



From principle to practice: Creating neurodiversity-affirming learning environments for students with echolalia

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ABSTRACT

The shift towards understanding neurodivergence as differences to accommodate rather than deficits to remedy has been significantly influenced by advocates with lived experience, prompting educators and allied health professionals to reconsider how echolalia is conceptualised and supported in the educative environment. Echolalia, a form of communication commonly observed in Autistic individuals, is increasingly recognised as a meaningful and functional form of expression rather than merely a behavioural symptom to be eliminated. Despite growing interest in neurodiversity-affirming approaches, there remains considerable ambiguity regarding the practical application of these principles in educational contexts. This literature review aimed to address this gap by synthesising existing research that translates neurodiversity-affirming principles into classroom practices and broader education frameworks. From an initial pool of 740 articles, 8 were identified as offering high-value insights into supporting students with echolalia in ways consistent with these principles. These key works provide a foundation for educators and leadership personnel to foster cultures of acceptance, respect, and inclusivity, highlighting strategies that affirm echolalia as a legitimate and meaningful form of communication. The review synthesises practical frameworks and presents a series of considerations for implementing neurodiversity-affirming practices, including the importance of understanding communicative intent, creating supportive environments, and embracing diverse modes of expression. This synthesis offers actionable insights for educational communities seeking to align their practices with the neurodiversity paradigm, ensuring all students, including those with echolalia, are valued and supported as contributors to their education communities.

The educational landscape is undergoing a profound transformation, moving towards more inclusive models (Roberts & Simpson, 2016) that embrace the neurodiversity paradigm. This shift reconceptualises neurological differences, such as Autism, Attention Deficit (Hyperactivity) Disorder, developmental delay, developmental language disorder, and other neurotypes, as natural and valuable aspects of human diversity (Chapman, 2019; Walker, 2014). Essentially, neurodiversity embraces human neurological diversity with no 'one correct way of being'. A person with neurological differences is often termed as neurodivergent, and a person without such differences is termed as neurotypical (Walker, 2014). The neurodiversity movement has been shaped by the field of critical disability studies and was collectively developed in parallel to the human rights model conceptualisation of disability (Botha

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et al., 2024; Lawson & Beckett, 2021).

Building on this theoretical reconceptualisation, applying this paradigm shift to education challenges an overt focus on inflexible structures, and instead acknowledges that students who are neurodivergent have unique strengths and challenges that manifest from these neurological differences that must be understood and supported within education systems (Cohn et al., 2022). As education institutions strive to meet the needs of all students, it becomes increasingly important to focus on how best to support neurodivergent individuals in their learning and holistic development. We focus here on supporting the inclusion and validation of the diverse communication and neurodivergent people.

One area of communication that has garnered attention in literature and practice is echolalia, a characteristic often observed in neurodivergent people, especially those who are Autistic (Cohn, McVilly et al., 2023b; Marom et al., 2018; Ryan et al., 2022; Stiegler, 2015). It is important to note that echolalia is a foundational part of language development in neurotypical populations (Ganos et al., 2012; Tager-Flusberg, 2015; Tager-Flusberg & Calkins, 1990), meaning that its presence in neurotypical people does not necessarily mean differences in neurological processes. However, for neurodivergent people the presence of echolalia implies differences in neurological processes, underlying speech and language formation, and production; essentially, it could be said that echolalia is tied to the very basis of the neurodiversity movement (i.e., that differences in brain and neurological functioning underlie observable patterns of being).

Echolalia, commonly heard as the repetition of words and phrases (Cohn, McVilly et al., 2023a), is frequently misunderstood and has historically been treated as a behaviour to be corrected (Blackburn et al., 2023). Echolalia has predominantly been examined in Autistic children, between the ages of 3 and 12 years (Prizant & Duchan, 1981; Prizant & Rydell, 1984), with a study by Cohn et al. (2023b) noting the mean age of 127 children in the study being 8.1 years of age.

Pioneering research theorised that echolalia may serve a variety of communicative and non-communicative functions (Dyer & Hadden, 1981; Marom et al., 2018; Prizant & Duchan, 1981; Prizant & Rydell, 1984; Sterponi & Shankey, 2014; Xie et al., 2023). Such theorised communicative functions include requesting, labelling objects, and affirmation; non-communicative functions of echolalia may include cognitive routines such as repeating for memory aid, assisting with language processing, navigating social interactions and for other functions such as maintaining or regaining equilibrium in heightened emotional states (Jaswal & Akhtar, 2019; Prizant & Fields-Meyer, 2022). Here, echolalia is often observed in multiple forms, such as immediate echolalia, delayed echolalia, or mitigated echolalia (Roberts, 1989, 2014). Briefly, immediate echolalia occurs soon or instantly after it was first heard, delayed echolalia occurs with some time delay (hours, days, or weeks) between the original and the subsequent repetition, and mitigated echolalia is when modifications (word additions, removals, or substitutions) are made to the utterances, with mitigations occurring within both immediate and delayed echolalia (for a full review of the forms of echolalia, see Cohn et al., 2022).

While echolalia has historically been perceived as a behaviour to be corrected (Cohn et al., 2022; Schuler, 1979; Stiegler, 2015), when freed from behaviourist assumptions and viewed through a neurodiversity-affirming lens, echolalia is not a deficit or a disorder (Cohn, Harrison et al., 2023), but rather a significant developmental stage in the acquisition of language and social communication across the spectrum of diverse human communication (Prizant, 1983; Roberts, 2014; Saad & Goldfeld, 2009; Schuler & Prizant, 1985). It is important to provide clarity here relating to a recent article by Cohn et al. (2023) which advanced that some parents understood echolalia as an expression of their child's identity, as opposed to the historically dichotomous views of (a) echolalia as a language anomaly to be fixed, or (b) echolalia as the early stages of language and possible communication (Stiegler, 2015). While it is important to acknowledge that there remains some critiques of the neurodiversity paradigm (Jaarsma & Welin, 2012; Nelson, 2021), and that neurodiversity can mean different things to different people (Chapman, 2020) in the current article we adopt the assumptions of the parents from the work of Cohn et al. (2023) and highlight how a neurodiversity-affirming approach can be employed by educators and leadership personnel to support students with echolalia in education settings.

In this context, it is important to recognise that echolalia, like other communicative forms, can be viewed through a strengths-based lens. By acknowledging echolalia as a tool for learning and self-expression, we can offer a more supportive and inclusive environment for neurodivergent students grounded in a human rights-focused paradigm.

It is argued that traditional educational models often prioritise verbal fluency and adherence to socially accepted norms of communication, which can marginalise neurodivergent students whose communicative forms do not align with these expectations (Smagorinsky, 2020). If this argument is accepted, the consequences of this cultural hominisation may be frustration, a sense of isolation, and diminished self-esteem for students with diverse forms of communication (including echolalia). In contrast, neurodiversity-affirming practices encourage educators and leadership personnel to embrace a wider range of communicative strategies, including non-verbal, alternative, and repetitive forms of expression (DeThorne & Sears-Smith, 2021; Santhanam, 2023). By shifting the focus from deficit-based approaches to strengths-based methods, we can help neurodivergent students (including those with echolalia) feel more empowered and understood in their educational settings (Bogart, 2022; Cohn et al., 2022; Fung, 2024). These practices recognise that communication is not a one-size-fits-all concept but a multidimensional process that can take many forms, all of which are valid.

In the context of creating education systems grounded in a recognition of universal human rights, the importance of the continual shift towards neurodiversity-affirming practices in education cannot be overstated. As the student population is recognised as increasingly diverse, educators must be equipped with the knowledge, skills, and resources to support all learners, especially those who are neurodivergent. This includes understanding and valuing different communication styles, such as echolalia, and providing tools to support students.

To that end, we present here a framework with practical utility so that educators and leadership personnel may adopt neurodiversity-affirming practices to include students with echolalia in education settings. Specifically, the aims of this review were three-fold: (a) to collate, synthesise, and analyse, the nexus between neurodiversity-affirming practices in education, neurodiversity-

affirming approaches in speech pathology, and echolalia; (b) to synthesise the research base that might support educators and leadership personnel to adopt neurodiversity-affirming practices in their education communities; (c) to provide educators and leadership personnel with practical neurodiversity-affirming strategies that they might use to include and support their students with echolalia.

Ultimately, a neurodiversity-affirming approach not only improves the educational experiences of neurodivergent students but also enriches the entire education community, fostering a culture of acceptance, respect, and inclusivity for all learners.

1. Theoretical perspectives

In developing our framework, we utilised three theoretical perspectives with components of each perspective informing the creation of the framework. Each theoretical framework offered a lens through which to understand echolalia and the conditions in which intervention are ethically and morally justified when analysed using the assumptions of the neurodiversity paradigm.

1.1. The social model of disability

The social model of disability, as opposed to the medical model, suggests that being ‘disabled’ arises not from the individual’s condition but from societal barriers that limit participation (Barney, 2012; Oliver, 2013, 2023). The social model challenges the idea that echolalia should be viewed as a disorder and subsequently suppressed through intervention. Instead, the assumptions of the social model position echolalia as one of many diverse and valid forms of communication, with the implication being that society needs to provide accommodations for these forms of communication to ensure full participation in all contexts including in our formal education systems. By reframing echolalia as a legitimate form of expression, increasing opportunities can be provided for neurodivergent students as attitudinal barriers are reduced as a result of ongoing community education. Removing cultural stigmatisation is a key step in allowing echolalic children and young adults to fully participate in both the academic and social dimensions of education.

1.2. Vygotsky’s sociocultural theory of development

Vygotsky’s Sociocultural Theory (Vygotsky, 1934/2012) emphasises the social nature of learning and the role of interaction in cognitive development. Vygotsky argued that language development is a process shaped by social interactions and that cognitive and communicative abilities are cultivated through engagement with others. In this perspective, echolalia can be seen as part of the social learning process, through which neurodivergent children internalise language and social norms. Rather than being a sign of developmental delay, echolalia may serve as a tool that students use to engage with their environment, make sense of language, and may eventually transition to more self-generated language. The Vygotskian theoretical lens supports the idea that through social interaction and support, echolalia may evolve into more flexible language skills. Here, echolalia is not an obstacle to language development but might be a transitional phase in the child’s linguistic journey, where they test out and internalise the language they hear in their environment before gaining the capacity for more self-generated language.

1.3. Theory of mind and the double empathy problem

Of the three theories informing the framework, Theory of Mind (ToM: Premack & Woodruff, 1978) has been the most critically interrogated and challenged by neurodiversity-scholars. Originally concerned with chimpanzee’s, the work of Baron-Cohen et al. (1985) applied Theory of Mind to Autistic people. While Baron-Cohen et al. (1985) have expanded and added nuance to their original definition (Baron-Cohen, 1989, 1991), Theory of Mind is still largely understood in the field of Autism intervention as the ability to understand that others have thoughts, feelings, and perspectives different from one’s own, with Baron-Cohen et al. (1985) positing that a lack of Theory of Mind is a defining feature of the Autistic neurotype. Critique of theory suggests that this line of reasoning places the responsibility for miscommunication on neurominority individuals, privileging the norms of the neuromajority (Cole & Millett, 2019; Marocchini & Baldin, 2024).

While many neurodivergent individuals, especially those who are Autistic, may experience challenges in exhibiting what was conceptualised as a ‘typical ToM’ (Marocchini, 2023), the Double Empathy Problem (Milton, 2012; Milton et al., 2022) shifts the burden from being solely the responsibility of neurodivergent individuals to all parties. Grounded in the neurodiversity paradigm, the Double Empathy Problem reconceptualises these challenges as a misalignment between neurotypical-neurodivergent communication partners in understanding social communication and social cues norms (Milton et al., 2022). Echolalia, in this context, may serve as a bridge for neurodivergent students to navigate social interactions, allowing them to replicate and understand social scripts, even if they do not yet fully comprehend the underlying meanings. In this way, echolalia is not merely repetitive behaviour but an important step in developing social cognition and communication, allowing students to engage with others in meaningful ways while they continue to refine their understanding of social contexts and conventions.

Bringing together the assumptions of the Social Model’s emphasis on disability as a manifestation of inaccessible communities, environments and systems, the Vygotskian sociocultural theory of development and the variability in learning, and differences in Theory of Mind and communication norms allow us to reposition echolalia as a natural developmental stage rather than a symptom or deficit. By viewing echolalia through these lenses, and in the context of this review of the research, educators and leadership personnel can implement neurodiversity-affirming practices that respect and support the diverse communicative needs of neurodivergent students.

2. Method

This review sought to explore and frame neurodiversity-affirming practices for students with echolalia in education. To achieve this, we conducted a review of published works in three key areas: (a) neurodiversity-affirming practices in education; (b) neurodiversity-affirming practice for speech pathology; and (c) echolalia within the context of neurodiversity.

Here, we included a wide variety of work types from the two fields identified above. Such types included individual narratives, theoretical perspectives, research with human participants, research without human participants, personal experience centred perspectives, and conceptual frameworks, amongst others. However, we did not include dissertations or books. Essentially, we wanted to explore the state of the science as it related to neurodiversity-affirming practices in education and in speech pathology, and understandings of echolalia within the context of the broader neurodiversity movement. Importantly, works to be included in the current review needed to have taken a neurodiversity-affirming perspective on therapy. Further, if any neurodiversity-affirming practices were discussed, they needed to be one's which could be implemented with little-to-no financial cost for education communities.

The search strategy involved searching databases *ProQuest*, *Web of Science*, *ERIC*, *Scopus* and *PubMed*. Different date range filters were applied dependent upon the area. Specifically, neurodiversity-affirming practices in education and neurodiversity-affirming practices in speech pathology were captured within the years 2020 to 2025; whereas, years of capture for literature in the context of echolalia were widened to be 2015 to 2025 due to the limited available literature in that area.

In the first instance, the search terminology included *neurodiversity-affirming practices in education* and *neurodiversity-affirming*

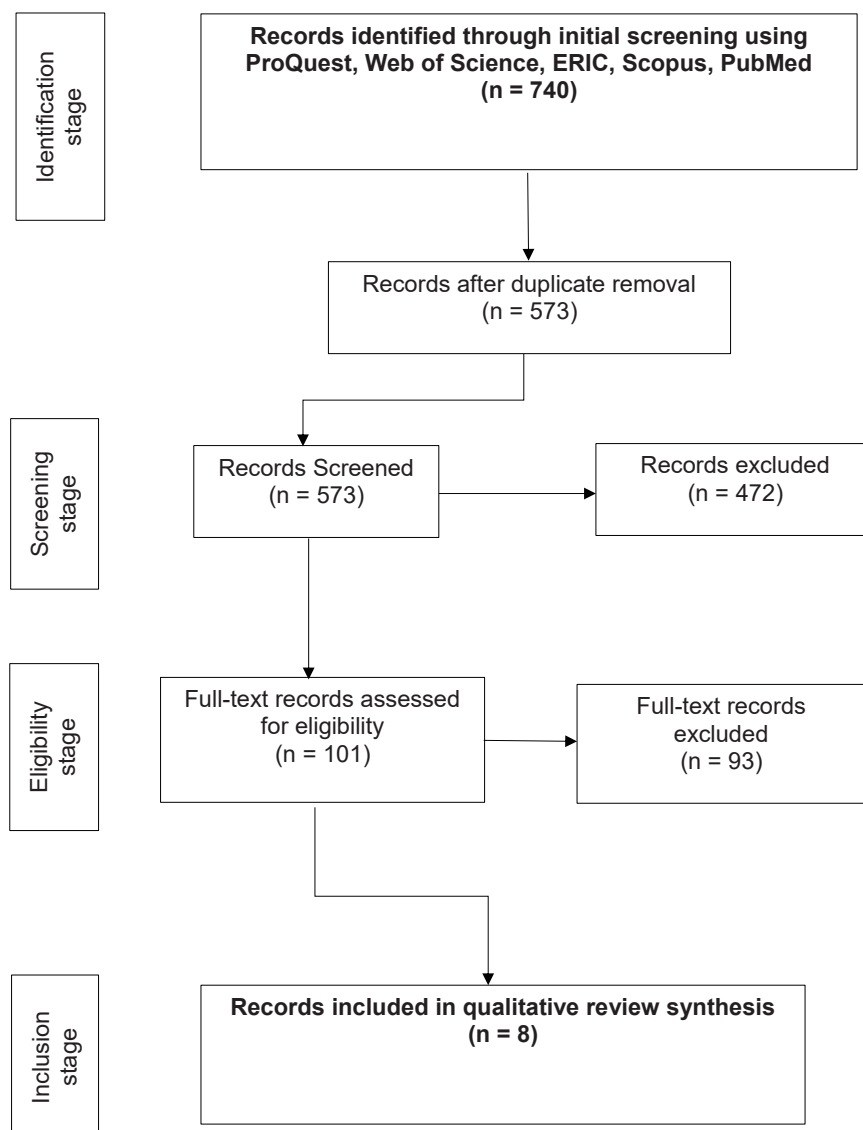


Fig. 1. Review process from initial database search to identification of literature for inclusion.

practices in speech pathology and echolalia within neurodiversity. As the search progressed, variations of these search terms were used, examples included *neuro-affirming*, *neurological-affirming*, *affirming echolalia*, and *affirming speech pathology*. We did not limit the population to any specific neurodivergent trait (for example, epilepsy or Autism) as we wanted to capture the totality of neurodivergence. Importantly, education was taken to mean any formal setting in which education is provided; this included, kindergarten, primary school, middle school, high school, secondary school, and university, amongst others.

Initially, as is shown in the literature flow diagram in Fig. 1, the broad searches of the first author returned 740 possible inclusions. A duplicate entry removal procedure resulted in 167 candidates being excluded. Next, the titles and abstracts of all 573 works were read; here, 472 were excluded resulting in 101 remaining candidates for possible inclusion in the review. Continuing, the authors undertook the lengthy process of reading all 101-remaining works. Following this reading, a further 93 works were discounted. The remaining 8 works were addressed via a thorough reading, numerous times by the authors.

Within the literature search procedure, as is shown in the flow diagram in Fig. 1, several works were excluded from inclusion. Many works that were returned in the searches presented insights into the neurodiversity-paradigm and the neurodiversity movement, but did not provide implications for educational, speech pathology, or echolalia practice.

The eight works identified at the end of the literature flow process, presented in Table 1, share self-declared neurodiversity-affirming practices. The extent to which the practices are neurodiversity-affirming are later analysed in our analysis; however, for inclusion in this review, we rely on the self-declaration of neurodiversity-affirming practices by the authors of each study. Table 1 presents the key identified literature included in the current review.

Table 1

Key identified literature related to neurodiversity-affirming practices for students with echolalia in education.

| Author | Overview of work | Work particulars |
|-------------------------------|---|---|
| Cohen et al. (2022) | Details the experiences of the intersection of an Autistic identity and the school environment Whilst this article does not specifically mention echolalia, this article aligns with the objective of our study by unearthing insights into the stigmatisation of traits that some neurodivergent people might have | Interviews with (n = 10) Autistic adolescents aged between 15 and 35 |
| Cohn et al. (2023) | Presents a perspective of echolalia as an expression of a person's identity This study specifically addresses echolalia and presents a seldom explored perspective of echolalia: that it should not be addressed by intervention of any kind; echolalia for parents in this study forms part of their child's identity | Interviews with (n = 8) parents of Autistic school-aged students |
| DeThorne and Searsmith (2021) | Provides guidance for school-based speech and language pathologists on neurodiversity-affirming practices While also not mentioning echolalia specifically, this work aligns with the objective of the current study by discussing the importance of modifying environmental deficits surrounding echolalia, not focusing on interventions for the individual | Perspective (viewpoint) article detailing some myths surrounding neurodiversity and providing implications for school-based speech pathologists |
| Gaddy and Crow (2023) | Suggests neurodiversity-affirming practices for speech pathology services for Autistic people This work aligns with our study aims by questioning one's own personal beliefs and experiences may interact with the provision of speech pathology practice, and specifically to echolalia, how these may obstruct the view of echolalia being a valid form of communication | Professional practice tutorial discussing how neurodiversity-affirming speech pathology practice can be implemented with Autistic individuals |
| Haydock et al. (2024) | Details how Gestalt Language Processing should be considered as a fundamental neurodiversity-affirming practice This work aligns with the study objectives by highlighting that presuming the developmental competence of echolalia (in this case GLP) is fundamental in centring neurodiversity-affirming approaches | Editorial piece discussing the case of adopting neurodiversity-affirming practice for |
| Johnston et al. (2024) | Details neurodiversity-affirming techniques that can be employed by schools to support absences of Autistic learners While not specifically centred around echolalia, the article aligns with the goals of the current review by highlighting the imperative for schools to change to structures that support neurodivergent students and their needs | Framework for addressing absences of Autistic students in education settings, grounded in neurodiversity-affirming perspectives |
| Santhanam (2023) | Describes a neurodiversity-affirming approach to communication supports for Autistic students through videogames Again, while not specifically addressing echolalia, the article aligns with the goals of the current review by describing how creative, low-pressure activities may foster and promote inclusion of diverse communication | Intervention trials involving Autistic and non-Autistic students, evaluating videogames to support communication |
| Sewell and Park (2021) | Presents a model of key educational considerations for teaching from a strengths-based approach Again, while not specifically addressing echolalia, the article aligns with the goals of the current review by detailing how educational approaches that adopt a strengths-based approach may provide opportunities in which echolalia is centred and built upon | Case study of (n = 2) school aged students (1 Autistic, 1 with ADHD) |

3. Results

Although they utilise a diverse range of study designs, each of the identified key works included in this review offers insights into neurodiversity-affirming practices for students with echolalia in education.

The work by [Cohen et al. \(2022\)](#) explores how Autistic students experience their identity and navigate school environments, emphasising the importance of understanding Autism within an intersectional framework. The authors discuss how factors like race, gender, socioeconomic status, sexuality, and cultural background interact with Autism, shaping each student's experience in unique ways. A key focus of the article is the concept of Autistic identity, where the authors highlight that many of the Autistic students in the study, view Autism as an intrinsic part of who they are, rather than something to be "fixed" or overcome. With the authors noting that self-perception can be empowering, especially when students are supported. The article stresses the importance of affirming Autistic identity, fostering self-acceptance, and promoting pride in a person's Autistic identity. Further, another key part of the piece is centred around how Autistic identity intersects with formal schooling. Here, it was noted by the authors that educators are often influential in a student's life and, with some study participants believing their teacher was purposefully embarrassing them in-front of their peers, seeing educators behave in such a way could influence other pupils in the school.

Ultimately, the article encourages educators to recognise and honour the complex identities of Autistic students, advocating for policies and practices that support both their identities and their broader intersectional experiences. With respect to echolalia specifically, if echolalia forms part of someone's identity, and an educator, who supports and guides students to develop their own individual identities, has a preconceived idea of how students should act, communicate, and socialise (which may not include echolalia), then echolalia is likely to be stigmatised and perhaps suppressed by educators. The result here is that an educator may begin to erase parts of a neurodivergent person's identity.

Next, the article by [Cohn et al. \(2023\)](#), two of the authors of the present article, offers an alternative perspective of echolalia that has seldom being reported: echolalia as an expression of a person's identity. Using interviews, 8 parents of Autistic school-aged children discuss how they reject societal pressure to intervene with echolalia, instead celebrating their child's diversity and uniqueness. Here, parents rejected intervention (of any kind, be it behavioural or developmental) for their child's echolalia. In this discussion of the article by [Cohn et al. \(2023\)](#) questions are posed that are of direct relevance to the objectives of the current review. Specifically, the authors asked how neurodiversity-affirming care for echolalia might be incorporated into education communities, and how collaboration between parents and educators to ensure a consistent neurodiversity-affirming approach is maintained, can occur.

[DeThorne and Sears \(2021\)](#) provide guidance for school-based Speech and Language Pathologists (SLP) so that they may adopt neurodiversity-affirming practices in their service delivery. The article highlights first-person Autistic perspectives, addressing environmental contributions to communicative competence, and the centring of support and respect for self-identity and self-expression. The authors acknowledge that the school-based SLP might be restricted by the wider school operational programming and that to appreciate neurodiversity-affirming practices for speech pathology, approaches must transcend all school layers.

For echolalia specifically, school-based speech pathologists can take a leading role in foregrounding echolalia as a valid form of communicative expression, by modifying speech therapy goals to limit environmental barriers that may hinder the view of echolalia being perceived as valid.

[Gaddy and Crow \(2023\)](#) provide insight into neurodiversity-affirming practices, the neurodiversity movement and paradigm for the delivery of neurodiversity-affirming practices for speech services for Autistic people. The piece discusses key insights into how neurodiversity-affirming practices for speech might be delivered. Through fictitious examples and scenarios, the work highlights the importance of thoroughly understanding neurodiversity-affirming practices for speech service delivery so that these new approaches can be implemented and delivered with fidelity. For echolalia specifically, the work challenges speech pathologists to transition away from previous assumptions that echolalia was non-communicative, and to instead look through the window of assuming communicative competence (however it is presented) as opposed previous perceptions limiting the implementation and delivery of neurodiversity-affirming practice.

The work by [Haydock et al. \(2024\)](#) seeks to highlight how Gestalt Language Processing (GLP), a proposed theory whereby individuals learn language through a chunking process, should be valued as neurodiversity-affirming practice. It is postulated that GLP forms the basis for echolalia. It must be noted however that GLP continues to attract significant disagreement in the literature, with some researchers noting that there is little empirical research that substantiates the existence of a GLP language acquisition style (see: [Bryant et al., 2024](#); [Hutchins et al., 2024](#); [Venker & Lorang, 2024](#)). Importantly, these authors ([Bryant et al., 2024](#); [Hutchins et al., 2024](#); [Venker & Lorang, 2024](#)) are not suggesting that echolalia does not exist, they are however calling into question the empirical evidentiary base for a GLP language acquisition style. It is beyond the scope of the current review to take a stance on GLP or enter the debate in the literature. For echolalia, whether the empirical evidentiary base for GLP meets the standard, may not necessarily be a deciding factor in implementing neurodiversity-affirming practice for what is directly observed: the seeds of communication presented through echolalia. For clarity, we are not suggesting that research evidence is not important, indeed it is important in clinical decision making; rather, we are noting that, for echolalia specifically, not GLP, in alignment with a shift toward neurodiversity-affirming practice, echolalia should be given the benefit of the doubt.

Work by [Johnston et al. \(2024\)](#) highlights that inflexible school operations can aide in school absences for Autistic students. Essentially, some of the needs of Autistic students are not being met, resulting in them not attending school at all. Here, the work provides schools with suggestions on how they might alter operations so that Autistic students are more appropriately included, and education is provided in such a way that meet their needs. Specifically, it focuses on ways that educators and leadership may address sensory requirements, social needs, communication preferences, and lays the groundwork for a collaborative model between school systems and Autistic students.

For echolalia, the work by Johnston et al. (2024) highlights the growing imperative for education communities to modify their often inflexible structures in favour of frameworks, procedures and activities that cater to an increasing number of neurodivergent students. More specifically, the article notes that student attendance absences may be recorded because of students' perceptions that current approaches aren't meeting their needs. Whilst absence might, in some instances, be an extreme reaction in the case of echolalia, it does highlight that education communities cannot continue to ignore or resist changing societal attitudes. This is especially significant when taken into consideration with attendance mandates and policies set by educational jurisdictions in some countries (for example, the state of Victoria in Australia (Victorian Government, 2004)).

While identifying and explaining the many benefits of using video-game methods for communication supports in Autistic people, the work of Santhanam (2023) highlights that neurodiversity-affirming approaches can be provided through different mediums. The article provides suggestions on how a neurodiversity-affirming approach to video-gaming can be implemented by educators in their pedagogical programming.

For echolalia, the work of Santhanam (2023) identifies how creative alternate approaches (in this case video games) may support, influence, or alter socialisation and communication both amongst neurodivergent students and between neurodivergent and neurotypical students. Here, it might be that, given the low-pressure environment associated with gaming, new insights into a student's echolalia may be observed. For example, it could be that a new repetition is heard, or the student can mobilise their echolalia for different interactive or communicative means, given the change in circumstance. Such alterations in echolalia due to environments and people is supported by prior research in the context of echolalia (Charlop, 1983, 1986; Sterponi & Shankey, 2014), with gaming being used as part of other neurodiversity-affirming social capacity building programs (Harrison, 2022). Ultimately, the focus is transitioned away from more structured speech and language activities toward more low-pressure activities where the focus is on playing with peers with an emphasis on social inclusion.

Lastly, Sewell and Park (2021) explore how educators might better support neurodivergent students by emphasising strengths over challenges. A three-factor model is proposed whereby personalised learning approaches, environmental adaptations, and collaborative partnerships are positioned as fundamental components for teaching from a strengths-based perspective. The authors suggest visual cues, structured routines, and parent-educator professional partnerships, amongst other strategies.

For echolalia, the shift toward a strengths-based approach in pedagogy as discussed by Sewell and Park (2021) focuses on using the students strengths as foundations for learning. Specifically, it might be that a student is able to use their echolalia to communicate a specific need, discuss something, or engage in an interactional sequence. Here, pedagogies can be modified to use echolalia in this way as foundations, given that some of these repetitions may already be known by educators.

4. Discussion

The aims of this review were three-fold: (a) to collate, synthesise, and analyse, the nexus between neurodiversity-affirming practices in education, neurodiversity-affirming approaches in speech pathology, and echolalia; (b) to synthesise the research base that might support educators and leadership personnel to adopt neurodiversity-affirming practices in their education communities; (c) to provide educators and leadership personnel with practical neurodiversity-affirming strategies that they might use to include and support their students with echolalia.

Synthesising the findings in the key works specifically with implications for echolalia offers more than theoretical development. Bringing together these neurodiversity-affirming approaches offers practical utility for educators and leadership personnel in

Table 2

Frequently discussed considerations for neurodiversity-affirming practices across the reviewed literature for echolalia.

| Key Consideration | Principle | Example of translation to practice |
|------------------------------------|--|---|
| Value Communication Diversity | All forms of communication are valid, whether verbal, non-verbal, repetitive, or alternative. Educators and leadership personnel must recognise and affirm that echolalia, as a form of communication, can serve important functions for neurodivergent students, such as self-regulation, language processing, and social engagement. | Instead of viewing echolalia as a behaviour to be "fixed," educators should celebrate it as part of the student's unique communication profile. Provide opportunities for students to use echolalia in functional and purposeful ways while gradually expanding their communication methods to include more flexible language. |
| Focus on Strengths | A strengths-based approach centres on the student's abilities, rather than their perceived deficits. Recognising the functional role of echolalia allows educators to build on the student's existing communication strategies and provide support in ways that honour their individual needs. | Conduct individual assessments to understand any additional functions of echolalia for the student. Whether it's a way of processing language, self-soothing, or engaging in social interactions, use these insights to tailor support that build on the student's existing strengths and promote growth in areas where needed. |
| Creating a supportive environment | Neurodivergent students often thrive in environments in which they feel safe, valued, and respected. The premise is that creating supporting environments may elicit new learning, self-expression, and support students with their neurodivergent identity. | Encourage the use of echolalia in, as far as practical, all environments and activities. Such encouragement seeks to normalise echolalia as a valid form of communication expression and acknowledges diverse communicators as valid and equal. |
| Promote Autonomy and Self-Advocacy | Neurodivergent individuals should be empowered to express their needs, desires, and feelings in ways that feel authentic to them. This means acknowledging that neurodivergent students may use echolalia to communicate needs or respond to sensory experiences. | Teach self-advocacy skills by allowing students to recognise when they need support or and to communicate these with staff by using any method they know (including echolalia) |

educational communities so that they may understand how these approaches may enrich their education communities, create the conditions for a culture of acceptance, respect, and inclusivity for learners with diverse communicative forms such as echolalia. The key considerations presented here transcend many operational layers within education environments, with emphasis placed on collaboration between leadership personnel and education staff. These principles, presented in this discussion and summarised in [Tables 2 and 3](#), not only encourage an inclusive environment for neurodivergent students but also challenge prevailing educational norms that often centre around conformity to a limited set of communicative expectations. The considerations presented in [Table 2](#) are those that were found to be frequently discussed across most articles in the review; whereas the considerations in [Table 3](#) are those that were lesser discussed or overlooked, but we argue are equally as important for creating neurodiversity-affirming environments for students with diverse communication (such as echolalia).

4.1. Valuing communication diversity

Communication is not a uniform process; it is a highly individualised and dynamic series of skills that varies widely across individuals and cultural contexts. In the minds of the authors, we believe that there is a serious argument to be made that Autism constitutes a distinct culture as well as a neurotype or disability ([Naylor et al., 2023](#)). The traditional model of communication in education settings tends to prioritise a narrow, socially accepted version of verbal communication, which can inadvertently alienate students who communicate differently, such as those with echolalia. A neurodiversity-affirming approach emphasises that all forms of communication are valid, including echolalia, as part of an acceptance cultural plurality ([DeThorne & Sears-Smith, 2021](#)). For neurodivergent students, echolalia (be it immediate or delayed) can be a vital tool for self-regulation, language processing, and social engagement ([Prizant & Fields-Meyer, 2022](#)).

Students with echolalia may repeat words or phrases they hear from others, television shows, or even the environment around them. While often viewed as a repetitive or the ‘incorrect’ way of communicating, echolalia plays an important role in their learning process. Indeed, echolalia may serve as a bridge between the sensory and cognitive information for the student encounters ([Haydock et al., 2024](#)). For example, some students with immediate and delayed echolalia use it as a form of ‘rehearsal’, echoing words to solidify their understanding of language and that their repetitions may engender a response ([Cohn et al., 2022](#); [Prizant & Duchan, 1981](#); [Prizant & Rydell, 1994](#)). Others, particularly those with delayed echolalia, may use it as a way of managing sensory overload, offering a self-soothing mechanism that helps them regain focus or calm ([Prizant & Fields-Meyer, 2022](#)). In the case of echolalia for the purposes of regaining homeostasis, echolalia here could be thought of as alerting others in the immediate environment that the student is dysregulated. Whilst these repetitions might not be the conventional way of informing others of one’s emotional state, they are nevertheless communicating something to others nearby ([Cohn et al., 2023](#); [Haydock et al., 2024](#)).

When educators embrace communication diversity, they begin to understand that language does not follow a one-size-fits-all trajectory. Students who use echolalia (be it immediate or delayed) may not initially form their own original sentences, but this does not make their communication any less meaningful. As educators affirm these different forms of expression, they create an environment where neurodivergent students feel validated and supported.

4.2. Focusing on strengths

As confirmed in the analysis of the reviewed literature, a fundamental tenant of neurodiversity-affirming practice is focusing on the

Table 3

Lesser discussed or overlooked considerations for neurodiversity-affirming practices for echolalia.

| Key Consideration | Principle | Example of translation to practice |
|--|---|---|
| Encourage peer education | Having as many people (including students) as possible aware of neurodiversity and individual differences, can only serve to benefit student cohorts and educational communities. Teaching others about diversity and diverse ways of communicating (including echolalia) and diverse ways of existing in the world, helps to normalise neurodiversity and may encourage pupils to make attempts to understand and engage with those who communicate diversly | Leadership personnel can take a leading role in creating space for education communities to incorporate learning about diversity as a central and common part of learning. Perhaps education communities could invite neurodivergent people to come and present activities. Educators may also incorporate activities in which students must use alternate communication. |
| Respect through language | Creating environments whereby other students and educators speak to or refer to neurodivergent students (including those with echolalia) in ways which see through the window of difference as opposed to deficit can create a culture of acceptance and reduce stigmatisation. This may also reduce instances of peer bullying. | Education leadership personnel can create a culture whereby the language students and educators use is respectful toward those who are neurodivergent (including those with echolalia). |
| Encouraging reflective practice and learning | An informed and reflective education staff community, serves to benefit the student cohort, families, and indeed educators themselves. | Education leadership personnel can plan structured reflective practice sessions and encourage all education staff to keep up to date with practices for echolalia and neurodivergent students |
| Collaboration for continuity of care | Collaboration for consistent practices across the home and educative environment is critical. This includes collaboration between disciplinary teams within educational settings. Disjointed practice may negatively impact the student. A unified support team delivering a unified approach is essential. | Education staff, and those involved in supporting neurodivergent students with echolalia in the home environment, should maintain regular contact and, more importantly, agree on a consistent approach. How echolalia is approached at home should be the same as how it is approach in the education setting. |

individual strengths and needs of each student, rather than solely on perceived deficits (Cohen et al., 2022; Sewell & Park, 2021). Rather than viewing echolalia as a hurdle to overcome, educators should understand it as a potential strength—a way for students to engage with the world and process the language they hear. By focusing on strengths, educators and support staff can tailor support that build on the student's existing skills, while addressing areas where additional encouragement may be needed.

For example, a student with delayed echolalia may be able to recall long phrases or entire scripts from a favourite show or book, demonstrating impressive memory and language retention skills (Cohn et al., 2022; Haydock et al., 2024). One approach could involve using the student's impressive language retention by drawing upon pedagogical and extra-curricular circumstances in which these skills come to the fore. For example, students may be invited to present on their favourite movie, television show, or song, and a student who is echolalic might be able to recall specific moments and replay these verbatim. Another example might include involving students with echolalia in performances in which recalling lines is required. Indeed, students with immediate forms of echolalia could repeat the lines of a previous speaker, by using an earpiece receiver whilst on stage. While taking such steps may appear trivial or tokenistic gestures, for many students being a part of a school production can be a pivotal social experience during schooling and can help build social connections and a sense of belonging to the broader community.

By focusing on what the student can do, rather than what they cannot, educators can help neurodivergent students build confidence in their abilities, reinforcing their sense of competence and worth in the classroom (Sewell & Park, 2021).

4.3. Create a supportive and inclusive environment

The foundation of neurodiversity-affirming practices, as explicitly highlighted by DeThorne and Searsmith (2021) and Johnston et al. (2024) is the creation of an environment where all students, regardless of their communication style, feel accepted and understood. Students with echolalia may benefit from supportive environments that reduce sensory overload, provide clear visual supports, and offer opportunities for both structured and unstructured, low-pressure communication and socialisation practice, such as video gaming, as suggested by Santhanam (2023). This includes recognising the importance of providing alternatives to verbal communication, such as using visual cues, Picture Communication Symbols (PCS: Tobii Dynavox, 2025), or other assistive technology. In determining the mode of communication between the student and the peers, it is of course vital that the individual where possible has some sense of agency in making this decision (DeThorne & Searsmith, 2021; Gaddy & Crow, 2023; Johnston et al., 2024).

Creating such an environment also means providing opportunities for students to engage in social interactions that allow them to practice new forms of communication in low-pressure settings, such as through the use of video-games as detailed by Santhanam (2023). Social Stories, peer buddies, and group activities (including video-games) can help students practice language skills and improve their social understanding. Encouraging the use of echolalia in these settings, helps to normalise their communication style and enhance their social experience. For example, a student with delayed echolalia might repeat the word "fun" or "I like", which can be understood by nearby educators as the student enjoying themselves. Here, educators should affirm these repetitions, thereby cementing them as important communicative contributions to social sequences and cementing them as valid to all students (especially that of the student who is echolalic). Importantly, in using such activities educators are not attempting to abate or reduce echolalia; rather, educators are creating, nurturing, and maintaining, supportive and inclusive environments where communication (in all its forms) is encouraged (Cohen et al., 2022, 2023).

Whilst education communities may value diverse communication methods this does not necessarily mean that space is created in learning activities for that communication to occur. Educators, whilst acknowledging their busy classrooms with other students needing support, can create a space whereby a student who is echolalic is given opportunity to use their communication. Perhaps sub-consciously and unintentionally, it might be that those who have diverse communication are not given sufficient opportunity in different activities to communicate. For example, a student who is echolalic may voice a repeat which lasts for up to a several minutes, and an educator, again, unintentionally, may interrupt that student. Or, in another instance, a student who is echolalic might be overlooked in favour of someone who might be able to convey their communication in a shorter way. In a similar way to how one would not remove the speech device or 'voice' of a student who uses augmentative communication mid-sentence, educators must make intentional efforts to ensure they do not remove the 'voice' of the student who is echolalic. Importantly, providing space for communication (in all its forms) to occur not only decreases what is perhaps one of the sharpest of frustrations, that of not getting ones message across, but also circumvents misunderstandings, provides opportunities for learning, and supports students' communicative growth.

Here, educators can reflect on if they are treating the student who is echolalic as an equal communication partner who has something to say and contribute. As affirmed by almost all articles in this review, creating environments whereby the neurodivergent student (and indeed their preferred communication) is positioned as valid and equal (DeThorne & Searsmith, 2021; Gaddy & Crow, 2023; Johnston et al., 2024; Santhanam, 2023; Sewell & Park, 2021). We argue that communication agency is at the very heart of neurodiversity-affirming practice and must be a key tenant for the neurodiversity-affirming practitioner.

4.4. Promote autonomy and self-advocacy

Neurodivergent students, particularly those with echolalia, often face challenges in expressing their needs, especially when their communication styles might be considered to deviate from the conventional norms of traditional educational models (Sewell & Park, 2021). Encouraging autonomy and self-advocacy is crucial for supporting students in understanding and communicating their desires, needs, and emotions. Students with echolalia may use repetitive phrases to indicate that they are overwhelmed or need a break, but this form of communication may not always be understood by those around them. As indicated by DeThorne and Searsmith (2021) and

Gaddy and Crow (2023) neurodiversity-affirming approach promotes teaching students how to recognise when they themselves need support and how to express those needs effectively, whether through echolalia or another method of communication.

This approach also involves providing students with the tools to communicate more effectively. This might mean introducing augmentative and alternative communication (AAC) systems, such as communication boards or speech-generating devices, in addition to verbal communication. By giving students more options to express themselves, educators empower them to advocate for their needs and preferences in a way that respects their individual communication style (Gaddy & Crow, 2023). A practical strategy that uses echolalia to promote self-advocacy and autonomy might be through incorporating role-play. Some students who are echolalic might feel more comfortable repeating familiar phrases, educators here can utilise this by creating situations which require the student to use their repetitive familiar phrases in self-advocacy scenarios. For example, an educator might role-play a classroom situation where the student is being taught how to alert a staff member that they are in pain or discomfort, and a student with delayed echolalia might repeat the phrase “never mind, eh, rub it better” or something similar. Indeed, the phrase “never mind, eh, rub it better” was used by a young boy in the study by Reynell (1978) to alert others that he was in pain. The young boy had learnt “never mind, eh, rub it better” from his mother and that it was to be said in instances of pain or injury.

Table 2 summarises the principle behind each consideration along with an example of how educators and leadership personnel may enact these principles in their professional practice. These principles were found to be consistently mentioned across almost all articles included in the review.

4.4.1. Encourage peer education

Like the reflective practices and continued learning of education staff, another important yet overlooked consideration is peer education. Essentially, if one wants to create an inclusive environment, others such as students, need to similarly see neurodivergent students as equals (Mirfin-Veitch et al., 2020). Here, student cohorts may also benefit from learning about neurodiversity and the various ways people communicate (including echolalia). By educating students about neurodiversity, education communities can cultivate empathy, reduce stigmatisation, and promote acceptance, amongst others. Peer education helps students understand that neurodivergent traits are not ‘strange’; rather, they are simply different ways of experiencing and interacting with the world. Such education programs may involve age-appropriate lessons, workshops, and inclusion and diversity statements read by students and educators at various events.

Additional education programs might be through collaborative learning projects, in which neurodivergent and neurotypical peers might work together, engaging in projects which afford multimodal communication opportunities through tasks that are interest-based for all students in the group. In another example, neurodiversity might be integrated into curriculum. In English or literature studies for example, neurodivergent students might be encouraged to write, speak, or present artworks or texts about neurodivergent characteristics. Including neurodiversity in curriculum is at the heart of the Learning About Neurodiversity at School (LEANS) program, in which the focus is on educating primary school communities about the neurodiversity movement (Salvesen Mindroom Research Centre, 2025).

Or, students might be encouraged to undertake reviews of books, plays, or shows, which are written by or include neurodivergent authors.

Pertaining to echolalia specifically, and indeed that of immediate echolalia, peer education and teaching peers about echolalia, might stop other pupils from perceiving immediate repetitions as forms of mockery or becoming frustrated at their classmate every time something is repeated.

Lessons in neurodiversity, inclusion, and acceptance, extend beyond the classroom, equipping students with valuable life skills that promote kindness and social responsibility throughout their lives, which in-turn potentially makes a real impact on how neurodiversity is viewed in larger society.

4.5. Respect through language

Words have impact. The words used when speaking to, about, or referring to someone, can have a significant effect on our perceptions, beliefs, attitudes, and may even alter the ways in which people interact with each other (Cohen et al., 2022; Prizant, 2010a, 2010b). When using phrases such as “suffering from echolalia” or “struggling with echolalia”, these may inadvertently position the student as needing to be ‘cured’, which can be harmful and implies pity and judgement (DeThorne & Searsmith, 2021; Gaddy & Crow, 2023). Here, educators and leadership personnel should strive to create a positive language culture whereby deficit-based terminology is no longer used. School leadership personnel and indeed other education staff may wish to consult the LEANS program, which seeks to change pupils’ perceptions about neurodiversity and neurodivergence and the actions that they take at school, including that of engaging respectfully with all students (Salvesen Mindroom Research Centre, 2025).

4.6. Collaboration for continuity of care

Collaboration across all stakeholders is crucial for implementing neurodiversity-affirming practices for echolalia. Here, collaboration should involve multiple formal and informal formats (emails, student meetings, parent sessions, notes in diaries, and discussions at drop-off and pick-up times, amongst others). Here, collaboration with the goal of implementing a continuity of care for echolalia should be the focus. The aim is to bridge the often disconnect between stakeholders. Whilst stakeholders are well-meaning, acknowledging that a mismatched approach between various settings and groups (parents, wider families, carers) may impact upon how the student presents and experiences both environments (Johnston et al., 2024), and more importantly, how to work

together for a unified approach, should be a focus of collaboration. Ultimately, ensure a unified approach to neurodiversity-affirming practice for echolalia in education communities is implemented and maintained is essential (Sewell & Park, 2021).

4.7. Encourage reflective practice and ongoing learning

A key gap in the literature reviewed here was the lack of emphasis placed on reflective practice and ongoing learning for educators who deliver neurodiversity-affirming practices in education communities (Admiraal et al., 2021; Mirfin-Veitch et al., 2020). Yet we know, to create the conditions for change in the learning environment, such as the introduction as neurodiversity-affirming practices, reflective practices and ongoing learning are essential, when moving beyond tokenistic gestures of inclusion. When education leadership personnel encourage ongoing learning and continued reflective practice, educators are challenged to assess their pedagogies, attitudes, and understanding of neurodiversity, neurodiversity-affirming practices, and echolalia. Leadership personnel can support educators to attend professional development workshops, read research trends, and engage with neurodivergent communities to deepen their professional teaching practice. The commitment to professional growth serves not only the students, but it may also serve the education profession as an entirety.

Table 3 presents the principle behind each consideration along with an example of how educators and leadership personnel may enact these principles in their professional practice. Considerations presented in Table 3 were lesser mentioned or overlooked but we argue are equally as important for creating neurodiversity-affirming environments for students with diverse communication (such as echolalia).

5. Limitations

It should be noted that there are some limitations of the current review. Specially, there are a small number of included studies with differing contexts making direct comparisons and generalisations challenging. However, direct comparisons and generalisations are not the purpose of this article. The purpose is an exploration of what could be possible, and the vast areas requiring further research to gain a better understanding of neurodiversity-affirming practices for supporting students with echolalia.

Conclusion and next steps

Historically, education has used models which favour verbal fluency and adherence to socially accepted norms of communication. However, in the context of an educational revolution toward inclusive models and practices, confusion remains as to how neurodiversity-affirming practices can be adopted by educators and leadership personnel for those with diverse communication, such as echolalia. We undertook a review of the literature in the context of (a) neurodiversity-affirming practices in education; (b) neurodiversity-affirming practice for speech pathology; and (c) echolalia within the context of neurodiversity. Our review of eight high-value articles provided a framework with neurodiversity-affirming principles which we translated into practical strategies that could be adopted by educators and leadership personnel. It was found that some considerations were frequently discussed across most articles in the review, whereas others were lesser mentioned or overlooked, but we argue are equally important in creating neurodiversity-affirming environments for students with diverse communication (such as echolalia). All practices presented in our review could be implemented with little-to-no financial cost to education communities.

When educators fail to adopt neurodiversity-affirming principles for diverse communication (including that of echolalia), they contribute to a cycle of marginalisation, potentially leading to diminished self-worth and academic and social struggles for these students. Without such practices, their opportunities for success and personal growth might be limited, reinforcing negative stereotypes about their communicative abilities. Moreover, in a broader sense, not valuing diverse communication in education activities, deprives all student cohorts of valuable experiences in diversity, empathy, and collaboration.

CRediT authorship contribution statement

Eli G. Cohn: Writing – review & editing, Writing – original draft, Methodology, Formal analysis, Data curation, Conceptualization.
Matthew J. Harrison: Writing – review & editing, Writing – original draft, Methodology.

Declaration of Competing Interest

The authors declare that they have no known competing financial interests or personal relationships that could have appeared to influence the work reported in this paper.

Data availability

No data was used for the research described in the article.

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