

LITERATURE REVIEW

# Stakeholder Collaboration in the Education of Australian Students With Autism Spectrum Disorder: A Systematic Review<sup>†</sup>

Samantha Vlcek<sup>1</sup> , Michelle Somerton<sup>2</sup>  and Scott Pedersen<sup>3</sup> 

<sup>1</sup>RMIT University, Australia, <sup>2</sup>Maynooth University, Ireland, and <sup>3</sup>University of Tasmania, Australia

**Corresponding author:** Samantha Vlcek; Email: [samantha.vlcek@rmit.edu.au](mailto:samantha.vlcek@rmit.edu.au)

(Received 5 September 2023; revised 14 August 2024; accepted 25 August 2024; first published online 25 October 2024)

## Abstract

Effective collaboration between key stakeholders increases the educational opportunities and outcomes of students with autism spectrum disorder (ASD). Although the value of collaboration between the central members of a student's network has been widely cited, how collaboration occurs between different stakeholder groups in the education of Australian primary and secondary students with ASD is not widely known. The aim of this review was to identify the factors that influence collaborative practices between three primary stakeholder groups supporting the education of Australian students with ASD: family, school, and community. Through this lens, we analysed the intent of the collaborative practices as well as the specific details of the collaborative practices identified across the research literature published since the implementation of the Disability Standards for Education 2005 (Commonwealth of Australia, 2006). Results from this review indicate existing motivations and processes of collaboration, as well as directions for future research and practice.

**Keywords:** collaboration; inclusive education; partnerships; parents; allied health professionals; autism spectrum disorder

Collaboration has emerged as a critical feature in recent educational research and dialogue surrounding the education of students with autism spectrum disorder (ASD; e.g., Bateman et al., 2022; Vlcek et al., 2020). Although there is no single accepted definition, collaboration is fundamentally described as a process between two or more people working together towards a mutual objective (Dillenbourg, 1999); however, the varied applications and descriptions of collaboration among individuals and across groups establishes the contextual significance of the term. How collaboration is interpreted, defined, and practised is unique to each individual (Williams, 2012). Collaboration is also frequently used as an all-inclusive term to describe varied forms of interactional behaviours. Given the complexities of the support often required for students with disability, and the constellation of traits and behaviours of students with ASD, this review was undertaken to establish what is currently known about the purpose and practice of collaboration for students with ASD in Australian schools. While there has been some discussion within the ASD community about appropriate terminology, we have chosen to use person-first language throughout the paper.

---

This article was originally published with incorrect affiliation information. A notice detailing this has been published, and the error rectified in the online PDF and HTML versions.

<sup>†</sup>This manuscript was accepted under the Editorship of Michael Arthur-Kelly.

© The Author(s), 2024. Published by Cambridge University Press on behalf of Australian Association of Special Education. This is an Open Access article, distributed under the terms of the Creative Commons Attribution licence (<http://creativecommons.org/licenses/by/4.0/>), which permits unrestricted re-use, distribution and reproduction, provided the original article is properly cited.

The child with disability exists at the intersection between three critical environments: home, school, and therapeutic settings. Although collaborative partnerships are vital to the education of every student enrolled in school programs (Emerson *et al.*, 2012), evidence-based practices show that students with additional educational, social, emotional, or physical needs benefit from allied health professionals' (AHPs) involvement in their development (Prior *et al.*, 2011; Vlcek *et al.*, 2024). Research has shown an increase in the quality of support provided to students with disability when their primary caregivers and educators engage in effective collaboration (e.g., Asher & Nichols, 2016; Ellis *et al.*, 2007). Collaboration during periods of change, such as transitions between education settings, has also established the critical importance of collaboration between stakeholders (e.g., Bateman *et al.*, 2022; Cumming *et al.*, 2020). However, international and Australian research including AHPs working with students with ASD, both privately and within the school setting, is limited (Vlcek *et al.*, 2020). A recent exploration of the collaborative experiences of teachers, parents, and AHPs involved in the education of students with ASD in Australian mainstream schools indicated that collaborative teamwork between these three central stakeholder groups involved in a child's development is not yet a consistent feature within Australian schools (Vlcek *et al.*, 2020). Nevertheless, collaboration is an important contributor to positive outcomes for children with ASD in schools, and a systematic literature review (SLR) that identifies how collaboration is practised in Australian schools is warranted.

### ***The Rights of Students With Disability in Australian and International Contexts***

The inherent right to equitable opportunities for individuals with disability in Australia is established in Commonwealth law through the Disability Discrimination Act 1992 (DDA; Australian Government, 1992). The DDA makes it unlawful to discriminate against a person because of his or her disability or the specific nature of the disability (Australian Government, 1992). In almost all situations, it is unlawful for an Australian educational institution to refuse admission, limit access, or exclude participation in educational experiences based solely on an individual's disability (Australian Government, 1992).

Similar to Australia's DDA and Disability Standards for Education 2005 (DSE; Commonwealth of Australia [COA], 2006), nations across the globe have programs for providing students with disability educational access and opportunities. In the United States of America (USA), the Individuals with Disabilities Education Act ensures students with disability are able to access a free education, and provisions are made to ensure they receive specialised services as required (United States Department of Education, 2004). Within the United Arab Emirates (UAE), the rights of individuals with disability, known locally as 'people of determination', are protected within the National Policy for Empowering People of Determination (UAE Government, 2021). The rights of students in the UAE to receive an inclusive education with relevant adjustments and assistive technology are further legislated through ministerial resolutions. Alongside Singapore's Compulsory Education Act 2000 assuring school enrolment for all students aged 6 to 15 (Ministry of Education Singapore, 2000), the rights of students with disability are further protected through policies regarding increased school funding, educator capacity, and specialised learning programs (Enabling Guide, 2022).

The rights of families supporting children with disabilities enrolled in compulsory education is also formally established within targeted legislation and policies within Australia and abroad. In Australia, educational providers are required to consult with the student with disability, or an associate of the student, regarding potential adjustments prior to implementation (COA, 2006). Similar to the provisions in Australia, other countries including Ireland (Houses of the Oireachtas, 2022), Denmark (Ministry of Children and Education, 2013), and the USA (United States Department of Education, 2004) require specific standards of support for students with disability to be met. Despite these intentions in Australia and countries with similar mandates, the findings of recent research into collaboration between educators and families and educators and AHPs has demonstrated that the intent of the collaborative practices, as well as the specific details of the collaborative practices, remains unknown. A deeper understanding of these interactions is critical to recognising the most

advantageous avenues for ensuring all students with ASD are able to experience and achieve positive educational experiences and outcomes, respectively.

### ***Students With Disability in Australia***

The Australian education system is founded on the premise that every child can learn and is entitled to an education that prepares them with the necessary knowledge, skills, and dispositions to lead fulfilling lives (Department of Education and Training [DET], 2015). The overarching goals of Australian education, as outlined within the Alice Springs (Mparntwe) Education Declaration, implicitly acknowledge the rights of all students to access and participate in quality learning programs, as well as the obligations of education providers to ensure that the effects of student disadvantage are reduced (Education Council, 2019). Furthermore, Australia's social justice and human rights model of education emphasises inclusion, and inclusive practices, for all students irrespective of need, disability, or diversity (DET, 2015). These are crucial considerations in the education of students with disability within the Australian context.

In 2013, Australia introduced the National Disability Insurance Scheme (NDIS) with an intention of achieving Australia's commitment to universal health care and support for individuals with disability (National Disability Insurance Agency [NDIA], 2023a). Despite this national program, NDIS funding allocated to individuals with disability enrolled in school programs, such as students with ASD, is currently unable to be used for school-based purposes (NDIA, 2019). This segregation of funds has been attributed to the separate funding entities responsible for each program (NDIA, 2019): schooling is funded by federal and state or territory education department budgets, and health care is funded by the federal health budget. Despite these overarching restrictions, funds can support a limited number of initiatives related to a school context. For example, NDIS funding can be used to pay for specific professional development relating to a student's disability for teachers, but AHP support within a school cannot be funded (NDIA, 2023b). The ambiguity concerning what can and cannot be funded has confused carers, educators, and service providers (such as privately funded AHPs) alike, leading to avoidable service gaps (COA, 2023). Given these restrictions, the extent of collaboration with AHPs in the education of students with ASD is currently unknown.

### ***Research Questions and Framework***

In this SLR, we intended to identify and summarise findings from Australian studies to ascertain how collaboration between stakeholders involved in the education of students with ASD had been reported since the release of the DSE (COA, 2006). According to Epstein (2018), the characteristics of a child are an important consideration when examining the overlap between stakeholders involved in a child's development. Different disabilities have differing influences on the individual and their associated network, and so to reduce complexity, a single disability was chosen as the basis of this SLR. Given the high incidence and continued growth in numbers of students with ASD (Australian Bureau of Statistics, 2012; Australian Institute of Health and Welfare, 2017), studies examining collaboration between stakeholders involved in the education of students with ASD was selected as the basis of the review.

Given the variety of interactions between individuals involved in the education of students with ASD, this study was guided by an interpretation that collaboration and collaborative practices anticipate that each individual approaches the interaction with a diverse set of skills, knowledge, and capacity. This diversity allows each individual within a collaboration to approach a situation from a unique vantage point and apply this to not only achieve a shared outcome but also extend the capacity of all others involved (Cloninger, 2017). For example, in the education context, a teacher might use their knowledge of sounding out phonemes to guide a parent to support their child's early reading experiences at home. In this respect, the terms 'collaboration' and 'collaborative practices' used

throughout this SLR relate to interactional behaviours aligned with this definition irrespective of the specific terminology used and/or omitted across the literature reviewed.

This SLR was guided by the following research question: What is the intention of collaborative interactions of primary stakeholders (i.e., teachers, school leaders, parents, AHPs, etc.) involved in the education of students with ASD enrolled in the Australian education system? An additional subquestion was also identified for the study: What are the characteristics of the collaborative practices identified?

To answer these questions, Epstein's (2018) overlapping spheres of influence was adopted as a framework for examining the crossover of stakeholder groups involved in the education of Australian students with ASD within our review. The framework provided a lens to identify stakeholder groups across family, community, and school domains. Within the model, three primary spheres that influence the development of a child are delineated: school, family, and community. These domains allowed us to identify the specific groups of stakeholders working together within each study in order to effectively examine factors that were reported to influence their collaboration. It was anticipated the findings of the SLR could provide policymakers and researchers with a deepened understanding of the purpose and practice of collaboration between stakeholders involved in the education of students with ASD at the school and classroom level.

## Method

Studies were identified from databases that included journals reporting studies in the fields of education and allied health: Education Resources Information Center, ProQuest, PsycINFO, PubMed, Scopus, and Web of Science. The search consisted of the following terms relating to collaborative interactions, education, ASD, and Australia: (collab\* OR communic\* OR cooper\* OR consult\* OR engag\* OR partner\*) AND (education OR school) AND (autis\* OR ASD) AND (Australi\*). Search filters further limited inclusion to studies published in English since 2006 that had been peer reviewed. The search parameters identified a combined total of 842 articles.

## Selection Criteria

To identify studies appropriate for the review, the following criteria were applied:

- Relevance to the topic: The study focused on the collaborative interactional behaviours, such as consultation, collaboration, and teamwork, of stakeholders involved in the education of students with ASD.
- Setting: Data referred to the education of students enrolled in the Australian education system.
- Date of publication: The article was published after the release of the DSE (COA, 2006).
- Design: The article reported peer-reviewed empirical research.
- Participants: The article addressed the perspectives of participants from at least two stakeholder groups in relation to the features of their collaborative practices and experiences of collaboration.

After identifying and removing 236 duplicates, the first two authors screened the title and abstracts of the remaining 627 articles. The researchers compared their decisions and discussed any discrepancies until consensus was reached. A total of 56 articles were identified for a full-text review. Both researchers independently evaluated these articles using the selection criteria, and identified five articles appropriate for inclusion in the review. The reference list of each article included in the review was examined to identify other potential studies for inclusion. A further 21 articles were screened, with five articles meeting the criteria for a full-text review. Of these, two articles were identified for inclusion. A second reference list search of these papers identified a further three potential articles that were determined to not meet the inclusion parameters. Figure 1 displays a Preferred Reporting Items for Systematic Reviews and Meta-Analyses flow chart (Moher et al., 2009), illustrating the article selection

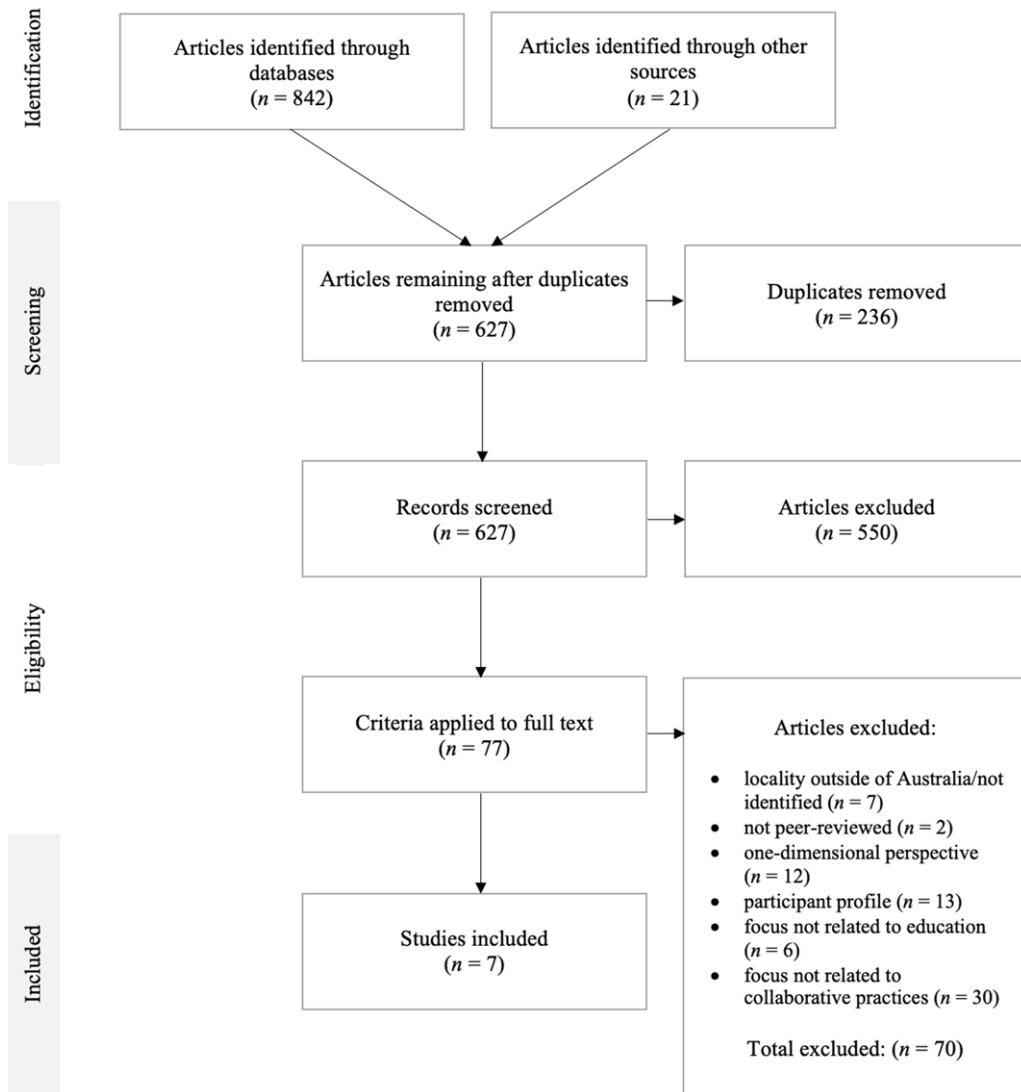


Figure 1. Search Procedure.

and inclusion process for this systematic review. In total, seven articles were identified as meeting the criteria for inclusion. To confirm the suitability of the studies, both researchers independently assessed the quality of the studies using the Joanna Briggs Institute critical appraisal tools for use in qualitative research (Lockwood et al., 2015). This instrument requires reviewers to consider 10 elements constituting quality features of research. These elements are judged to be either present, missing, unclear, or not relevant to the particular study under consideration. For this study, the standard of eight out of 10 elements being present was used to determine inclusion. Each of the seven articles met this standard. References marked with an asterisk identify studies included in the present summary and analysis.

### Data Analysis

The analysis consisted of three stages. Initially, information was collected on each study's topic, method, participants, details relating to the student or students at the centre of the collaborative

**Table 1.** Stakeholder Perspectives Addressed Within Each Article Reviewed

	Two dimensions			Three dimensions
	School and family	School and community	Family and community	School, family, and community
Bruck et al. (2022)				X
Chen et al. (2020)			X	
Hatfield et al. (2017)			X	
Larcombe et al. (2019)			X	
Saggers et al. (2019)				X
Stephenson et al. (2021)	X			
Vlcek et al. (2020)				X

interactions, geographic information, and school demographics. Next, the two- or three-dimensional participant perspectives from each study were identified and recorded (see Table 1). Articles were further examined to ascertain whether they reported on instances where participants were working in a cluster with other participants (e.g., if a teacher and AHP were identified as working together to support the same student) or whether their participation did not report on a specific overlap (e.g., participants reporting on their experiences generally rather than on a specific contribution to a cluster). The seven articles were then analysed following a thematic process as outlined by Braun and Clarke (2006) to locate (a) the collaborative practices identified, (b) the intended purpose of the collaboration, and (c) the participants’ direct experiences and opinions of the collaborative practices. Each article was re-read by both researchers and details relating to the child, family, school, community, and overlap were noted (see Table 2). From here, the first author read each article to locate and manually highlight leading words. The leading words were then collated and reviewed to ascertain dominant and recurring terms that were then labelled as codes and grouped under categories. Each article was then re-read by the first and second authors to identify patterns across the dataset. This led to preliminary codes that were then evaluated to reveal overarching themes. Each of these themes was then sorted into broader categories (Braun & Clarke, 2006).

**Results**

In total, eight themes emerged across three categories describing the intention and experiences of varying forms of collaborative interactions in the education of students with ASD found in this review (displayed in Table 3). The first involves transition planning and activities that occur around milestone transitions. The second category concerns identifying and meeting student needs, including the expectations of the various stakeholders in relation to shared goals to achieve shared outcomes for the student at the centre of the support. The third category, constraints on collaboration, relates to the interpersonal and environmental barriers to collaborative interactions identified across participant groups within the collaborative sphere.

**Category 1: Transition Planning**

Collaboration as a feature of transition planning was mentioned as a factor in the majority of articles. Although articles referred to collaboration during times of transition, four articles were concentrated on transitions as the predominant research focus. Of these, two articles focused solely on the transition from early childhood experiences to formal schooling (Chen et al., 2020; Larcombe et al., 2019), one examined the transition from one school setting to another (Bruck et al., 2022), and the remaining

Table 2. Factors Relevant to Each Study

	Methodology	Child	School	Family	Community	Overlap
Bruck et al. (2022)	Personalised online quantitative and qualitative surveys for each of the three participant groups: family, school, and allied health professionals (AHPs)	Students with autism spectrum disorder (ASD) enrolled in mainstream primary and secondary schools, specialist settings, specialist classes within mainstream schools, and home-schooling arrangements	167 educators that included school administrators, classroom teachers, school support staff, and specialist teachers	681 parents of students aged 5 to 18 years	142 specialist and advisory teachers, AHPs, and counsellors working in both school-based and private roles	Participants were not identified as working within a cluster <sup>a</sup> . Individual experiences addressed the level of overlap between participants and other stakeholders within their personal networks
Chen et al. (2020)	Focus groups and interviews with early intervention staff and parents across Australia	Students with ASD transitioning out of Autism Specific Early Learning and Care Centres at the end of Term 4, 2017, to commence school the following year	–	18 parents of 24 students with autism	45 early intervention professionals, including trained teachers and educators, AHPs, behavioural specialists, program managers, administration staff, and social workers	Participants were not identified as working within a cluster. Individual experiences addressed the level of overlap between participants and other stakeholders within their personal networks
Hatfield et al. (2017)	Semi-structured interviews with AHPs and parents	Teenage children with ASD either currently or previously enrolled in primary and secondary school settings	–	9 parents of students with ASD residing in Western Australia and Queensland	4 professionals, including job support coordinator, occupational therapist, and speech pathologist	Participants were not identified as working within a cluster. Individual experiences addressed the level of overlap between participants and other stakeholders within their personal networks
Larcombe et al. (2019)	Mixed methodology sequential quantitative–qualitative explanatory design beginning with a questionnaire to inform the direction of focus groups and interviews with parents and AHPs	Students aged 5 to 8 years with a diagnosis of ASD who had previously transitioned to school	–	25 parents of children with ASD who completed a specific early intervention program in 2014 or 2015	11 occupational therapists and speech pathologists working in early intervention and school support sectors	Participants were not identified as working within a cluster. Individual experiences addressed the level of overlap between participants and other stakeholders within their personal networks

(Continued)



Table 2. (Continued)

	Methodology	Child	School	Family	Community	Overlap
Saggers et al. (2019)	Mixed methods sequential explanatory design beginning with a national quantitative online survey of family, school, and AHPs, followed by qualitative interviews	Students aged 5 to 18 years with a diagnosis of ASD enrolled in the Australian education system	248 teachers with experience teaching students with ASD	934 parents/carers comprising those with at least one child with ASD	179 specialists, including education specialists, AHPs, and psychologists working in both school-based and private roles	Participants were not identified as working within a cluster. Individual experiences addressed the level of overlap between participants and other stakeholders within their personal networks
Stephenson et al. (2021)	Structured interviews with teachers and parents on a 6-monthly basis for 3.5 years	Students with ASD enrolled in one of 12 schools in New South Wales (NSW) or 50 schools in South Australia (SA)	208 teachers and 227 principals from 12 schools in NSW and 50 schools in SA	305 parents/carers comprising those with at least one child with ASD enrolled in one of the 12 NSW schools or 50 schools in SA	–	Participant clusters were identified in some instances across a combination of participant profiles. Remaining participants were not identified as working in a cluster
Vlcek et al. (2020)	National qualitative online survey personalised for each of three participant groups: family, school, and AHPs	Students with ASD enrolled in mainstream primary and secondary schools	41 teachers with various years' experience teaching students with ASD	44 parents/carers comprising those with at least one child with ASD who had attended a mainstream school post-ASD diagnosis	44 AHPs, inclusive of psychologists, speech pathologists, and occupational therapists, working in both school-based and private roles	Participants were not identified as working within a cluster. Individual experiences addressed the level of overlap between participants and other stakeholders within their personal networks

<sup>a</sup>Cluster indicates participants supporting the same student.



**Table 3.** Categories and Themes

Category	Themes
Transition planning	Processes
	Stakeholder involvement
	Communication
Identifying and meeting student needs	Capacity building
	Shared goals
Constraints	Time, money, and resources
	Co-collaborator perspectives and tensions

article focused solely on the transition from secondary school to postschool life (Hatfield et al., 2017). Of the three remaining articles not concentrated on transitions specifically (Saggers et al., 2019; Stephenson et al., 2021; Vlcek et al., 2020), transition planning was acknowledged as a common occasion for collaboration to occur; however, specific processes during transition planning were not addressed.

Processes relating to collaboration when planning for transitions were evident in each of the four studies focused on transitions. The authors of three of the articles acknowledged that meetings between the school and students' external support networks were a critical element of transition planning. Bruck et al. (2022) and Chen et al. (2020) both cited meetings between the school and parents and/or specialists to share information to support the student to transition from one setting to the next as a key feature of effective transition planning processes. Hatfield et al. (2017) recognised the importance of establishing clear processes for all stakeholders to collaborate during the transition planning process. Similarly, Larcombe et al. (2019) reported that there was value in providing more than standard opportunities for parents and children to visit the school, experience the school environment, and meet teachers as a feature of the transition planning process. Only two articles (Hatfield et al., 2017; Larcombe et al., 2019) made specific reference to including students in the transition planning process. Stephenson et al.'s (2021) research into facilitators and barriers to inclusion of students with ASD found 'well-managed' transitions had a positive impact on student inclusion during transitions, and, conversely, 'poor transition planning or implementation' presented a barrier to student inclusion (p. 7). Despite this, specific characteristics of effective transition planning were not expanded upon in depth (Stephenson et al., 2021).

Stakeholder involvement, including roles and responsibilities, was a feature of three articles relating to transition planning. Chen et al. (2020) and Hatfield et al. (2017) both acknowledged the importance of parents being advocates of their children during transition planning. While the value of collaboration between all relevant stakeholders was acknowledged as a feature of effective transition teams, Chen et al. (2020) found parent respondents took on a role of intermediary between the school and other external stakeholders involved in their child's development. While Hatfield et al. (2017) recognised that successful teams were cohesive, collaborative, and valued the differing perspectives of all contributors, they also acknowledged that parents were critical in driving the focus of the transition. In reviewing the influence of stakeholders on a student's experience at the classroom level, Larcombe et al. (2019) reported that their family and therapist participant groups acknowledged that the teacher's role was most critical. Despite this, the authors also reported that parents felt teachers were reluctant to utilise the knowledge and strategies shared by AHPs they privately funded to meet with their child's teacher, whereas AHPs acknowledged the importance of respecting the teacher's role in the classroom setting and refraining from approaching the opportunity from the perspective of an expert.

The impact of communication on collaboration during transition planning was cited in three articles. Larcombe et al. (2019) found open and honest communication was critical during transition

planning. Beyond this, two articles addressed concerns with communication between stakeholders in the transition planning process. Chen *et al.* (2020) found difficulties with communication and collaboration impacted transition planning; respondents within the school setting referred to limitations imposed when parents did not respond to requests for information, whereas parents reported difficulties with connecting with relevant staff to share information during the transition planning stage. The results of Bruck *et al.*'s (2022) survey of educators, specialists, and parents revealed varying perceptions regarding the involvement of students and parents during transition planning. The majority of educator (88%) and specialist (77%) respondents felt students and parents were involved in this process, but just less than half of parent (49%) respondents reported the same perception. Overall, the authors concluded that increased communication between stakeholders was necessary to improve transition planning and implementation.

### ***Category 2: Identifying and Meeting Student Needs***

Each of the seven articles regarded stakeholders coming together to identify and meet student needs at the school and classroom levels as important. Understanding the specific needs of the student at the centre of the support was a feature of four articles reviewed. Saggars *et al.* (2019) reported that responses among all participant groups showed they recognised the importance of collaboration for understanding a student and the necessary resources to meet their needs. Chen *et al.* (2020) and Vlcek *et al.* (2020) highlighted the importance of collaborative teamwork focused on knowledge sharing regarding the student at the centre of the support in order to upskill the knowledge and capacity of all contributors to apply relevant strategies across settings. Three of the articles further acknowledged the importance of open and transparent communication between teachers and parents for establishing trust in the support students were receiving at school (Larcombe *et al.*, 2019; Saggars *et al.*, 2019; Vlcek *et al.*, 2020).

Four articles had some focus on the role of goals in working collaboratively to effectively support the student at the centre of the support. Hatfield *et al.* (2017) and Vlcek *et al.* (2020) both cited the importance of teams developing and working towards shared goals. Larcombe *et al.*'s (2019) research including parent and therapist participant groups reported on the centrality of a family's goals for their child with ASD driving the focus of AHP supports during transitions. Overall, the value of different stakeholders' knowledge, skills, and experience when working together to achieve shared outcomes was acknowledged by the majority of articles reviewed (Hatfield *et al.*, 2017; Larcombe *et al.*, 2019; Saggars *et al.*, 2019; Vlcek *et al.*, 2020).

### ***Category 3: Constraints on Collaboration***

Authors of the majority of the studies included within this review cited constraints relating to collaboration between stakeholders. The findings of each study acknowledged the impact of limited time, money, and resources on collaborative practices and impacts, both relating to direct collaboration and the ability to implement strategies addressed throughout the collaboration. While Vlcek *et al.* (2020) referred to time, money, and resources as direct barriers to collaboration from respondents across all three participant groups, the remaining studies addressed individual variables in relation to different collaborative actions. Time was identified as a barrier to teachers' ability to collaborate (Chen *et al.*, 2020; Vlcek *et al.*, 2020), so too was time for teachers to appropriately implement individualised strategies to meet the support needs of students with ASD (Larcombe *et al.*, 2019; Saggars *et al.*, 2019; Vlcek *et al.*, 2020). Parents cited the financial responsibility of providing allied health support to their children (Chen *et al.*, 2020; Vlcek *et al.*, 2020) and addressed government funding in schools as a limitation on ensuring sufficient personnel to meet their child's needs (Chen *et al.*, 2020). The impact of limited autism-specific resources (Bruck *et al.*, 2022) and inefficient resources for supporting inclusive practices and individualised adjustments were also cited by respondents as likely constraints to the

support students were able to receive, irrespective of the collaborative processes actioned (Chen et al., 2020; Larcombe et al., 2019; Vlcek et al., 2020).

Respondents across three studies indicated tension arising from perceived perceptions of other stakeholders' approaches, skills, and knowledge. Vlcek et al. (2020) reported a range of tensions identified by respondents across the three participant groups, with almost a quarter of all respondents citing an unwillingness of other stakeholders to collaborate as one of the greatest barriers to collaboration. While a proportion of parent participants noted they perceived their child's teacher(s) as viewing them as not having sufficient knowledge and that they were 'seen as a problem' (Vlcek et al., 2020, p. 109), teachers reported parent and AHP unwillingness to collaborate as a barrier. AHPs further reported parents who were unwilling or unable to follow through on recommendations as a direct barrier to effective collaboration (Vlcek et al., 2020). Tensions between participant groups were also identified when strategies were not implemented across environments (Chen et al., 2020; Larcombe et al., 2019; Vlcek et al., 2020), or not enough explicit detail was provided to co-collaborators for strategies to be implemented appropriately (Larcombe et al., 2019). Overall, inconsistent approaches and expectations between stakeholders led to reduced collaboration (Chen et al., 2020), and there was a desire for greater transparency and adaptability with co-collaborators to increase the effectiveness of collaboration (Chen et al., 2020; Larcombe et al., 2019; Vlcek et al., 2020).

## Discussion

In this discussion, subsections are used to answer our research questions — (a) intent of collaboration, (b) characteristics of collaboration, and (c) discrepancies — with a final section to discuss collaboration moving forward. In the first subsection, we consider the implications of this research for supporting individuals involved in collaborative teams. The second subsection explores the impact of this research regarding the education system more broadly. The last subsection addresses implications for future research and practice. Finally, the limitations of this research are acknowledged.

### *Intent of Collaboration*

This SLR identified transitions as the most widely addressed reason for collaboration between central stakeholders involved in the development of students with ASD. Collaboration as an activity to support students preparing for and experiencing times of transitions across education sectors was addressed in all of the articles reviewed and was the dominant focus of over half of the articles. The prominence of transitions as an occasion for collaboration to occur aligns with an extensive body of research recognising the difficulties faced by many students with ASD transitioning from one education space to the next (e.g., Asher & Nichols, 2016; Reupert et al., 2015; Vlcek et al., 2024; Vlcek & Somerton, 2023). Similar to other jurisdictions abroad, Australian students commonly participate in a number of milestone educational transitions: entering early childhood education (optional), moving into formal primary schooling (compulsory) and secondary school (compulsory), opting into further educational programs, including vocational education (optional) and/or university (optional), before transitioning into post-education opportunities. There was the limited focus on collaboration in relation to non-milestone — or regular — transitions throughout an individual's education, including transitioning to and from school, transitions between scheduled breaks and classes, as well as transitions between classes. Similar to milestone transitions, there remains an absence of research into the importance of schools working with parents and AHPs to provide individualised support for students with ASD across the day. Beyond transitions specifically, this SLR indicates research into other intentions for collaboration should be explored to better understand the full scope of circumstances stakeholders involved in the education of students with ASD collaborate.

### **Characteristics of Collaboration**

The results of this study found a range of supportive and obstructive elements that influence collaboration. Consistent with past research into models of collaboration for students with disability (Cloninger, 2017), characteristics of collaboration identified as effective in this research included open and honest communication, sharing knowledge of the child at the centre of the support, and developing and implementing shared goals. Elements of collaboration that were seen as less desirable included perceptions of co-collaborators being unwilling to implement agreed-upon strategies, inconsistent approaches and expectations, and perceptions of a knowledge imbalance between co-collaborators. Although participants within each of the studies reviewed frequently cited desirable and undesirable characteristics of collaboration, the greater context and justification of these preferences was not fully elucidated. One potential barrier to this was the omission of case studies relating to collaborative teams. We suggest this presents an opportunity for researchers to more fully examine the direct collaborative experiences of stakeholders, both individually and within clusters. Interestingly, misalignment between parents' and teachers' goals reported in one study (Vlcek *et al.*, 2020) within this SLR was contradicted in another of the studies (Saggers *et al.*, 2019), where experiences of shared goals was noted across participant groups. Research into the goals determined by collaborative teams, including the processes by which they are developed, should be ongoing.

### **Discrepancies**

Beyond similarities between articles addressed in the present study, the perspectives of varying participant group responses across three articles reviewed revealed different priorities and views of collaborative engagement. Vlcek *et al.* (2020) noted that the parent, teacher, and AHP groups had different perceptions of the role of collaboration in promoting positive student outcomes. Overall, the authors found that teachers emphasised learning and academic outcomes, whereas parents and AHPs were more concerned with the development of transferable life skills. Saggers *et al.* (2019) reported that the collective responses of three similar participant profiles — parent, educator, and AHP — gave prominence to students' non-academic needs that typically required increased levels of support. Stephenson *et al.* (2021) revealed that principals viewed home-school partnerships and communication and support as facilitators more often than parent and teacher participants, whereas Saggers *et al.*'s (2019) article reported no statistical significance between participant groups regarding their value of collaboration.

### **Collaboration Moving Forward**

The results of this SLR have highlighted some important areas for further research and practice. First, further research at the individual level is necessary to better understand the experiences of stakeholders directly involved in the education of students with ASD. This should include factors relating to experiences of both effective and ineffective collaboration, and the collaborative processes that have the greatest impact upon student experience and outcomes. Constraints attributed to external variables, such as limitations on time, money, and resources, were also reported as a barrier to effective collaboration. Excessive teacher workloads, limited administrative time, and funding constraints, as well as their impact on teacher attitudes and practice, in the Australian education system generally are well documented (e.g., Garrad *et al.*, 2019; Round *et al.*, 2016; Schwab & Alnahdi, 2020).

Overall, the results indicate that more research is needed to ascertain the way each of the three dimensions in Epstein's theory of overlapping spheres of influence (family, school, and community) influence collaboration as it pertains to the education of students with ASD. Additional research should be conducted on clusters of individuals across family, school, and community supporting students to appropriately explore the roles, responsibilities, and outcomes of collaboration between the prominent members of a student's development. Research should also focus on identifying generalisable findings to promote effective practices that can be implemented in school and classroom practice. The findings

from this SLR highlight the importance of specifically exploring the systematic enablers and obstructions to genuine collaboration for students with disability, including students with ASD. This recommendation intends to support researchers and policymakers to better understand the types of guidelines, procedures, and supports schools, families, and therapists require to effectively support all students.

### Limitations

The small quantity of empirical studies included in this SLR has implications for our findings. Although there are a plethora of papers advocating collaboration and collaborative teamwork, more research is needed, particularly in Australia, to appropriately understand the specific variables that directly influence the operation and outcomes of collaborative teams in the education system, as well as the experiences of different stakeholder groups and the overlap of different group profiles. The purpose of this SLR was to present the current body of knowledge regarding key factors stakeholders involved in the education of students with ASD enrolled in Australian schools identified as influencing their collaboration with other primary stakeholders. For this reason, the results of this review are not generalisable, and we encourage an investigation of collaboration involving the education of children with ASD conducted in other settings. In addition, including research that focuses on parental input into educational planning for their child with ASD might provide useful information. Evaluations into collaboration, collaborative teamwork, and the roles of diverse stakeholders involved in the education of students with disability, including ASD, should be ongoing to ensure all students receive the requisite supports to achieve positive educational opportunities and outcomes.

### Conclusion

This SLR has presented the breadth of empirical studies concerning collaboration between multiple stakeholder groups supporting the education of Australian students with ASD since the release of the DSE. Despite presenting literature on the importance and value of collaboration between primary stakeholders supporting an individual student with ASD across environments, research detailing the specific intentions, practices, and collaboration outcomes across stakeholder profiles is sparse. The results of this review indicate that existing research regarding the intent and practice of collaboration is limited, and further research is needed to better understand existing collaborative processes and impacts. Continued research into collaboration and collaborative teamwork is needed to ensure the identification of effective practices as well as the development of policy and guidelines that equip stakeholders with the necessary knowledge, supports, and resources to effectively support the educational experiences and outcomes of students with ASD.

**Acknowledgements.** The authors gratefully acknowledge the financial support provided by the Australian Postgraduate Award scholarship from the Australian Government and the University of Tasmania.

**Competing interests.** The authors have no competing interests to declare.

### References

References marked with an asterisk indicate studies included in the systematic literature review.

- Asher, A., & Nichols, J. D. (2016). Collaboration around facilitating emergent literacy: Role of occupational therapy. *Journal of Occupational Therapy, Schools, & Early Intervention*, 9(1), 51–73. <https://doi.org/10.1080/19411243.2016.1156415>
- Australian Bureau of Statistics. (2012). 4428.0 - Autism in Australia, 2012: Autism and education. <http://www.abs.gov.au/au/sstats/abs@.nsf/Latestproducts/4428.0MainFeatures52012?opendocument&tabname=Summary&prodno=4428.0&issue=2012&num=&view=>
- Australian Government. (1992). *Disability Discrimination Act 1992*. <https://www.legislation.gov.au/C2004A04426/latest/text>

- Australian Institute of Health and Welfare. (2017). *Autism in Australia*. <http://www.aihw.gov.au/disability/autism-in-australia/>
- Bateman, K. J., Schwartz, I. S., & Gauvreau, A. N. (2022). It takes a team: Working together to meet the needs of young children with autism spectrum disorder in an inclusive setting. *Inclusive Practices*, 1(4), 132–138. <https://doi.org/10.1177/27324745221097354>
- Braun, V., & Clarke, V. (2006). Using thematic analysis in psychology. *Qualitative Research in Psychology*, 3(2), 77–101. <https://doi.org/10.1191/1478088706qp063oa>
- \*Bruck, S., Webster, A. A., & Clark, T. (2022). Transition support for students on the autism spectrum: A multiple stakeholder perspective. *Journal of Research in Special Educational Needs*, 22(1), 3–17. <https://doi.org/10.1111/1471-3802.12509>
- \*Chen, N., Miller, S., Milbourn, B., Black, M. H., Fordyce, K., Van Der Watt, G., Alach, T., Masi, A., Frost, G., Tucker, M., Eapen, V., & Girdler, S. (2020). “The big wide world of school”: Supporting children on the autism spectrum to successfully transition to primary school: Perspectives from parents and early intervention professionals. *Scandinavian Journal of Child and Adolescent Psychiatry and Psychology*, 8(1), 91–100. <https://doi.org/10.21307/sjcapp-2020-009>
- Cloninger, C. J. (2017). Designing collaborative educational services. In F. P. Orelve, D. Sobsey, & D. L. Gilles (Eds.), *Educating students with severe and multiple disabilities: A collaborative approach* (5th ed., pp. 1–26). Brookes Publishing.
- Commonwealth of Australia. (2006). *Disability Standards for Education 2005: Plus guidance notes*. <https://www.education.gov.au/disability-standards-education-2005>
- Commonwealth of Australia. (2023). *Working together to deliver the NDIS: Independent review into the National Disability Insurance Scheme: Final report*. <https://www.ndisreview.gov.au/resources/reports/working-together-deliver-ndis>
- Cumming, T. M., Strnadová, I., & Danker, J. (2020). Transitions of students with autism and intellectual disabilities in inclusive settings: The nexus between recommended and actual practice. *Australasian Journal of Special and Inclusive Education*, 44(1), 28–45. <https://doi.org/10.1017/jsi.2020.1>
- Department of Education and Training. (2015). *Planning for personalised learning and support: A national resource based on the Disability Standards for Education 2005*. [https://education.nt.gov.au/\\_data/assets/pdf\\_file/0005/268826/planning\\_for\\_personalised\\_learning.pdf](https://education.nt.gov.au/_data/assets/pdf_file/0005/268826/planning_for_personalised_learning.pdf)
- Dillenbourg, P. (1999). *Collaborative learning: Cognitive and computational approaches*. Elsevier.
- Education Council. (2019). *Alice Springs (Mparntwe) Education Declaration*. <https://www.education.gov.au/alice-springs-mpa-rntwe-education-declaration>
- Ellis, C. R., Lutz, R. E., Schaefer, G. B., & Woods, K. E. (2007). Physician collaboration involving students with autism spectrum disorders. *Psychology in the Schools*, 44(7), 737–747. <https://doi.org/10.1002/pits.20262>
- Emerson, L., Fear, J., Fox, S., & Sanders, E. (2012). *Parental engagement in learning and schooling: Lessons from research*. Family-School and Community Partnerships Bureau.
- Enabling Guide. (2022). *Education*. SG Enable. <https://www.Enablingguide.sg/Im-Looking-for-Disability-Support/Education>
- Epstein, J. L. (2018). *School, family, and community partnerships: Preparing educators and improving schools* (2nd ed.). Routledge. <https://doi.org/10.4324/9780429493133>
- Garrad, T.-A., Rayner, C., & Pedersen, S. (2019). Attitudes of Australian primary school teachers towards the inclusion of students with autism spectrum disorders. *Journal of Research in Special Educational Needs*, 19(1), 58–67. <https://doi.org/10.1111/1471-3802.12424>
- \*Hatfield, M., Falkmer, M., Falkmer, T., & Ciccarelli, M. (2017). “Leaps of faith”: Parents’ and professionals’ viewpoints on preparing adolescents on the autism spectrum for leaving school. *Journal of Research in Special Educational Needs*, 17(3), 187–197. <https://doi.org/10.1111/1471-3802.12377>
- Houses of the Oireachtas. (2022). *Education for Persons with Special Educational Needs Act 2004*. <https://www.oireachtas.ie/en/bills/bill/2003/34/>
- \*Larcombe, T. J., Joosten, A. V., Cordier, R., & Vaz, S. (2019). Preparing children with autism for transition to mainstream school and perspectives on supporting positive school experiences. *Journal of Autism and Developmental Disorders*, 49(8), 3073–3088. <https://doi.org/10.1007/s10803-019-04022-z>
- Lockwood, C., Munn, Z., & Porritt, K. (2015). Qualitative research synthesis: Methodological guidance for systematic reviewers utilizing meta-aggregation. *International Journal of Evidence-Based Healthcare*, 13(3), 179–187. <https://doi.org/10.1097/XEB.0000000000000062>
- Ministry of Children and Education. (2013). *Agreement between the Danish Government (the Social Democrats, the Social-Liberal Party and the Socialist People’s Party), the Liberal Party of Denmark and the Danish People’s Party on an improvement of standards in the Danish public school (primary and lower secondary education)*. <http://eng.uvm.dk/primary-and-lower-secondary-education/the-folkeskole>
- Ministry of Education Singapore. (2000). *Compulsory Education Act 2000*. <https://sso.agc.gov.sg/Act/CEA2000>
- Moher, D., Liberati, A., Tetzlaff, J., Altman, D. G., & The PRISMA Group. (2009). Preferred reporting items for systematic reviews and meta-analyses: The PRISMA statement. *Annals of Internal Medicine*, 151(4), 264–269. <http://www.annals.org/cgi/content/full/151/4/264>
- National Disability Insurance Agency. (2019). *School education*. <https://ourguidelines.ndis.gov.au/how-ndis-supports-work-menu/mainstream-and-community-supports/who-responsible-supports-you-need/school-education>



- National Disability Insurance Agency. (2023a). *History of the NDIS*. <https://www.ndis.gov.au/about-us/history-ndis#:~:text=The%20NDIS%20was%20legislated%20in,adults%20and%20children%20with%20disability>
- National Disability Insurance Agency. (2023b). *What work or study supports do we fund while you are at school?* <https://ourguidelines.ndis.gov.au/supports-you-can-access-menu/social-and-community-participation/work-and-study-supports/what-work-or-study-supports-do-we-fund-while-you-are-school>
- Prior, M., Roberts, J. M. A., Rodger, S., & Williams, K. (with Dodd, S., Ridley, G., & Sutherland, R.). (2011). *A review of the research to identify the most effective models of practice in early intervention for children with autism spectrum disorders*. Australian Government Department of Families, Housing, Community Services and Indigenous Affairs. [https://www.dss.gov.au/sites/default/files/documents/10\\_2014/review\\_of\\_the\\_research\\_report\\_2011\\_0.pdf](https://www.dss.gov.au/sites/default/files/documents/10_2014/review_of_the_research_report_2011_0.pdf)
- Reupert, A., Deppeler, J. M., & Sharma, U. (2015). Enablers for inclusion: The perspectives of parents of children with autism spectrum disorder. *Australasian Journal of Special Education*, 39(1), 85–96. <https://doi.org/10.1017/jse.2014.17>
- Round, P. N., Subban, P. K., & Sharma, U. (2016). 'I don't have time to be this busy.' Exploring the concerns of secondary school teachers towards inclusive education. *International Journal of Inclusive Education*, 20(2), 185–198. <https://doi.org/10.1080/13603116.2015.1079271>
- \*Saggers, B., Tones, M., Dunne, J., Trembath, D., Bruck, S., Webster, A., Klug, D., & Wang, S. (2019). Promoting a collective voice from parents, educators and allied health professionals on the educational needs of students on the autism spectrum. *Journal of Autism and Developmental Disorders*, 49(9), 3845–3865. <https://doi.org/10.1007/s10803-019-04097-8>
- Schwab, S., & Alnahdi, G. H. (2020). Do they practise what they preach? Factors associated with teachers' use of inclusive teaching practices among in-service teachers. *Journal of Research in Special Educational Needs*, 20(4), 321–330. <https://doi.org/10.1111/1471-3802.12492>
- \*Stephenson, J., Browne, L., Carter, M., Clark, T., Costley, D., Martin, J., Williams, K., Bruck, S., Davies, L., & Sweller, N. (2021). Facilitators and barriers to inclusion of students with autism spectrum disorder: Parent, teacher, and principal perspectives. *Australasian Journal of Special and Inclusive Education*, 45(1), 1–17. <https://doi.org/10.1017/jsi.2020.12>
- United Arab Emirates Government. (2021). *Education for people of determination*. <https://u.ae/en/information-and-services/education/education-for-people-with-special-needs#:~:text=This%20Department%20promotes%20the%20rights,for%20Empowering%20People%20of%20Determination%27>
- United States Department of Education. (2004). *Individuals with Disabilities Education Act*. <https://sites.ed.gov/idea/statuteregulations/>
- Vlcek, S., Cuskelly, M., Somerton, M., & Pedersen, S. (2024). Home-school interactions for students with disability: A document analysis of Australian policy. *Qualitative Research Journal*.
- Vlcek, S., & Somerton, M. (2023). Collaborative engagement between stakeholders in the education of Australian students with disability: A scoping review. *International Journal of Inclusive Education*. Advance online publication. <https://doi.org/10.1080/13603116.2023.2216693>
- \*Vlcek, S., Somerton, M., & Rayner, C. (2020). Collaborative teams: Teachers, parents, and allied health professionals supporting students with autism spectrum disorder in mainstream Australian schools. *Australasian Journal of Special and Inclusive Education*, 44(2), 102–115. <https://doi.org/10.1017/jsi.2020.11>
- Williams, P. (2012). *Collaboration in public policy and practice: Perspectives on boundary spanners*. The Policy Press. <https://doi.org/10.46692/9781447306306>