregarded. On the contrary, such difficulties may require substantial support; however, the purpose of this support is to facilitate functioning, autonomy, and participation rather than to eliminate neurological difference as such. Given the considerable heterogeneity of neurodivergent experiences, even within the same diagnostic category, cognitive, sensory, and social profiles may vary substantially. Consequently, a neurodiversity-affirming approach does not assume the existence of a universal set of accommodations applicable to all neurodivergent students but rather emphasizes the *need for flexible and individualized responses*. This need for individualization is supported by recent

research highlighting the importance of neurodivergent people lived experiences and of practices adapted to contextual and individual characteristics (Lo et al., 2026). This perspective is particularly relevant in school settings, where the same environmental characteristics may function as facilitators for one student and as barriers for another.

The neurodiversity-affirming perspective also includes *respect for students' voices and autonomy*. Decisions concerning communication methods, educational accommodations, environmental organization, and support strategies should, whenever possible, consider students' experiences, preferences, and perspectives. A neurodiversity-affirming educational culture is not constructed exclusively "for" neurodivergent students, but together with them, by taking their perspectives and experiences into consideration. Recent research highlights the importance of involving children and families in the development of neurodiversity-affirming resources and practices (Shore & Powell, 2026). Also, literature likewise emphasizes the need for approaches that incorporate the lived experiences of neurodivergent individuals into research and the development of educational practices (Botha et al., 2024). In the case of students who are unable to communicate these preferences directly or fully, appropriate methods should be used to identify their needs and available forms of communication, without equating the absence of conventional communication with an absence of preferences or an inability to participate in decision-making.

Therefore, in the present paper, a neurodiversity-affirming school culture is conceptualized as a set of educational norms, practices, and relationships that recognize neurological diversity, respect the identity and autonomy of neurodivergent students, reduce barriers to participation, and promote genuine opportunities for learning, social interaction, and belonging. More operationally, it can be understood as an educational orientation that recognizes and respects neurological differences, avoids conditioning acceptance on conformity to neurotypical norms, and seeks to reduce barriers that restrict the autonomy, participation, and sense of belonging of neurodivergent students. Such a culture aims not only to reduce stigmatization, but also to transform the school environment so that neurological differences do not, in themselves, constitute grounds for exclusion or devaluation.

The "affirming" character of this perspective should not be understood as an obligation to regard all characteristics of neurodivergence as advantages, nor as a denial of the difficulties that individuals may experience. Rather, it refers to positioning the person beyond a deficit-based understanding, recognizing their right to exist and participate without this participation being conditional upon conformity to a single model of functioning, and creating educational contexts in which support and accommodation are oriented toward access, autonomy, participation, and well-being.

1.4. The Relevance of the Neurodiversity Paradigm to School Culture and the Development of Students' Attitudes

Applying the neurodiversity paradigm in schools has implications not only for teachers' practices but also for the ways in which students perceive differences among their peers. Students' attitudes represent an important component of inclusion because they influence the quality of peer relationships, students' sense of belonging, and the opportunities available for neurodivergent

students to participate socially. The presence of a neurodivergent student in a classroom does not guarantee acceptance or inclusion. Studies indicate that autistic students may experience difficulties related to social acceptance, friendships, and stigmatization, which supports the relevance of interventions aimed at improving peers' attitudes (Settanni et al., 2024).

In this context, school culture becomes an essential factor in the formation of attitudes. The ways in which teachers talk about difference, how neurodevelopmental conditions are represented in the curriculum, the opportunities provided for cooperation among students, and institutional messages concerning respect and diversity may contribute to the development of less stereotypical representations. Teachers' attitudes may also indirectly influence students' attitudes, as students observe and internalize the social norms promoted within the classroom and school. Research on the inclusive education of autistic students highlights the importance of teachers' attitudes and school climate in the successful implementation of inclusive strategies (Petersson-Bloom & Bölte, 2022). Autism-related cases are used preferentially as a reference point because the largest body of empirical research within the neurodiversity literature has focused on autism.

Therefore, promoting a neurodiversity-affirming culture can be understood as a process that extends beyond the individual adaptation of the student and targets the transformation of norms, relationships, and practices within the school. Such a culture seeks to ensure that neurodiversity is presented to students not as a deviation from normality, but as one of the forms of human diversity. At the same time, it involves developing contexts in which students can acquire accurate knowledge about neurodiversity, interact positively with neurodivergent peers, and critically reflect on their own stereotypes and prejudices.

In conclusion, the neurodiversity paradigm provides a relevant theoretical framework for understanding school inclusion because it shifts the focus from individual deficit toward the interaction between students' characteristics and environmental conditions. The neurodiversity-affirming perspective extends this orientation by promoting respect for the identity and autonomy of neurodivergent individuals, adapting the environment, and valuing neurological differences. For schools, the central implication is that inclusion is not merely a matter of access or curricular adaptation, but also a matter of culture and social relationships. From this perspective, developing students' positive attitudes toward neurodiversity becomes an essential component of building an inclusive school climate and constitutes an important direction for the theoretical analysis of the mechanisms through which a neurodiversity-affirming culture can be promoted in schools.

2. STUDENTS' ATTITUDES TOWARD NEURODIVERSITY

2.1. The Concept of Attitude and Its Relevance to School Inclusion

Attitudes represent a central construct in social psychology and can be defined as favorable or unfavorable evaluations that individuals develop toward people, groups, situations, or behaviors. In the educational context, students' attitudes toward neurodivergent peers are particularly important because they may influence how students interact, cooperate, provide support, or, conversely, engage in avoidance, social distancing, and exclusionary behaviors.

Attitudes can be analyzed through cognitive, affective, and behavioral dimensions. The cognitive component includes the beliefs and representations that an individual holds about the object of the attitude; the affective component refers to the emotions associated with that object; and the behavioral component reflects the tendency to act in a particular way. Applied to neurodiversity, this model allows for a distinction between what students know and believe about neurodivergence, what they feel in relation to neurodivergent individuals, and how they choose to interact with them. This distinction is important because the mere acquisition of information about neurodiversity does not necessarily guarantee the development of favorable attitudes.

However, an inclusive attitude toward neurodiversity involves a considerably more nuanced set of processes. It depends not only on knowledge of the characteristics associated with a particular form of neurodiversity, but also on the development of non-stereotypical representations, empathy, and willingness to engage in social relationships, as well as perceived group norms and individuals perceived capacity to manage particular social situations. In this regard, school inclusion should also be examined from the perspective of the quality of relationships among students, rather than solely in terms of the physical presence of neurodivergent students in mainstream classrooms. In a systematic review of interventions aimed at improving students' attitudes toward autistic individuals, Settanni et al. (2024) emphasize that simply placing an autistic student in a mainstream educational setting is not sufficient to achieve meaningful inclusion.

2.2. Attitudes, Stereotypes, Prejudice, and Stigmatization

Attitudes toward neurodiversity should be analyzed in relation to concepts such as stereotypes, prejudice, and stigmatization. These concepts are particularly relevant because they describe distortions or biases in cognitive, affective, and behavioral responses toward social categories constructed through the segregation of normality and abnormality characteristic of the medical model.

Stereotypes represent cognitive generalizations about members of a particular group and may lead to the attribution of common characteristics to all individuals belonging to that group. In the context of neurodiversity, stereotypes may result in reducing a person to their diagnosis or in automatically associating neurodivergence with certain negative characteristics. Prejudice involves an affective evaluation of an individual or group based on their membership in a particular social category, whereas stigmatization involves the behaviors, attribution of socially devalued characteristics who may lead to rejection, discrimination, and exclusion. In the school environment, these mechanisms may have significant consequences for neurodivergent students' social participation and sense of belonging.

This issue is particularly relevant for neurodivergent students, who may experience lower levels of social acceptance, fewer friendship relationships, and greater exposure to stigmatization and bullying. Cook et al. (2020) highlight the relevance of the school environment and peer relationships to children's attitudes toward autism and bullying. In their longitudinal study, conducted with 775 students aged 11–12 years, increased personal contact with autistic individuals

was associated with greater cognitive understanding, attenuation of negative emotional responses, and a more pronounced increase in positive attitudes toward autistic individuals.

In this context, the aim of education should not be limited to transmitting information about autism or other forms of neurodivergence but should also include reducing stereotypical representations and creating social contexts in which students can develop positive experiences of interaction. A neurodiversity-affirming perspective therefore entails moving beyond the mere “tolerance” of difference toward recognizing difference as a legitimate and valued component of human diversity.

3. THEORETICAL FOUNDATIONS FOR DEVELOPING NEURODIVERSITY-AFFIRMING ATTITUDES

The development of neurodiversity-affirming attitudes among students, both as a component of and a precursor to a neurodiversity-affirming culture in schools, is supported by several psychological and educational theories. Two of these are particularly relevant for understanding students’ attitudes toward neurodiversity: Intergroup Contact Theory and the Theory of Planned Behavior.

3.1. *Intergroup Contact Theory* provides an explanatory framework for understanding how interactions between neurodivergent and neurotypical students may contribute to reducing stereotypes and prejudice. Allport (1954) started from the observation that prejudice emerges and is maintained, in part, through generalizations and stereotypical perceptions of members of another group. Interpersonal contact may allow individuals to perceive members of another group not merely as representatives of a category, but as concrete individuals with diverse characteristics, experiences, and needs.

According to Allport (1954), the reduction of prejudice is particularly likely when four conditions are present:

Equal status – individuals belonging to the two groups should interact under conditions of relatively equal status, rather than within a relationship in which one group is consistently positioned as inferior.

Common goals – members of the groups should pursue shared objectives.

Intergroup cooperation – achieving these objectives should require cooperation rather than competition between groups.

Institutional support – contact should be supported by authorities, norms, rules, or institutions that communicate that positive intergroup relationships are valued.

In education, this perspective highlights the importance of cooperative activities, shared goals, and opportunities for positive interaction between students. Positive effects of contact may occur even when the classical conditions formulated by Allport are not fully met, although these conditions contribute to strengthening its beneficial effects.

The meta-analysis conducted by Pettigrew and Tropp (2006), based on 713 independent samples from 515 studies, demonstrated that intergroup contact is generally associated with reduced prejudice. The authors also showed that contact effects tend to be stronger when

interactions occur under favorable conditions, such as cooperation and the presence of common goals. Applied to schools, this perspective suggests that the mere physical coexistence of neurodivergent and neurotypical students is insufficient to promote positive attitudes. Meaningful contexts of contact need to be created, characterized by cooperation, joint participation, and authentic social relationships.

In the context of disability, a systematic review conducted by MacMillan et al. (2014) identified 35 studies examining the relationship between children's contact with people with disabilities and attitudes toward disability. In 22 of these studies, a significant association was identified between contact and more favorable attitudes, supporting the importance of contact experiences in the development of children's attitudes. Similarly, Armstrong et al. (2017), in a systematic review and meta-analysis of school-based contact interventions, found positive effects of both direct and extended contact on children's attitudes toward disability. These findings suggest that direct interactions, as well as certain forms of indirect contact, may constitute relevant mechanisms for attitudinal change.

The relevance of this theory to neurodiversity is also supported by recent empirical research. In a systematic review of interventions aimed at improving students' attitudes toward autistic individuals, Settanni et al. (2024) identified 13 studies that included forms of direct, indirect, or peer-mediated contact; most of the interventions also included an educational component. Overall, the findings indicated favorable effects on attitudes, although the authors emphasize the need for further research regarding the effectiveness and sustainability of these interventions.

In the school environment, Intergroup Contact Theory therefore suggests that activities involving neurodivergent and neurotypical students should be designed to promote authentic interaction, cooperation, and the achievement of shared goals. Simply sharing the same educational space does not guarantee positive outcomes. On the contrary, superficial contact or contact characterized by avoidance of interaction may have limited value in the process of attitudinal change (Rademaker et al., 2020).

Complementary to Intergroup Contact Theory and relevant to the promotion of neurodiversity-affirming attitudes and, subsequently, a neurodiversity-affirming school culture, is the pedagogical approach of *cooperative learning*, in which students work together in structured groups to achieve common learning objectives, with each member having both individual responsibilities and a responsibility to contribute to the success of the group. This approach creates conditions for repeated contact, positive interdependence, and the achievement of shared goals. Unlike accidental or superficial contact, cooperative activities involve students' active participation and require them to draw upon the resources and competencies of each group member. Integrated activities and play-based groups, through the activation of positive emotions, have also been among the forms of contact associated with beneficial outcomes for inclusion.

In the case of neurodivergent students, cooperative learning may contribute not only to changing peers' perceptions but also to increasing opportunities for social participation. Repeated contact in functional collaborative situations may enable students to discover shared interests and

competencies and reduce the tendency to interpret behavioral differences through stereotypical frameworks. Therefore, cooperative activities may constitute a mechanism through which cognitive and affective change is translated into concrete social experiences. In a neurodiversity-affirming school, cooperation should not be viewed solely as a teaching method, but also as a strategy for building relationships and fostering a sense of belonging.

3.2. The Theory of Planned Behavior and the Transition from Attitudes to Behavior

Understanding the process through which attitudes are translated into behaviors can be achieved through the *Theory of Planned Behavior* (Ajzen, 1991). This theory proposes that behavioral intention is influenced by three main factors: attitudes toward the behavior, subjective norms, and perceived behavioral control.

In the context of neurodiversity, this perspective helps explain situations in which a student may hold a positive attitude toward neurodivergent peers but may nevertheless avoid interacting with them. For example, a student may consider inclusion important but perceive that their peer group does not value interaction with a neurodivergent student or may feel that they lack the skills necessary to communicate effectively with that student. Therefore, attitudinal change needs to be accompanied by changes in social norms and by strengthening students' perceived sense of competence. Studies by Opoku and colleagues confirm that students' intention to learn together with autistic peers (Opoku et al., 2021) is influenced by neurotypical students' attitudes toward their autistic peers, perceived social norms, and perceptions of control over inclusive behavior.

Several predictive factors for positive attitudes toward neurodiversity can be derived from this model:

a. Norms promoted within the social environment

These include both peer-group norms and the norms governing hierarchical relationships. According to Bandura (1977), an important part of human behavior is acquired through observing and imitating the behavior of others, as well as through observing the consequences associated with such behaviors (*Social Learning Theory*).

Students observe how adults respond to difference, how neurodivergent behaviors are managed, and which types of interactions are valued or sanctioned within the group. Consequently, a teacher who uses respectful language, explains differences without stigmatization, and facilitates cooperation may indirectly contribute to the development of social norms that support inclusion.

Peer-group norms, in turn, constitute an important mechanism in the development of attitudes. Students do not form their opinions independently of their social context; rather, they observe their peers' reactions and adjust their behavior according to what they perceive as acceptable and valued by the group. Consequently, promoting a neurodiversity-affirming culture requires the development of collective norms that support respect, cooperation, and acceptance of differences. Interventions focused exclusively on changing the attitude of an individual student may have limited effects if that student returns to a group in which stereotypes and exclusionary behaviors continue to be valued.

b. Attitudes toward neurodiversity are influenced by the *cognitive representations* that students develop about neurodivergent individuals, which are shaped, among other factors, by

instruction and education. A lack of information or exposure to stereotypical information may contribute to the development of distorted perceptions. In this regard, education about neurodiversity may contribute to correcting misconceptions, reducing stereotypes, and developing a more nuanced understanding of neurological differences. Educational content should address both the challenges that neurodivergent individuals may encounter and their individual characteristics, interests, strengths, and diverse ways of communicating and participating.

However, information should not be regarded as sufficient. Research applying Intergroup Contact Theory to inclusive education has found that interventions combining contact and information were associated with more favorable attitudinal outcomes than interventions relying on a single component. Therefore, a neurodiversity-affirming approach requires information provided to students to be framed in ways that avoid reducing a person to a diagnosis or to the difficulties associated with it.

In this context, the constructivist perspective on learning proposed by J. Bruner (Bruner, 1996) should also be considered. Within this perspective, learning is understood as a social and relational process in which knowledge is not simply transmitted from teacher to student, but actively constructed through exploration, interaction, and the attribution of meaning to experiences; the educational process can be understood as a space for the co-construction of knowledge and meaning, in which students actively participate in learning, while the teacher assumes a facilitating and supportive role. This perspective is particularly relevant to a neurodiversity-affirming approach because it enables students to be viewed not as passive recipients of predetermined norms and content, but as active participants in constructing their own learning experiences and attributing meaning to them. Within this framework, diversity in communication, participation, and information-processing styles can be valued within the learning process, while interactions among students can become a context for negotiating and co-constructing meaning. This perspective is also consistent with the need to include neurodivergent individuals as active participants in the learning process, both as sources of knowledge for neurotypical students and as valuable resources for the development of all students, regardless of whether they are neurotypical or neurodivergent.

In this regard, education about neurodiversity may serve a dual function: on the one hand, it facilitates the cognitive understanding of differences; on the other hand, it may create the conditions for modifying affective and behavioral responses. Accurate information can reduce the uncertainty associated with interacting with a person perceived as different and may facilitate willingness to engage in contact and cooperation.

c. The role of predictability and control

The need for control is common to both neurotypical and neurodivergent individuals, the inclusion of all students may be influenced by the extent to which the school environment is perceived as predictable and controllable. When a challenging situation is perceived as falling outside established social norms or one's familiar routines, and the individual's perceived ability to control or manage the situation is considered low, the likely response of a neurotypical person may be withdrawal and disengagement from an inclusive stance. For a neurodivergent person, the

same situation may result in increased emotional distress and pressure to conform to neurotypical norms, potentially at the expense of autonomy, inclusion, and a sense of belonging.

From this perspective, increasing the perceived sense of control and competence among all individuals involved represents an important variable influencing inclusive behavior. Creating predictable, accessible, and flexible environments may therefore benefit both neurotypical and neurodivergent students: it may reduce uncertainty and facilitate sustained engagement among neurotypical peers, while simultaneously reducing the pressure on neurodivergent students to achieve conformity at the expense of their autonomy and authentic participation. From a neurodiversity-affirming perspective, reducing the emphasis placed on behavioral control and conformity allows intervention to focus on adapting the environment and reducing barriers to participation (Wagland et al., 2025).

These perspectives converge on a central idea: students' attitudes cannot be changed sustainably through a single intervention or through the simple transmission of information. Developing a neurodiversity-affirming culture requires an integrated approach that combines education about neurodiversity with positive contact experiences, cooperative activities, inclusive behavioral models, and social norms that value difference.

The theoretical foundations examined provide a framework for understanding how schools can contribute to the development of attitudes that support neurodiversity. Positive contact, information, cooperation, social learning, group norms, and a sense of competence represent complementary mechanisms through which conditions for inclusion and social participation can be created. Therefore, promoting a neurodiversity-affirming culture should be conceived as a process of transforming the knowledge, attitudes, norms, and behaviors of the school community, rather than merely as a series of individual accommodations intended for neurodivergent students.

Methodology

1. Research Design

The present paper adopts a theoretical and conceptual research design and aims to develop an integrative conceptual model describing the mechanisms through which students' attitudes toward neurodiversity may be related to the development of a neurodiversity-affirming school culture. Given the nature of the research question, the study does not seek to empirically test causal relationships. Instead, it identifies, organizes, and integrates relevant theoretical perspectives and empirical findings in order to develop a theoretically grounded explanatory framework.

The research is guided by the following question: Through what mechanisms are students' attitudes toward neurodiversity related to the development of a neurodiversity-affirming school culture?

The methodological approach can be characterized as an integrative narrative review, focusing on the identification and synthesis of theoretical perspectives and empirical findings relevant to the development of students' attitudes and their implications for school culture. This approach is appropriate given the interdisciplinary nature of the topic, which draws on social

psychology, educational psychology, inclusive education, and the emerging literature on neurodiversity-affirming practices.

Aims of the Study

The primary aim of the study is to develop an integrative theoretical model explaining how the development of attitudes supportive of neurodiversity among students may contribute to the formation of a neurodiversity-affirming school culture.

To achieve this aim, the analysis pursues several specific objectives:

- to clarify the conceptual foundations of the neurodiversity paradigm and the neurodiversity-affirming perspective;
- to examine the concept of attitude and its relevance to school inclusion;
- to explore the relationships between attitudes, stereotypes, prejudice, and stigmatization;
- to identify the psychosocial and educational mechanisms that may contribute to the development of attitudes supportive of neurodiversity;
- to examine the roles of intergroup contact, cooperative learning, social norms, social learning, education and information, and perceived competence and behavioral control;
- to integrate these mechanisms into a coherent theoretical model explaining the development of a neurodiversity-affirming school culture.

3. Literature Identification and Selection

The literature informing the development of the theoretical model was identified through the examination of scientific publications addressing neurodiversity, inclusive education, students' attitudes toward neurodivergent peers, intergroup contact, social norms, and attitudinal and behavioral change. Particular attention was given to empirical studies examining the attitudes of neurotypical students toward autistic and other neurodivergent peers, as well as to systematic reviews and meta-analyses addressing school-based interventions, intergroup contact, disability attitudes, and inclusive educational practices. Autism-related research was preferentially considered because autism is the most extensively studied form of neurodivergence in the existing empirical literature, particularly in research examining peer attitudes, social inclusion, and school-based interventions.

Integrative theoretical model

Based on the theoretical perspectives and empirical findings review above, an integrative theoretical model is proposed to explain the mechanism through which students attitudes toward neurodiversity may be related to the development of a neurodiversity-affirming school culture.

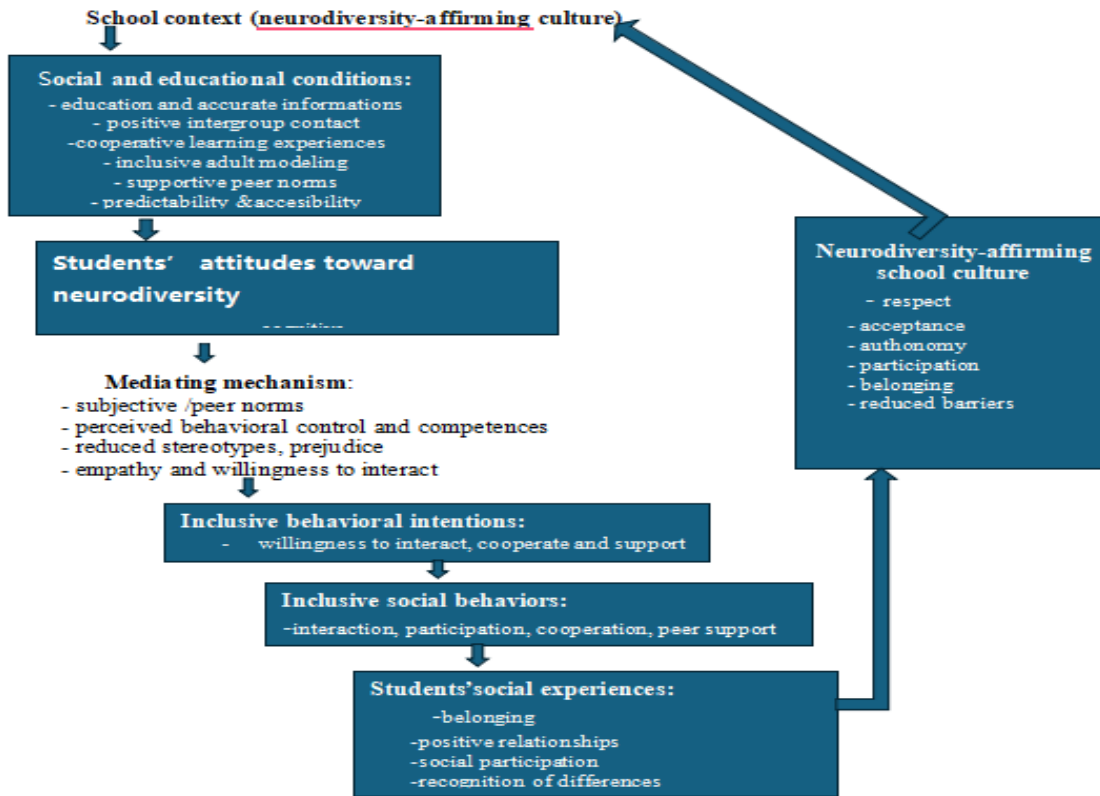


Figure 1. Integrative theoretical model of the mechanisms linking students 'attitudes toward neurodiversity and the development of a neurodiversity-affirming school culture

Theoretical Model: Synthesis and implications

The theoretical model proposed in this paper integrates the main mechanisms identified in the literature as potentially relevant to the relations between students' attitudes toward neurodiversity and the development of a neurodiversity-affirming school culture (Figure 1). Rather than conceptualizing this relationship as linear or unidirectional, the model proposes a dynamic and reciprocal process in which educational conditions, students' attitudes, social interactions, and school culture continuously influence one another.

At the individual level, students' attitudes toward neurodiversity comprise *cognitive, affective and behavioral dimensions*. However, the development of attitudes supportive of neurodiversity cannot be reduced to the acquisition of knowledge. Accurate information may contribute to more nuanced cognitive representation, while positive intergroup contact and cooperative experience may provide opportunities for reducing stereotypes, developing empathy, and increasing willingness to interact.

The model therefore places particular emphasis on the transition from attitudes to inclusive behavioral intentions and actual social behaviors. A student may hold favorable beliefs about inclusion while nevertheless avoiding interaction if peer norms discourage such interaction or if the student perceives limited competences or control in managing the situation. Conversely, predictable, accessible, and supportive environments may facilitate sustained engagement and reduce uncertainty for all students. In this sense, *perceived control* represents a relevant mechanism through which favorable attitudes may become observable inclusive behaviors.

Inclusive behaviors, including interaction, cooperation and peer support, create repeated social experience that may contribute to participation, positive relationships, and a sense of belonging among neurodivergent students. These experiences are not merely outcomes of an inclusive culture but may also contribute to its development. Repeated patterns of respectful interactions can become part of the *informal norms of the peer group* and, when supported by teachers and institutional practices, may become embedded within the broader school culture.

The model consequently conceptualizes a neurodiversity-affirming school culture as both a context and an outcome of inclusive processes. School norms, adult role modeling, opportunities for meaningful contact, cooperative learning, and accessible educational environments may shape students' attitudes and behavioral intentions. In turn, students' inclusive behaviors and social interactions may reinforce norms of respect, acceptance, autonomy, participation, and belonging. This reciprocal relationship suggests that sustainable change is unlikely to result from interventions targeting attitudes in isolation. Rather, attitudinal development should be embedded within broader changes in the social and educational environment.

Taken together, the model suggests that the development of the neurodiversity-affirming school culture may be understood as a *multilevel process* involving cognitive, affective, behavioral, interpersonal, and institutional mechanisms. Students' attitudes represent an important component of this process, but their effects are likely to depend on the social condition in which those attitudes are expressed. Consequently, interventions aiming to promote neurodiversity-affirming cultures should combine accurate education, meaningful contact, cooperative experiences, inclusive role modelling, supportive peer norms, and conditions that increase perceived competence, predictability, and control. This model thus provides a theoretical framework for understanding how individual attitudinal change may become connected to broader transformations in the relationships, norms, and practices that characterize school life.

Directions for integrative interventions

The theoretical model proposed in this paper suggests that the development of a neurodiversity-affirming school culture is unlikely the result from a single intervention targeting students' knowledge or attitudes in isolation. Rather, it requires an integrated approach addressing the cognitive, affective, social, behavioral, and contextual mechanisms through which students relate to neurodivergent peers. Accordingly, future school-based interventions should combine neurodiversity education, positive intergroup contact, cooperative learning, inclusive social norms, adult modeling, and conditions that increase predictability, perceived competence, and autonomy.

First, educational interventions should provide students with accurate and non-stereotypical information about neurodiversity. Information should move beyond diagnostic description and deficit-based representations and should include the diversity of individual profiles, communication style, strengths, interests, support needs, and lived experiences of neurodivergent individuals. Autism may represent a particularly relevant reference category for intervention development, given that it is the most extensively studied form of neurodiversity in the existing empirical literature. However, autism should be used as an empirical reference point rather than as a representation of neurodiversity as a whole.

Second, educational information should be combined with meaningful opportunities for positive intergroup contact. The theoretical model suggest that knowledge may contribute to cognitive change, while contact may provide opportunities for students (even for neurotypical ones) to revise stereotypical expectations through direct social experience. Such contact should therefore be structured around authentic interactions, shared goals, cooperation, and meaningful participation rather than simple physical proximity

Third, cooperative learning may provide an important mechanism for integrating education and contact within everyday classroom practices. Structured collaborative activities can create repeated opportunities for students to interact, recognize one another's' competency, and experience positive interdependence. From a neurodiversity-affirming perspective, cooperative learning should be designed so that participation does not depend on a single communication style or behavioral pattern, allowing different students to contribute through diverse forms of communication, problem-solving and participation

Fourth, interventions should address the social norms operating within the peer group and the wider school environment. Changing an individual students' attitude may have limited effects if the surrounding social environment continues to reinforce avoidance, stereotypes, or exclusionary behavior. Consequently, teachers and other adults should model respectful responses to difference, while school should establish explicit norms supporting cooperation, dignity, participation, and respect for neurological differences. Peer group norms should be considered an important target of interventions rather than merely a contextual variable

Fifth, the model highlights the importance of predictability, perceived control, and competence for both neurotypical and neurodivergent students. Inclusive behavior may become more difficult when students perceive social situations as unpredictable and themselves as lacking the resources necessary to manage them. Interventions should therefore provide students with sufficient information, clear expectations, communication strategies and opportunities to develop confidence in interacting across neurological. At the same time, increasing predictability should not become another mechanism for imposing conformity on neurodivergent students. Environmental structure should be combined with flexibility and respect for individual autonomy.

Conclusions

The present theoretical analysis suggests that students' attitudes toward neurodiversity may represent an important component in the development of a neurodiversity-affirming school culture. Their relationship with school culture is not linear, but is shaped by interconnected mechanisms including knowledge, intergroup contact, cooperation, social norms, perceived competences, predictability, and behavioral control. Consequently, promoting neurodiversity-affirming attitudes require more than providing information or encouraging individual attitudinal change; it requires educational and social environments that support meaningful interaction, participation, autonomy, and belonging for both neurodivergent and neurotypical students. The proposed framework therefore positions attitudinal development within a broader process of transforming classroom practices, peer relationships, and school norms providing a theoretical basis for the design of integrative interventions and for future empirical research.

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