Literature review: The use and efficacy of integration aides with students with disabilities in general education settings

Renée Punch PhD

Literature review: The use and efficacy of integration aides with students with disabilities in general education settings

Renée Punch PhD

Table of Contents

Executive Summary

The inclusion of students with disabilities in mainstream schools and classes has increased greatly in Australia and most developed countries in recent years. A response to the presence of these students has been a large increase in the numbers of education support workers employed to work with them, particularly in the case of students with autism spectrum disorders (ASD), intellectual disabilities, behavioural challenges, and multiple disabilities.

A note on terminology

The terminology used for these support workers varies in different countries and in different Australian states and territories. The word *paraprofessional* is commonly used in the USA, and the terms *paraeducator* and *teacher assistant* are also found in the U.S. literature. In the U.K. the term *teacher assistant* is generally used. In Australia many states use the term *teacher aide*. In Victoria the term most commonly used is *integration aide*. The term *integration aide* will be used throughout this review, except in direct quotations where authors use other terms.

The findings of recent studies have revealed several unintended and serious consequences of a heavy reliance on the use of integration aides, particularly in the areas of students' learning, social inclusion, and independence. Their findings have also clarified ways in which the use of integration aides can positively affect inclusion and learning for students with disabilities. This literature review presents these findings, as well as recommendations that have been made for improving the ways in which integration aides are utilised and for alternatives to a heavy reliance on integration aides to support inclusive education.
The key findings are:

Roles and responsibilities of integration aides
- Roles and responsibilities are seldom clearly delineated in job descriptions or job advertisements.
- Recruitment of integration aides is often informal.

- Many integration aides have no training specific to the position, and qualifications or experience are seldom explicitly required.
- Integration aides are increasingly taking on instructional roles with the students they support.

Impact on student learning

- Studies report a negative relationship between the amount of integration aide support and the academic outcomes of the students supported (not explained by variables such as students' level of disability).
- There is evidence of increased student engagement with some aspects of learning, particularly staying on-task.
- When integration aides are present, there tends to be an increase in interaction with adults, but with the aides rather than with teachers.
- Teachers can treat the integration aide as the 'expert' on the students with disabilities in their classes.
- There can be a high degree of student segregation, due to either being outside of the classroom or being seated at the back or side of the class with the integration aide.
- Compared to teachers, integration aides place a greater emphasis on task completion and less on engagement in learning.
- There is a positive effect on student literacy of targeted, research-based interventions by integration aides specifically trained and supported to deliver the intervention.

Impact on social inclusion

- Students may be physically and socially segregated from classroom peers while receiving integration aide support.
- The presence of integration aides can reduce opportunities for students to interact with their peers.
- Some students feel embarrassed at having the obvious support of integration aides.

- Integration aides can have a temporary and situational role in preventing bullying, but may contribute to the problem through the stigmatising effect of their presence for the student with a disability.

- Specific, targeted intervention training for integration aides can have positive effects on social interactions of students with disabilities and their peers.

Impact on student independence

- Students can become overly dependent on integration aide help in the classroom.

- Some integration aides may be overzealous in providing assistance in cases where students could, and should, make their own efforts.

- Integration aides can find it difficult to achieve the right balance between helping and encouraging independence.

- The entrenched nature of integration aide support for some students can impede the development of independence and self-confidence.

Parents' perceptions of integration aides

- Many parents see integration aide support as necessary for their children's inclusion.

- Parents value having close relationships and communication with aides.

- Some parents think of aides as professionals; others are aware of their limitations in training and qualifications.

- Some parents feel that their children become overly dependent on integration aides.

- Some parents report that integration aides support social inclusion; others perceive that their presence can be a barrier to social inclusion.

- Some parents suggest that more support from class teachers and peers could reduce their children's need for integration aide support.

Why school administrators choose to employ integration aides

- Principals report pressure from parents and teachers for integration aide support.

- Teachers who feel overloaded with large and diverse classes welcome support in the classroom.
- Teachers report a reduction in off-task behaviour and disruption when integration aides are present in the classroom.
- Teachers feel underprepared to teach students with disabilities, particularly those with challenging behaviours and inappropriate social skills.
- Principals may need professional development to extend their working knowledge of effective research-based practices in the inclusion of students with disabilities.

Recommendations for improving the use of integration aides

- Integration aide roles and responsibilities should be clearly delineated and limited to non-instructional roles (administrative duties, personal care, materials preparation) and supplemental rather than primary instruction.
- This instruction should be based on plans developed by classroom or special education teachers.
- Integration aides should be trained to carry out teacher-prepared plans with fidelity.
- They should also receive training in managing challenging student behaviours.
- Classroom teachers should provide adequate supervision and monitoring to integration aides.
- Teachers should receive training in working collaboratively with, monitoring, and supporting integration aides.
- The practice of working on a one-to-one basis with individual students should be reduced as much as possible. It is preferable to assign integration aides to the teacher or class and have the aides support students in the context of groups.
- Students' needs should be regularly reassessed and the possibility of fading, or reducing individual students' amount of support from aides, should be considered.
- Schools can establish an integration aide pool from which aides can be drawn to address time-limited student needs.

- School administrators should clarify roles and expectations, allocate planning and feedback time for teachers and integration aides, and ensure that integration aides receive initial orientation and ongoing training at the school, classroom, and individual student level.

Recommendations for alternatives to an over-reliance on integration aides

- Special education teachers should be better deployed to support and advise classroom teachers, integration aides, and the school community. Special education teachers should work collaboratively with classroom teachers to develop individual education plans, to adapt curriculum and instruction, and to plan, implement, model, monitor and evaluate teaching programs.

- Better use may be needed of other specialist professionals, such as speech pathologists, occupational therapists, and educational psychologists, through a team support approach for students with complex needs.

- Schools should build capacity through training and professional development of mainstream teachers. Most teachers feel underprepared to teach students with disabilities and would benefit from training in specific disabilities, differentiating instruction for mixed-ability groups, positive behaviour supports, and assistive technology.

- Students with disabilities should have age-appropriate input into decision-making about their own supports, and have instruction in self-determination and self-advocacy skills to improve their ability to do this.

- Peers can be used to support students with disabilities in some situations. Peer support is less stigmatizing than support from an integration aide, and has been found to improve students' engagement in classroom instruction and expand communication skills and social interactions.

- School principals need to ensure school-wide collaboration, support, planning time, and best use of resources to enable quality inclusive practices in the classroom.

- Change at the systemic and whole-school level is needed. School administrators have a strong influence in shaping the school culture, and their leadership is essential to creating inclusive environments and supporting inclusive practices.

Introduction

The inclusion of students with disabilities in mainstream schools and classes has increased greatly in Australia and most developed countries in recent years. A response to the presence of these students has been a large increase in the numbers of education support workers (generally called integration aides in Victoria) employed to work with them, particularly in the case of students with autism spectrum disorders (ASD), intellectual disabilities, behavioural challenges, and multiple disabilities.

In recent years, educationalists and researchers have been raising questions and concerns about the use, and possible overuse, of integration aides to support the inclusion of students with disabilities in mainstream classes. In particular, concerns have been raised about the increasingly instructional role of integration aides and the resulting problem that the least qualified personnel are working with students who have the most complex learning challenges. Researchers have emphasised that these concerns in no way should be seen as a criticism of integration aides, who are generally dedicated and hardworking in challenging roles and who can make valuable contributions in schools (Giangreco, 2013; Giangreco, Doyle, & Suter, 2012; Webster & Blatchford, 2015). Nevertheless, over-reliance on integration aides as a response to the inclusion of students with significant disabilities in general education settings can produce a situation that is not in the best interests of these students and, moreover, is inequitable, as these authors explain (Giangreco, Suter, & Doyle, 2010, p. 51):

> If you are a student without a disability, highly qualified teachers deliver your education. If you are a student with a certain type of disability label (e.g., autism, emotional/behavioural disorders, intellectual disabilities, multiple disabilities), the likelihood increases that you will receive a substantial part of your education from a paraprofessional who may be inadequately prepared, trained, and supervised (Broer, Doyle, & Giangreco, 2005; Giangreco & Broer, 2005). Such a scenario would be considered unacceptable for students without disabilities, yet we have grown to consider it acceptable for some students with disabilities, in part because these supports are offered with benevolent intentions, and they relieve pressures on teachers and special educators, many of whom feel overloaded with large and diverse classes and caseloads.

For some time there was very little published research on the impact of integration aides working in general classes with students with disabilities (Blatchford et al., 2011; Giangreco, 2010a). Recently, however, many rigorous empirical studies have been published that shed light on the effects of large-scale use of integration aides. The findings of these studies have revealed several unintended and serious consequences, particularly in the areas of students' learning, social inclusion, and independence. Their findings have also clarified ways in which the use of integration aides can positively affect inclusion and learning for students with disabilities. This literature review presents these findings, as well as recommendations that have been made for improving the ways in which integration aides are utilised and for alternatives to a heavy reliance on integration aides to support inclusive education.

Roles and responsibilities of integration aides

Integration aides are employed in schools to provide support to students and teachers, specifically to support students with disabilities in general education classes. The duties of these support staff can include providing administrative assistance to teachers, preparing materials, supervising students in group settings such as playgrounds, and providing personal care, social and behavioural support, and supervision to students; however, their roles have become increasingly instructional (Giangreco, 2013; Howard & Ford, 2007; Webster & Blatchford, 2015). Integration aides may be assigned to support a teacher and classroom or to support an individual student. Support is more often provided to individual students when those students have more severe disabilities or behavioural difficulties. Support is also more likely to be provided on an individual basis to students in secondary school than to primary students (Blatchford, Bassett, Brown, & Webster, 2009; Webster et al., 2010).

In most jurisdictions, formal qualifications are not a prerequisite for employment as an integration aide. In the United Kingdom, "teaching assistants" need no set qualifications, but there is a category of "Higher Level Teaching Assistant" for which a nationally recognized qualification in literacy and numeracy is required (http://www.skill.org.uk/page.aspx?c=359&p=485). In the USA, the *No Child Left Behind Act 2002* mandates minimum qualification levels for "paraprofessionals"

employed in schools receiving federal funds. The paraprofessional must have completed two years of study at an institution of higher education; or "be able to demonstrate, through a formal State or local academic assessment, knowledge of and the ability to assist in instructing, reading, writing, and mathematics" (Department of Education USA, 2004, p. 2).

In Australia, the 2012 review of the *Disability Standards for Education 2005* reported concerns about the variation in skills and qualifications of integration aides in Australia and the lack of benchmarking of training for these support staff (Department of Education Employment and Workplace Relations, 2012). In Australian states and territories, there is no requirement for training for integration aides in schools. Certificate courses are available; for instance, Monash University and Deakin University both offer a Certificate of Education Integration Aide course, and TAFE and private colleges offer Certificate III courses in Education Support. However, completion of such courses is not a prerequisite for employment as an integration aide in Victorian schools. Nevertheless, some aides do have a Certificate course (or higher) qualification. If integration aides choose to undertake a course, generally they will do this at their own expense (Victorian Equal Opportunity & Human Rights Commission, 2012). When they have the opportunity to attend individual workshops or professional development days, integration aides are generally keen to do so. Schools may pay for these, but usually aides are expected to attend them in their own time (Howard & Ford, 2007).

The employment situation of integration aides in Australian schools is relatively unstable, with most employed on a part-time basis, either casual or fixed-term, and their recruitment is often in response to the variable enrolment of students with disabilities in a particular school or district (Bourke & Carrington, 2007; Howard & Ford, 2007; Stephenson & Carter, 2014). The recruitment process tends to be informal, and many positions are filled without being advertised. Rather, schools often employ people who are known to them and who are part of the school community such as volunteers at the school or mothers of the school's students (Butt & Lowe, 2012; Howard & Ford, 2007). The large majority of integration aides are female (Broer, et al., 2005; Howard & Ford, 2007).

When integration aide positions are advertised, stated criteria largely include generic capacities rather than qualifications or experience. Stephenson and Carter (2014) examined job advertisements from all Australian states and territories, for

"teacher aide" positions in government, Catholic, and independent schools. They reported that the most frequently used criteria were the ability to work co-operatively as part of a team and effective communication skills. Most of the advertisements did not mention qualifications or experience. Only 11% of the advertisements included knowledge of the educational or social needs of students with disabilities, and in only one was this listed as an essential criterion.

Despite their general lack of training and qualifications, there is evidence that integration aides in Australia and other countries are increasingly taking on pedagogical and instructional roles (Blatchford, et al., 2011; Department of Education Employment and Workplace Relations, 2012; Giangreco, 2013; Howard & Ford, 2007). Many integration aides have high levels of autonomy in their provision of academic, social, and behavioural support to students (Giangreco, Broer, & Suter, 2011; Howard & Ford, 2007; Webster & Blatchford, 2015). Their responsibilities can include adapting curriculum and instructional materials, regardless of whether they have had any training to do this (Howard & Ford, 2007).

In a study of primary and secondary schools in one U.S. state, integration aides reported their most frequent tasks to be providing one-on-one instruction, facilitating relationships among students, providing instructional support, and implementing behaviour management programs (Carter, O'Rourke, Sisco, & Pelsue, 2009). The authors suggested that the levels of training of most integration aides were inadequate for the performance of some of these tasks, especially those involving instructional responsibilities.

In summary, the key aspects of the roles and responsibilities of integration aides are:

- Roles and responsibilities are seldom clearly delineated in job descriptions or job advertisements.
- Recruitment of integration aides is often informal.
- Many integration aides have no training specific to the position, and qualifications or experience are seldom explicitly required.
- Integration aides are increasingly taking on instructional roles with the students they support.

Impact on student learning

Few studies have directly examined the effect of integration aide support on students' learning outcomes. However, in the UK, a large-scale, longitudinal government research study called the Deployment and Impact of Support Staff (DISS) project measured the impact of the amount of integration aide support on two outcomes: (1) student attitudes to learning and (2) academic attainment in relation to progress over one school year (Blatchford, et al., 2011; Webster, et al., 2010). The study involved 77 schools and over 8,000 students across seven different year levels in primary and secondary schools. The findings showed no positive impact of integration aide support on student attitudes to learning (e.g., motivation, distractibility, and task confidence) in any of the year levels except Year 9. However, a clear negative relationship was found between the amount of integration aide support and students' academic progress across all year levels. The more integration aide support students received, the less progress they made in English, mathematics, and science. This effect was not explained by student factors such as level of disability, family income, or English as a second language, as the analysis controlled for these potentially confounding variables.

Observational findings in the same study indicated potentially positive effects of integration aide presence in two ways: an increase in student on-task behaviour, and a more active role in interactions with adults. However, the increase in interactions was with the integration aide and at the expense of interactions with teachers (Blatchford, Bassett, Brown, & Webster, 2009).

Webster and Blatchford (2013, 2015) followed up the large DISS study with a more intensive examination of the quality of educational experiences of students with disabilities in primary schools. Their study included 48 Year 5 students who had moderate learning difficulties and/or behavioural, emotional, and social difficulties. Researchers shadowed each child for a week, and gathered quantitative and qualitative data from systematic observations. These data were augmented with data from school documentation and from semi-structured interviews with teachers, integration aides, special education coordinators, and parents. The results indicated a high level of one-to-one interaction between students with disabilities and integration aides, and a high degree of separation of these students from their classrooms. Over a

quarter of their time was spent physically away from the regular classroom. The observations also revealed two more subtle forms of segregation when students with disabilities were present in the classroom. The first was that the majority of the students' interactions were with the integration aide, with very few interactions occurring between these students and their teachers. The second form of segregation occurred when a student with disabilities was seated at a desk at the side or back of the room with an integration aide, away from peers. Overall, teachers had a low level of involvement in planning for and teaching the students with disabilities. In addition, class teachers frequently treated the integration aide as the 'expert' on the students with disabilities in their classes (Webster & Blatchford, 2015).

Similar practices are reported in other UK studies, such as Emam and Farrell's (2009) investigation of students with ASD in primary and secondary schools, as well as studies from the USA (Giangreco, et al., 2011; Giangreco, Suter, et al., 2010), New Zealand (Rutherford, 2012), Sweden (Hemmingsson, Borell, & Gustavsson, 2003) and Australia (Howard & Ford, 2007). In Howard and Ford's study, integration aides in South Australian secondary schools reported that they often worked with individual students or small groups of students away from the classroom. In addition, they regularly modified materials and assignments without direction from teachers. In their study of students with physical disabilities, Hemmingsson and colleagues reported that teachers spoke directly to the integration aide with instructions, rather than to the student with a disability. In New Zealand, Rutherford found that in some cases aides, rather than teachers, had responsibility for adapting curriculum content, often with a minimal knowledge of the curriculum area.

All of these studies revealed situations in which students with disabilities were receiving less instruction from teachers than their class peers and were experiencing physical separation; in effect, a "micro-exclusion" within supposedly inclusive settings (Giangreco, Doyle, & Suter, 2014).

As part of the British DISS study, and in order to further explore the types and quality of support in classrooms, researchers analysed transcripts of the talk used by teachers with students and talk used by integration aides with students. In their study of mathematics classes in primary and secondary schools, Radford, Blatchford, and Webster (2011) reported that teachers generally 'opened up' while integration aides 'closed down' the talk. Integration aides emphasised task completion, using closed questions to support students to complete written tasks, and supplying correct answers

when students failed to do so. In contrast, teachers used open questions, and their repair strategies included scaffolding, prompts, and withholding outright correction. Some aspects of the integration aides' support were clearly beneficial to the students they supported, such as helping them to stay on task and encouraging them to participate in whole class discussion. Nevertheless, the authors expressed concern over the integration aides' emphasis on task completion rather than encouragement of learning and independent thinking.

Another, slightly different, analysis was conducted in English and mathematics classes (Rubie-Davies, Blatchford, Webster, Koutsoubou, & Bassett, 2010). The findings were similar: Integration aides tended to focus on task completion and supply answers to the students, whereas teachers' talk promoted thinking and learning. A worrying finding in both reports is that integration aides sometimes did not understand the concepts they were trying to assist students with and gave confusing and incorrect explanations to students.

These authors asserted that opportunities for more pedagogically sound practices exist. They suggested that "given targeted training from specialist teachers or therapists, [TA] staff might demonstrate different skills" (Radford, et al., 2011, p. 632). They have proposed a model of scaffolding that teachers and integration aides can use together in the classroom and suggested the type of training that could enable teachers and integration aides to work collaboratively using such practices (Radford, Bosanquet, Webster, & Blatchford, 2015).

The DISS study reported that the way integration aides worked with students differed in primary and secondary school settings. In primary classes, they largely worked with groups of students, while at secondary level they worked more exclusively with the individual student they were supporting (Blatchford et al., 2009; Blatchford, Bassett, Brown, & Webster, 2009; Webster, et al., 2010). It is not uncommon that the education of students with disabilities, especially intellectual disabilities, becomes less inclusive in high school than it was in primary school. As educators perceive widening academic and functional gaps between the students with disabilities and their class peers, they respond by increasing the students' time spent with integration aides or special educators. Doyle and Giangreco (2013) proposed alternative ways to ensure students remain included in high school, including approaches to curriculum such as multi-level curriculum and instruction and curriculum overlapping.

When integration aides are trained and prepared to support students in specific curricular interventions (this happens mostly for literacy), student learning outcomes can be influenced in a positive direction (Webster, et al., 2010). A number of studies have found positive outcomes when integration aides are using evidence-based reading approaches, are trained in the particular approach, and have ongoing monitoring and feedback from teachers (Alborz, Pearson, Farrell, & Howes, 2009; Causton-Theoharis, Giangreco, Doyle, & Vadasy, 2007; Farrell, Alborz, Howes, & Pearson, 2010; Lane, Fletcher, Carter, Dejuc, & DeLorenzo, 2007; Vadasy, Sanders, & Tudor, 2007). Most of the studies involved primary school children, some of whom did not have identified disabilities but were considered at risk of literacy failure.

Other studies have involved integration aide training in supporting students with ASD. Hall, Grundon, Pope, and Romero (2010) report on a training package for integration aides working with preschool children with ASD. Skills taught, such as effective prompting and elaboration of communication, increased but were not generalized to the educational setting or maintained over time without ongoing coaching and performance feedback.

In summary, the key findings on the effects of integration aide support on student learning are:

- Studies report a negative relationship between the amount of integration aide support and the academic outcomes of the students supported (not explained by variables such as students' level of disability).
- There is evidence of increased student engagement with some aspects of learning, particularly staying on-task.
- When integration aides are present, there tends to be an increase in interaction with adults, but with the aides rather than with teachers.
- Teachers can treat the integration aide as the 'expert' on the students with disabilities in their classes.
- There can be a high degree of student segregation, due to either being outside of the classroom or being seated at the back or side of the class with the integration aide.
- Compared to teachers, integration aides place a greater emphasis on task completion and less on engagement in learning.

- There is a positive effect on student literacy of targeted, research-based interventions by integration aides specifically trained and supported to deliver the intervention.

Impact on social inclusion

Studies have also reported unintended effects of integration aide support on the social inclusion of students with disabilities. In their interview study of South Australian integration aides supporting secondary school students with a wide range of disabilities, Howard and Ford (2007) found that many of the students were often isolated socially from their peers without disabilities and relied on the integration aides for social interaction during break times. In a West Australian study, 60 secondary students with learning, intellectual, and speech language disabilities were surveyed using the Student Perception of Classroom Support Scale. Findings showed that students found one-to-one integration aide support helpful academically, but from a social perspective they preferred the support to be shared with other class members. They indicated that sitting with other students and working on projects jointly with them was a classroom practice most likely to benefit them socially (O'Rourke & Houghton, 2008).

In their study of students with physical disabilities, Hemmingsson, Borell, and Gustavsson (2003) observed that the close proximity of integration aides decreased opportunities for peer interactions in class, and that integration aides often sat with the students with disabilities during breaks. Student interviews revealed that, although the students often appreciated the learning assistance from integration aides, they resisted the assistance if they felt that it compromised their social inclusion with their peers.

Other studies presenting students' perspectives have reported feelings of isolation and a sense of not belonging with classroom peers. In a U.S. study of the experiences of students with intellectual disabilities, young adults looking back on their school years recalled having few friends among their peers and described the integration aides as their friends, in some cases as their "best friend." Some students perceived the integration aides' presence as exacerbating their social problems. Some felt as though the integration aide took on the role of a mother; in the words of one boy: "that's why I didn't have any best friends or a girlfriend in high school because I always had a mother on my back" (Broer, et al., 2005, p. 421).

Many studies have reported that adolescents with a variety of disabilities dislike, or even resent, being singled out for special assistance, whether by special education teachers or integration aides. Australian studies of secondary students who have ASD (Saggers, Hwang, & Mercer, 2011), who are deaf or hard of hearing (Punch & Hyde, 2005), and who have visual impairments (Whitburn, 2013) have noted students' reluctance to being treated differently in this way in front of their classmates. The students with visual impairment in Whitburn's (2013) study described feeling embarrassed by their apparent dependence on the help of integration aides. They felt socially segregated from their classroom peers, particularly when they had to sit with an integration aide away from the other students. They appreciated integration aide services such as resource preparation, provision of specialised equipment, and discreet in-class support. However, they intensely disliked support that they perceived as overbearing and too authoritarian. Some students felt that they would not need so much integration aide support in class if teachers took more care to include them by increasing verbal communication and accessible resources.

A qualitative Canadian study of primary and secondary students with disabilities including autism and Down syndrome reported that some students spent most of their school day in the presence of integration aides (Tews & Lupart, 2008). Some of these students disliked this situation; however, others felt that the integration aide assisted their socialisation with peers in various ways: by helping them stay focused in play situations, by educating other students about their disability, and by protecting them from bullying. Bullying was an issue reported by students in the study by Broer et al. (2005). While the close proximity of an integration aide could shield them from bullying or being 'picked on,' this protection was situational and temporary, and some students felt that having an integration aide contributed to their being picked on by their classmates.

In a study of the perceptions of general and special education teachers who had students with ASD in their classes, general teachers reported that they would be more competent to assist these students "in navigating the social culture" of the school if they had more consultation time with special educators (Able, Sreckovic, Schultz, Garwood, & Sherman, 2015, p. 52). Both general and special educators believed that peer support systems could be effective in breaking social barriers at school. Special educators felt that they needed more time and skills to facilitate such

systems. (Studies reporting on the use of peer supports are described in the Peer Support section, below).

In a large U.K. study investigating school factors associated with educational progress for included students with ASD, Osborne and Reed (2011) reported that a greater presence of integration aides was associated with a reduction of behavioural and emotional problems, but also with a worsening of social behaviour. In their observational study in U.K. secondary school classrooms, Symes and Humphrey (2012) reported that students with ASD were less likely to work independently and be socially included than students with dyslexia and students with no disability, particularly when an integration aide was present. It was common for students with ASD to choose to work with the aide rather than a classmate. In general, the presence of an integration aide reduced the opportunities for a student with ASD to interact with peers.

However, there is evidence that, following specific training, integration aides can have a beneficial effect on social interactions. In one study, four integration aides underwent a four-hour in-service training session in knowledge and strategies designed specifically to facilitate interactions between students with severe disabilities and their peers without disabilities in general education settings (Causton-Theoharis & Malmgren, 2005). Observations after this intervention were compared with baseline levels of peer interactions. The number of peer interactions increased dramatically; after the integration aides' training, students interacted 25 times more frequently with peers than at the baseline level. Another study examined the effects of an integration aide training program aimed to improve interactions between primary students with behavioural disorders and their peers (Malmgren, Causton-Theoharis, & Trezek, 2005). Student interactions increased after the training and intervention, and the integration aides faded their assistance more frequently.

Other studies have found benefits of similar training interventions with integration aides working with students with ASD. Koegel, Kim, and Kogel (2014) measured socialisation of primary students with ASD before and after a training intervention for their integration aides. The aides participated in a one-hour training workshop, learning skills to use in social activities such as games. The data from observations after the training intervention showed significant increases in engagement with peers without disabilities compared to baseline data, and these levels were maintained over time. Robinson (2011) reported similar findings using a

brief video feedback training package with integration aides supporting primary students with ASD.

The findings of these studies suggest that integration aides, when provided with relatively brief training, can greatly improve their skills, with significant benefits to the social behaviours and interactions of primary students with disabilities.

In summary, key findings on the effects of integration aide support on social inclusion are:

- Students may be physically and socially segregated from classroom peers while receiving integration aide support.

- The presence of integration aides can reduce opportunities for students to interact with their peers.

- Some students feel embarrassed at having the obvious support of integration aides.

- Integration aides can have a temporary and situational role in preventing bullying, but may contribute to the problem through the stigmatising effect of their presence for the student with a disability.

- Specific, targeted intervention training for integration aides can have positive effects on social interactions of students with disabilities and their peers.

Impact on student independence

Another inadvertent result of integration aide support can be a limitation of the development of independence in students with disabilities. Students can become so used to integration aides' input that they are hesitant to participate without their direction or prompting (Giangreco, 2010a). Observational and interview studies have reported that the presence of integration aides can have the effect of reducing student autonomy and independence.

Hemmingsson and colleagues (2003) noted that students had little control over when and how much assistance their integration aides provided, and some aides tended to initiate help that the student may not have needed. In a Norwegian study, students aged from 12 to 14 years with physical disabilities reported that they appreciated practical help from integration aides when necessary, but felt that help

was often provided when it was not needed, and that this compromised their independence and sense of equality with other students (Asbjornslett, Engelsrud, & Helseth, 2014). Whitburn (2013) reported similar findings for Australian secondary students with vision impairment.

A U.S. study of young adults with intellectual disabilities reported that aides would often intervene too much; in the words of one ex-student: "I didn't even have to do anything. She pretty much did it all for me" (Broer, et al., 2005, p. 424). Some of the students reported systematic fading of integration aide support, with support reduced to certain classes only, or being considered no longer necessary at all, and these students were clearly proud of their growing independence.

Some integration aides have described struggling to find a balance between helping students and encouraging their independence. In a study of the perceptions of integration aides working with secondary students with ASD in England, one aide asked "where is that line between…. keeping them on task and realising, well actually, are they looking for me for too much support? (Symes & Humphrey, 2011a, p. 61). Given that these integration aides reported that they wanted to encourage independence but found it difficult to do so, the study's authors suggested the need for training focused on strategies to encourage independent learning.

In the intensive observational part of the DISS study, Webster and Blatchford (2013, 2015) found that the majority of integration aides worked in ways likely to maintain dependence, despite the schools reporting that a part of their roles was promoting independence and building self-confidence. These authors suggested that: "for many pupils, one-to-one, often intensive, TA support had become a way of life since the early years. It is hard to reconcile, therefore, how a pupil's independence and self-confidence could be raised by putting in place adult support on the basis that the pupil is unable to do things by him/herself" (Webster & Blatchford, 2015, p. 11).

In summary, key findings about the impact of integration aide support on student independence are:

- Students can become overly dependent on integration aide help in the classroom.
- Some integration aides may be overzealous in providing assistance in cases where students could, and should, make their own efforts.

- Integration aides can find it difficult to achieve the right balance between helping and encouraging independence.
- The entrenched nature of integration aide support for some students can impede the development of independence and self-confidence.

Parents' perceptions of integration aides

Parents often see integration aides as being the key to their child's inclusion in a mainstream school. In Victoria, some parents have reported that their child's education is hindered by a lack of sufficient funded hours of integration aide support (Victorian Equal Opportunity & Human Rights Commission, 2012). While it is easy to understand that parents of children with disabilities would want to ensure that their child was adequately supported in school, there are many reasons why intensive integration aide support may not be the optimal, or the only, solution to their concerns (Giangreco, Yuan, McKenzie, Cameron, & Fialka, 2005). Research into the perspectives of parents indicates that these reasons become apparent to some parents of students receiving such support.

The small amount of published research on parents' perspectives on integration aide support comes largely from the USA. Two studies have reported findings from in-depth interviews and focus groups with parents of students who were receiving integration aide support in general education classes. The first study reported interview findings from 28 parents of primary students with a range of disabilities, most commonly learning disabilities but also autism, Down syndrome, and ADHD (Werts, Harris, Young Tillery, & Roark, 2004). The majority of the parents spoke highly of their children's integration aides, and a quarter of them believed that their child's inclusion in the general education classroom would not be possible without integration aide support. Many parents viewed the integration aides as professionals who should receive more respect within the school. However, other parents expressed concerns that integration aides were not well-trained, and that teachers, rather than aides, should be the ones working with students with additional difficulties or disabilities. One mother spoke of her concerns about her son's dependence on adult help, and said she thought that peer support might be just as effective.

The second study included mothers of primary and secondary students, the majority of whom had high support needs (French & Chopra, 1999). Some of the mothers strongly expressed their regard for their children's integration aides, seeing them as 'connectors' with whom, in some cases, they had close personal relationships. Integration aides telephoned mothers regularly (every day after school in one case) and parents communicated more with them than with class teachers or resource room teachers. Many parents perceived that the integration aides facilitated their children's social interactions with classmates. However, others had misgivings about the role of integration aide support for their children. They saw that it could be a barrier to social inclusion, and spoke about aides "babying" and "hovering." They were concerned about unnecessary dependence on this adult support, with children getting used to accepting help and not growing in competence or confidence. In the words of one mother: "I just want them [paraprofessionals] to hang back and let her try and if she is unsuccessful, it is fine. My other kids are unsuccessful a lot of times too but they have to try" (p. 265).

Parents of children who needed physical care and help at school spoke about issues of training, privacy, and dignity. Some thought it inappropriate that the person who was like a teacher to their children in the classroom should also take them to the toilet. Specifically, one mother was concerned that a female integration aide assisted her teenage son with toileting. Other concerns of parents in this study involved integration aides' lack of training in knowledge of specific disabilities, in subject areas, and in behavioural issues.

In summary, key findings about parents' perceptions of integration aide support are:

- Many parents see integration aide support as necessary for their children's inclusion.
- Parents value having close relationships and communication with aides.
- Some parents think of aides as professionals; others are aware of their limitations in training and qualifications.
- Some parents feel that their children become overly dependent on integration aides.
- Some parents report that integration aides support social inclusion; others perceive that their presence can be a barrier to social inclusion

- Some parents suggest that more support from class teachers and peers could reduce their children's need for integration aide support.

Why school administrators choose to employ integration aides

Giangreco (2013, p. 2) maintains that integration aides "have become almost exclusively *the way*, rather than *a way*, to support students with disabilities in general education classrooms, especially those with severe or low-incidence disabilities." In many countries the use of integration aides has become entrenched and is seen as "the solution to inclusion" (Rutherford, 2012, p. 760). The decision to employ an integration aide can be an almost automatic response on the part of administrators to the enrolment of students with significant disabilities in their schools (Giangreco, et al., 2011).

There are several reasons why school administrators choose to employ integration aides as the primary response to the presence of students with disabilities in general classrooms. It is not always easy to determine the nature of the services an individual might need. The review of the *Disability Standards for Education 2005* reported that parents may be given a certificate from a medical or other specialist stating what their child needs, such as access to an integration aide a certain proportion of in-class time. Schools have suggested that it would be more helpful for such certificates to describe the functional needs of the student rather than the type of educational support to be provided (Department of Education Employment and Workplace Relations, 2012).

School principals have reported considerable teacher, special educator, and parent advocacy for integration aide support for students with disabilities. Once a student is assigned an aide, there is often pressure to maintain the services, even when the student no longer needs them (Giangreco, et al., 2011). In general, teachers like having integration aides when they have students with disabilities in their classes, reporting more job satisfaction and lower levels of stress. Teachers can feel overloaded with large and diverse classes, and welcome support (Giangreco, Carter, Doyle, & Suter, 2010; Shaddock, Smyth, & Giorcelli, 2007). Their workloads can be reduced if integration aides relieve them of some of their administrative duties. In addition, teachers report a reduction in off-task behaviour and disruption in

classrooms when integration aides are present (Blatchford, Bassett, Brown, & Webster, 2009; Webster, et al., 2010).

Another reason teachers like to have integration aides in their classes is that most mainstream teachers are not well-prepared or equipped with the knowledge and skills to teach students with disabilities (Department of Education Employment and Workplace Relations, 2012). Teachers feel that they have insufficient training and expertise in teaching students with disabilities, and have particular concerns about students with limited communication, challenging behaviours, or inappropriate social skills (Forlin, Keen, & Barrett, 2008; Soto-Chodiman, Pooley, Cohen, & Taylor, 2012; Subbann & Sharma, 2006). It is often an expected part of integration aides' roles to deal with disruptive behaviours by removing the student from the classroom (Rutherford, 2012).

In a study of Victorian primary school teachers attitudes' towards including students with disabilities in general education classes, Subban and Sharma (2006) reported that teachers who had undertaken some form of training in teaching students with disabilities had more positive attitudes than teachers without such training. They also found that teachers were most concerned about insufficient paraprofessional staff, special education staff, resources, and funding to support the inclusion of students with disabilities.

The inclusion of students with ASD, which has increased considerably in recent years in schools in Australia and elsewhere, has been described as one of the most complex areas of education, and is often considered more difficult to implement than the inclusion of students with other special educational needs (Humphrey & Symes, 2011; Symes & Humphrey, 2012). Teachers tend to view integration aide support as indispensible for students with ASD in their classrooms. In their study of teachers' views of including students with ASD, Emam and Farrell (2009) found that teachers relied heavily on integration aides for ensuring completion of academic tasks, prompting students' academic participation, and managing behavioural problems. Teachers report that they find the presence of students with ASD in their classes particularly challenging and feel they are ill-equipped to address these students' needs and manage the social, emotional, and behavioural manifestations of the students' ASD (Humphrey & Symes, 2011; Lindsay, Proulx, Thomson, & Scott, 2013; Symes & Humphrey, 2012).

Giangreco, Doyle and Suter speak of a "reactive stance" whereby schools react to the presence of students with disabilities by "adding on services without substantively reconceptualizing service delivery in ways that integrate general and special education" (Giangreco, et al., 2012, pp. 363-364). These authors maintain that this situation "necessitates rethinking how schools might proactively account for the full range of student diversity" (p.364). Principals may not be fully aware of possible alternatives to using integration aides, and may need professional development to extend their working knowledge of effective research-based practices in the inclusive education of students with disabilities (Di Paola & Walther-Thomas, 2003).

In summary, the major reasons administrators choose to employ integration aides are:

- Principals report pressure from parents and teachers for integration aide support.
- Teachers who feel overloaded with large and diverse classes welcome support in the classroom.
- Teachers report a reduction in off-task behaviour and disruption when integration aides are present in the classroom.
- Teachers feel underprepared to teach students with disabilities, particularly those with challenging behaviours and inappropriate social skills.
- Principals may need professional development to extend their working knowledge of effective research-based practices in the inclusion of students with disabilities.

Recommendations for improving the use of integration aides

The findings of the DISS study in the UK led to the implementation of trials in six primary and four secondary schools to develop improved models of using integration aides (Webster & Blatchford, 2012; Webster, Blatchford, & Russell, 2013). Over the course of one year, schools made changes in three areas: integration aide preparedness, deployment, and practice. In the first area, planning and feedback time between teachers and aides was increased by finding time within the school day or modifying integration aides' work hours. The quality of lesson preparation and

planning improved and aides felt more confident in their roles and in their instructional and subject knowledge. In deployment, the roles and activities of teachers and aides showed the beginnings of change. The amount of time teachers spent with students with disabilities increased and aides spent more time working with a mix of students. Changes in practice involved ways in which integration aides interacted with students, using more appropriate talk and strategies to encourage student independence.

If integration aides are to be used to better effect in mainstream classrooms, enhanced training for mainstream teachers in working collaboratively with, monitoring, and supporting integration aides is necessary (Alborz, et al., 2009; Australian Association of Special Education, 2007; Webster, et al., 2010). As well, when classroom teachers have a good understanding of the implications of a disability, better collaboration between teacher and aide is likely. Integration aides working with students with ASD reported that their role is facilitated when classroom teachers have good awareness of the needs of students with ASD and have had specific ASD training (Symes & Humphrey, 2011b).

It is clearly important for integration aides to have training in specific disability areas and in specific teacher-planned tasks and interventions (Alborz, et al., 2009; Webster, et al., 2010). The examples given in earlier sections of this review indicate the benefits of integration aides being trained to deliver specific, targeted curricular and social interventions. However, care must be taken that more training does not result in further dependence on the use of integration aides (Australian Association of Special Education, 2007; Bourke, 2009). Giangreco (2013) warns against falling into a 'training trap,' which can occur when teachers assume that they can relinquish more instructional responsibility to integration aides because they are 'trained.' Training alone is not sufficient to address the serious unintended consequences of the reliance on the use of integration aides with students with disabilities. Giangreco asserts that although training of integration aides and ensuring that they are supervised by teachers are desirable practices, "such steps alone do not address systemic changes needed to rectify inherent inequities present in schools where the more challenging the learning characteristics of the student, the more likely he or she is to receive instruction from teacher assistants rather than teachers" (Giangreco, 2010b, p. 344).

One suggestion to improve the way integration aides are deployed is that individual schools can establish a pool of aides who can be used as "floaters" to address time-limited student needs across different classes and grade levels (Giangreco, et al., 2011). For instance, the introduction of a new program or behaviour support plan might require intensive initial support that can be scaled back or withdrawn according to student progress. This type of integration aide resource pool is conducive to fading individual student support where appropriate, and can "provide administrative flexibility, encourage student independence, and establish an expectation among professionals and families that the assignment of a paraprofessional doesn't mean it is, or should be, permanent" (Giangreco, Halverson, Doyle, & Broer, 2004, p. 86).

The major researchers and educators in the field concur that there is an imperative for schools to assess and improve the way they use integration aides, and they have made recommendations about the ways in which integration aides can best be utilized (Alborz, et al., 2009; Australian Association of Special Education, 2007; Causton-Theoharis, et al., 2007; Doyle & Giangreco, 2013; Giangreco, 2013; Giangreco, et al., 2011; Shaddock, et al., 2007; Webster, et al., 2013). These include:

- Integration aide roles and responsibilities should be clearly delineated and limited to non-instructional roles (administrative duties, personal care, materials preparation) and supplemental rather than primary instruction.
- This instruction should be based on plans developed by classroom or special education teachers.
- Integration aides should be trained to carry out teacher-prepared plans with fidelity.
- They should also receive training in managing challenging student behaviours.
- Classroom teachers should provide adequate supervision and monitoring to integration aides.
- Teachers should receive training in working collaboratively with, monitoring, and supporting integration aides.
- The practice of working on a one-to-one basis with individual students should be reduced as much as possible. It is preferable to assign integration aides to the teacher or class and have the aides support students in the context of groups.

- Students' needs should be regularly reassessed and the possibility of fading, or reducing individual students' amount of support from aides, should be considered.

- Schools can establish an integration aide pool from which aides can be drawn to address time-limited student needs.

- School administrators should clarify roles and expectations, allocate planning and feedback time for teachers and integration aides, and ensure that integration aides receive initial orientation and ongoing training at the school, classroom, and individual student level.

Recommendations for alternatives to an over-reliance on integration aides

Giangreco (2013, p.8) maintains that "utilizing existing teacher assistant resources more wisely is necessary, but not sufficient to achieve substantial change that benefits both students with and without special educational needs." It is important to consider other options.

There are few reports in the literature of schools that have implemented changes with the intention of improving their inclusive practice through alternatives to a heavy reliance on the use of integration aides. In the USA, Giancgreco and colleagues conducted a five-year study field-testing a planning process called *Guidelines for Selecting Alternatives to Overreliance on Paraprofessionals* (Giangreco, et al., 2011). Twenty-six primary and secondary schools across six states participated in the study, in which planning teams examined their schools' practices with students with disabilities, and developed and implemented actions to improve these practices. The most commonly reported changes that occurred as a result of this process were:

- A small reduction in the number of integration aides and a small increase in the number of special educators

- A reduction in special educators' caseloads

- Increased collaboration and co-teaching between classroom and special education teachers

- Changes in the ways integration aides were used, notably (1) a reduction in one-to-one support through assigning aides to classrooms rather than to individual students, (2) moving aides away from providing primary instruction, and (3) assigning aides paperwork tasks normally done by special educators

- Building capacity through training and professional development for teachers

- Use of peer support in place of integration aide support where appropriate

Three years after their initial involvement in the project, school administrators reported that the changes had contributed to improved student outcomes in achievement, behaviour, inclusion opportunities, and social relationships. The initial concerns of school personnel and parents about a reduction in numbers of integration aides were not sustained, and follow-up investigations found that teachers and administrators adjusted well to the changes and reported positive student outcomes. In addition, many parents were happier at seeing their children's increased feelings of belonging after experiencing more natural peer supports and less time with integration aides (Giangreco, et al., 2011).

Under the *More Support for Students with Disabilities* initiative, education authorities in all Australian states and territories have implemented varying initiatives to build capacity in schools to better support students with disabilities. These initiatives include: in Queensland, the development of an Autism Centre of Excellence to work with schools; in Victoria, a Down Syndrome Inclusion Support Service and a real-time captioning program for students who are deaf or hard of hearing; and in Western Australia, the development of a model supporting learning technology innovations in schools (PhillipsKPA, 2014a). All of these have potential for improving inclusion and, possibly, reducing reliance on the use of integration aides. One of these initiatives in particular has relevance to the reduction of over-reliance on aides. The NSW Department of Education and Communities has developed a model that involves an extensive reorganization of human resources and changes in the way special education teachers are used in schools (PhillipsKPA, 2014b). The aim is to have a Learning and Support Teacher (LST) in every mainstream school, where they work collaboratively with classroom teachers to meet the needs of all students, particularly those with additional learning and support needs, including students with disabilities. LSTs work with teachers to identify

students' specific learning and support needs, to plan, implement, model, monitor and evaluate teaching programs, and to develop individual education plans for students with complex needs. LSTs also directly support students through assessing and instructing them, delivering adjusted learning programs, and monitoring their progress. In addition, they assist with the professional development of class teachers and integration aides.

The new specialist role of LST has been filled by former Support Teacher Learning Assistance teachers (STLAs, who previously worked directly supporting students with learning difficulties, disabilities, or behaviour problems), changing the role of itinerant support teachers so that they are based in individual schools, redeploying special education teachers, and employing appropriately qualified casual teachers where necessary.

The use of LSTs involves a shift from a deficit model, where STLAs were responsible for remediating students with difficulties and disabilities, to a capability focus, where LSTs develop teachers' skills to meet the needs of all their students. One primary and one secondary school have been used as case studies to observe and evaluate the new model. These schools consider that the LSTs are improving educational outcomes for students with disabilities and improving school performance in general. To date, reported findings are preliminary; the final evaluation report is due to be publically available in the latter half of 2015.

There is no indication in the reporting of this initiative of an aim of reducing reliance on integration aides. However, there are indications of the better use of integration aides, particularly through LSTs assisting in the professional learning of aides. Certainly the model, with its skilling of classroom teachers and integration of specialist teachers and their expertise into everyday mainstream activity, does appear to have potential for reducing reliance on aides.

In the U.K., the Office for Standards in Education, Children's Services and Skills (Ofsted) reported on its examination of 74 schools to establish factors contributing to high achievement for students with learning difficulties and disabilities. They concluded: "the provision of additional resources to pupils - such as support from teaching assistants – did not ensure good quality intervention or adequate progress by pupils. There was a misconception that provision of additional resources was the key requirement for individual pupils, whereas the survey findings showed that key factors for good progress were: the involvement of a specialist

teacher; good assessment; work tailored to challenge pupils sufficiently; and commitment from school leaders to ensure good progress for all pupils" (Ofsted, 2006, p. 2).

Several key recommendations for alternatives to a heavy reliance on integration aides have emerged from the work of these and other researchers.

Better use of special education teachers

Special education teachers have an important role to play in the successful inclusion of students with disabilities. Through consultative collaboration with mainstream teachers, special educators can "encourage and support positive attitudes, individualisation, develop individual education plans and assist in the use of strategies to facilitate learning" (Pearce & Forlin, 2005, p. 101). They can work with classroom teachers to adapt curriculum and instruction, with applications of strategies such as differentiation and multi-level instruction, so that students with disabilities can work towards their individually determined learning outcomes within shared classroom activities. They can facilitate peer interactions through teaching pro-social behaviours to students with disabilities and teaching their classroom peers how they can best interact with them. They can work with classroom teachers to direct the work of integration aides. Special educators can also act as a source of knowledge about assistive technology options available to support students with various types of disability (Giangreco, Carter, et al., 2010).

Co-teaching, with a general education teacher and a special education teacher working together in the classroom, can reduce reliance on integration aides and potentially benefit all students' learning. This joint instruction can allow for "greater differentiation of instruction and employment of intervention techniques designed to benefit both general and special education students" (Kilanowski-Press, Foote, & Rinaldo, 2010). Sufficient collaborative planning time is essential for optimal co-teaching, and general education teachers are likely to need training in co-teaching methods (Solis, Vaughn, Swanson, & McCulley, 2012). Co-teaching departs so significantly from the 'one teacher per class' model that it is necessary for teachers to be trained in the knowledge and skills required through professional development and ongoing support and coaching in order to implement effective co-teaching practice (Friend, Cook, Hurley-Chamberlain, & Shamberger, 2010).

Giangreco (2010a, 2013) suggests that the provision of more co-teaching can be achieved through resource reallocation, by trading in integration aide positions to hire additional special educators. In addition, lowering special educator caseloads and reducing the number of integration aides they are responsible to supervise enables them to be best used to provide more support in the classroom (Suter & Giangreco, 2009).

Better use of other specialist professionals

Educators and researchers have stressed the need for team support for students with complex needs (Able, et al., 2015; Giangreco, Carter, et al., 2010). Students with ASD, for instance, may need team support from speech pathologists, educational psychologists, special educators, and other professionals, and this type of support can increase teachers' willingness to accept students with ASD in their classrooms (Simpson, Boer-Ott, & Smith-Myles, 2003). The report of the Victorian Equal Opportunity and Human Rights Commission (2012) has suggested that there is an unmet need in Victorian schools for specialist supports, such as speech pathologists, occupational therapists, and Auslan interpreters. In addition, assistive technology and specialist equipment is not always available.

The *More Support for Students with Disabilities* initiative emphasises the potential role of assistive technologies for students with disabilities in general education classrooms, particularly the use of mainstream technologies, such as the iPad, with specialized applications that can be matched to individual student needs (PhillipsKPA, 2013).

Building capacity of general education teachers

In order to decrease reliance on integration aides and increase the amount and quality of instructional time students with disabilities receive from classroom teachers, it is necessary to build the professional capacity of these teachers to enable them to support the educational needs of the students with disabilities in their classes (Giangreco, et al., 2004). Training is a major component of this capacity building. Currently, mainstream teachers are unlikely to have received much training in working with students with disabilities. Younger teachers are more likely to have more training than older teachers, as many Australian undergraduate teaching degrees now include compulsory units on students with disabilities, or on diversity. Teachers

who qualified less recently are likely to be most in need of in-service training (Forlin, et al., 2008). However, an AITSL report indicates that even recent graduates do not feel well prepared for working with students with disabilities. Only 28% of early career primary teachers and 33% of secondary teachers reported that their teacher education course was helpful in preparing them to support students with disabilities. In addition, principals reported that only 6% of recent primary and 15% of recent secondary teaching graduates were well-prepared to support students with disabilities (Australian Institute for Teaching and School Leadership, 2014). However, this situation may improve with the adoption of AITSL's recently introduced Professional Standards for Teachers, which include knowledge and abilities necessary for teachers to support the participation of students with disabilities (Australian Institute for Teaching and School Leadership, 2015).

In one U.S. study of teachers working with students with ASD in inclusive settings, general education teachers were very specific in outlining their training needs. They wished to know more about ASD in general, academic and social accommodations that they could use with these students, and promotion of advocacy with students with ASD. They wanted practical strategies to use in ways that were individually responsive to students with ASD in their classrooms (Able, et al., 2015).

The VEOCRC report (2012) states that 62% of government school teachers surveyed said they did not feel adequately trained or supported to teach students with disabilities, and 43% reported that they were not aware of the *Disability Standards for Education 2005*. The report recommends the use of whole-of-school approaches to build workforce capacity in teaching students with disabilities. Giangreco and colleagues (2004) described professional development in schools committed to building teacher capacity; critical training areas included positive behaviour supports and differentiating curriculum and instruction for mixed-ability groups.

Access to in-service training for teachers is often limited by time and geographic constraints. Professional development using web-based instruction is one response to these problems, and programs in working with students with disabilities have been developed. For instance, an in-service professional development conducted entirely online over four semesters to train teachers working with students with ASD was developed by the University of Florida (Rakap, Jones, & Emery, 2014). The authors state that the program was effective in helping teachers improve their competencies and knowledge in working with students with ASD. However, the

evaluation was based only on participants' self-reports, pre- and post-training, of their own competencies and knowledge. The program's impact on actual classroom practices or student outcomes was not measured.

A Canadian study evaluated a web-based program for primary classroom teachers of students with ADHD (Elik, Corkum, Blotnicky-Gallant, & McGonnell, 2015). The six-week program was designed to provide teachers with knowledge about ADHD characteristics and evidence-based instructional and behaviour management interventions. A randomized controlled trial was conducted to evaluate the program's effectiveness. The results are not yet in publication, but the preliminary findings indicate that students in the intervention group demonstrated significant improvements in their ADHD symptoms compared to the students in the waitlist control group.

A model of 'virtual coaching' incorporating initial preparation and ongoing support and mentoring has been developed for new special education teachers working with students with significant disabilities (Israel, Carnahan, Snyder, & Williamson, 2013). These authors propose a virtual coaching model that includes coach observation of the novice teacher and immediate feedback delivered through multiple, integrated online technologies. To date, no results of programs using this model have been reported in the literature.

Studies conducted so far have not indicated whether there have been any changes in the use of integration aides in classes following in-service teacher training in including students with disabilities.

Listening to students with disabilities

Listening to the voices of students can be a valuable way to assess and improve the quality of inclusive educational practice (Saggers, et al., 2011). Students with disabilities should have age-appropriate input into decision-making about their own supports, particularly about whether to have integration aide support and if so, when, how, and from whom. Students may need instruction in self-determination and self-advocacy skills to improve their ability to do this (Broer, et al., 2005; Giangreco, et al., 2004; Giangreco, 2013). Studies such as those by O'Rourke and Houghton (2008) and Whitburn (2013) show that students can have realistic and useful ideas about how they can best be supported.

Peer supports

The involvement of peers in providing academic and social support to students with disabilities can be an effective and natural way to benefit not only the students with disabilities, but also the peer support students (Carter, Cushing, Clark, & Kennedy, 2005; Carter, Sisco, Melekoglu, & Kurkowski, 2007; Giangreco, 2013). Peer support can be informal and occasional or more structured and ongoing. It can improve engagement in classroom instruction and the general curriculum, and expand students' communication skills, social interactions, and peer networks (Giangreco, Carter, et al., 2010). In Able et al.'s (2015) study of teachers' perceptions of working with students with ASD, general education teachers reported that peer support or 'peer buddy' models were effective in breaking down social barriers between students with ASD and their classmates. Working with a peer is less stigmatizing than working with an integration aide, and both parties can benefit from relationships that otherwise may not have developed (Giangreco, et al., 2004).

Carter et al. (2007) studied the effects of using peer support as an alternative to adult support with four high school students with severe disabilities in science and art classrooms. Their close examinations of student interactions revealed that the students with disabilities initiated conversational turns as much as their peer supporters, interactions continued outside of class activities, and social interactions extended to classmates other than the peer supporters. Academic engagement levels improved somewhat for two of the supported students; for the other two, levels neither improved nor diminished. In another study, Carter and colleagues (2005) found that the social and academic engagement of three middle and high school students with moderate to severe intellectual disabilities and autism increased with peer support. Another study found substantial and sustained increases in social engagement and peer interactions after the establishment of peer networks, facilitated by a paraprofessional or special education teacher, for high school students with ASD (Gardner et al., 2014).

Peer support practices need the active involvement of teachers to identify suitable students, provide training or orientation in their roles and in support strategies, and provide ongoing monitoring and support. Further, Giangreco and colleagues emphasise that "peer support strategies are meant to be embedded within good-quality inclusive practices; they are not designed to supplant support from educators" (Giangreco, Carter, et al., 2010, p. 257).

It is clear that for many of these recommended changes and practices to be implemented, change at the systemic and whole-school level is needed. The full inclusion of students with disabilities and their achievement of good learning and social outcomes depend largely on the culture or ethos of the school. School administrators have a strong influence in shaping the school culture, and their leadership is essential to creating inclusive environments and supporting inclusive practices (Giangreco, 2013; Ofsted, 2006; Shaddock, et al., 2007). School principals need to ensure school-wide collaboration, support, planning time, and best use of resources to enable quality inclusive practices in the classroom. In addition, parents who are concerned about a reduction of integration aide support "may need to be reassured that their child can be effectively supported by alternative strategies that do not require the presence of an individually allocated aide" (Australian Association of Special Education, 2007).

In summary, key recommendations for alternatives to a reliance on the use of integration aides are:

- Special education teachers should be better deployed to support and advise classroom teachers, integration aides, and the school community. Special education teachers should work collaboratively with classroom teachers to develop individual education plans, to adapt curriculum and instruction, and to plan, implement, model, monitor and evaluate teaching programs.

- Better use may be needed of other specialist professionals, such as speech pathologists, occupational therapists, and educational psychologists, through a team support approach for students with complex needs.

- Schools should build capacity through training and professional development of mainstream teachers. Most teachers feel underprepared to teach students with disabilities and would benefit from training in specific disabilities, differentiating instruction for mixed-ability groups, positive behaviour supports, and assistive technology.

- Students with disabilities should have age-appropriate input into decision-making about their own supports, and have instruction in self-determination and self-advocacy skills to improve their ability to do this.

- Peers can be used to support students with disabilities in some situations. Peer support is less stigmatizing than support from an integration aide, and has

been found to improve students' engagement in classroom instruction and expand communication skills and social interactions.

- School principals need to ensure school-wide collaboration, support, planning time, and best use of resources to enable quality inclusive practices in the classroom.

- Change at the systemic and whole-school level is needed. School administrators have a strong influence in shaping the school culture, and their leadership is essential to creating inclusive environments and supporting inclusive practices.

Conclusion

It is apparent from the literature that reliance on the use of integration aides to support students with disabilities in general education settings has several serious unintended consequences for the academic, social, and independence outcomes of these students. It is also clear from the examples in the literature that individual schools can improve the ways in which they use integration aides, reduce their reliance on aides, and increase the quality and extent of teacher instructional time with students with disabilities. Researchers have developed and field-tested several planning processes and tools to guide schools in self-assessment, planning and implementing changes designed to improve the use of integration aides and to determine alternatives to their use (Giangreco & Broer, 2007; Giangreco, et al., 2011; Giangreco, Edelman, & Broer, 2003; Webster, et al., 2013).

A reassessment of the ways in which students with disabilities can be included in mainstream education will involve systemic change, whole-school approaches, and attention to in-class practices. Given the now substantial body of evidence about the use of integration aides, it is necessary to carefully consider both changes to make the use of integration aides more effective and the alternatives that could be implemented to make schools more fully inclusive and promote the best possible outcomes for students with disabilities.

References

Able, H., Sreckovic, M. A., Schultz, T. R., Garwood, J. D., & Sherman, J. (2015). Views from the trenches: Teacher and student supports needed for full inclusion of students with ASD. *Teacher Education and Special Education: The Journal of the Teacher Education Division of the Council for Exceptional Children, 38*(1), 44-57.

Alborz, A., Pearson, D., Farrell, P., & Howes, A. (2009). The impact of adult support staff on pupils and mainstream schools. *Research Evidence in Education Library*. London: EPPI-Centre, Social Science Research Unit, Institute of Education, University of London.

Asbjornslett, M., Engelsrud, G. H., & Helseth, S. L. (2014). Inclusion and participation in everyday school life: Experiences of children with physical (dis)abilities. *International Journal of Inclusive Education, 19*(2), 199-212.

Australian Association of Special Education. (2007). Position paper on teacher aides. Retrieved from http://aase.edu.au/wordpress/wp-content/uploads/documents/Teacher-Aide-Position-Paper.pdf

Australian Institute for Teaching and School Leadership. (2014). Initial Teacher Education: Data Report 2014. Retrieved from http://www.aitsl.edu.au/docs/default-source/initial-teacher-education-resources/ite-data-report-2014-chapters-1-4.pdf?sfvrsn=5

Australian Institute for Teaching and School Leadership. (2015). Australian Professional Standards for Teachers. Retrieved from http://www.aitsl.edu.au/australian-professional-standards-for-teachers/standards/list

Blatchford, P., Bassett, P., Brown, P., Koutsoubou, M., Martin, C., Russell, A., et al. (2009). *Deployment and Impact of Support Staff in Schools: The Impact of Support Staff in Schools (Results from Strand 2, Wave 2)*. London: Institute of Education, University of London.

Blatchford, P., Bassett, P., Brown, P., Martin, C., Russell, A., & Webster, R. (2011). The impact of support staff on pupils' 'positive approaches to learning' and their academic progress. *British Educational Research Journal, 37*(3), 443-464.

Blatchford, P., Bassett, P., Brown, P., & Webster, R. (2009). The effect of support staff on pupil engagement and individual attention. *British Educational Research Journal, 35*(5), 661-686.

Bourke, P., & Carrington, S. (2007). Inclusive education reform: Implications for teacher aides. *Australasian Journal of Special Education, 31*(1), 15-24.

Bourke, P. E. (2009). Professional development and teacher aides in inclusive education contexts: where to from here? *International Journal of Inclusive Education, 13*(8), 817-827.

Broer, S. M., Doyle, M. B., & Giangreco, M. F. (2005). Perspectives of students with intellectual disabilities about their experiences with paraprofessional support. *Exceptional Children, 71*(4), 415-430.

Butt, R., & Lowe, K. (2012). Teaching assistants and class teachers: Differing perceptions, role confusion and the benefits of skills-based training. *International Journal of Inclusive Education, 16*(2), 207-219.

Carter, E., O'rourke, L., Sisco, L. G., & Pelsue, D. (2009). Knowledge, responsibilities, and training needs of paraprofessionals in elementary and secondary schools. *Remedial and Special Education, 30*(6), 344-359.

Carter, E. W., Cushing, L. S., Clark, N. M., & Kennedy, C. H. (2005). Effects of peer support interventions on students' access to the general curriculum and social interactions. *Research and Practice for Persons with Severe Disabilities, 30*(1), 15-25.

Carter, E. W., Sisco, L. G., Melekoglu, M. A., & Kurkowski, C. (2007). Peer supports as an alternative to individually assigned paraprofessionals in inclusive high school classrooms. *Research and Practice for Persons with Severe Disabilities, 32*(4), 213-227.

Causton-Theoharis, J. N., Giangreco, M. F., Doyle, M. B., & Vadasy, P. F. (2007). The "sous-chefs" of literacy instruction. *TEACHING Exceptional Children, 40*(1), 56-62.

Causton-Theoharis, J. N., & Malmgren, K. W. (2005). Increasing peer interactions for students with severe disabilities via paraprofessional training. *Exceptional Children, 71*(4), 431-444.

Department of Education Employment and Workplace Relations. (2012). Report on the Review of Disability Standards for Education 2005. Retrieved from http://auspeld.org.au/wp-content/uploads/2012/08/Report_on_the_Review_of_DSE.pdf

Department of Education USA. (2004). Title I Paraprofessionals Non-Regulatory Guidance. Retrieved from http://www2.ed.gov/admins/tchrqual/qual/paraprofessional.html

Di Paola, M. F., & Walther-Thomas, C. (2003). *Principals and special education: The critical role of school leaders (COPPSE Document No. IB-7)*. Gainesville, FL: University of Florida, Center on Personnel Studies in Special Education.

Doyle, M. B., & Giangreco, M. (2013). Guiding principles for including high school students with intellectual disabilities in general education classes. *American Secondary Education, 42*(1), 57-72.

Elik, N., Corkum, P., Blotnicky-Gallant, P., & Mcgonnell, M. (2015). Overcoming the barriers to teachers' utilization of evidence-based interventions for children with ADHD: The Teacher Help for ADHD Program. *Perspectives on Language and Literacy, 41*(1), 40-49.

Emam, M. M., & Farrell, P. (2009). Tensions experienced by teachers and their views of support for pupils with autism spectrum disorders in mainstream schools. *European Journal of Special Needs Education, 24*(4), 407-422.

Farrell, P., Alborz, A., Howes, A., & Pearson, D. (2010). The impact of teaching assistants on improving pupils' academic achievement in mainstream schools: A review of the literature. *Educational Review, 62*(4), 435-448.

Forlin, C., Keen, M., & Barrett, E. (2008). The concerns of mainstream teachers: Coping with inclusivity in an Australian context. *International Journal of Disability, Development and Education, 55*(3), 251-264.

French, N. K., & Chopra, R. V. (1999). Parent perspectives on the roles of paraprofessionals. *Research and Practice for Persons with Severe Disabilities, 24*(4), 259-272.

Friend, M., Cook, L., Hurley-Chamberlain, D., & Shamberger, C. (2010). Co-teaching: An illustration of the complexity of collaboration in special education. *Journal of Educational and Psychological Consultation, 20*(1), 9-27.

Gardner, K. F., Carter, E. W., Gustafson, J. R., Hochman, J. M., Harvey, M. N., Mullins, T. S., et al. (2014). Effects of peer networks on the social interactions of high school students with autism spectrum disorders. *Research and Practice for Persons with Severe Disabilities, 39*(2), 100-118.

Giangreco, M., & Broer, S. M. (2005). Questionable utilization of paraprofessionals in inclusive schools: Are we addressing symptoms or causes? *Focus on Autism and Other Developmental Disabilities, 20*, 10-26.

Giangreco, M., Carter, E. W., Doyle, M. B., & Suter, J. C. (2010). Supporting students with disabilities in inclusive classrooms: Personnel and peers. In R. Rose (Ed.), *Confronting obstacles to inclusion: International responses to developing inclusive schools* (pp. 247-263). London: Routledge.

Giangreco, M., Halverson, A. T., Doyle, M. B., & Broer, S. M. (2004). Alternatives to overreliance on paraprofessionals in inclusive schools. *Journal of Special Education Leadership, 17*(2), 82-90.

Giangreco, M. F. (2010a). One-to-one paraprofessionals for students with disabilities in inclusive classrooms: Is conventional wisdom wrong? *Intellectual and Developmental Disabilities, 48*(1), 1-13.

Giangreco, M. F. (2010b). Utilization of teacher assistants in inclusive schools: is it the kind of help that helping is all about? *European Journal of Special Needs Education, 25*(4), 341-345.

Giangreco, M. F. (2013). Teacher assistant supports in inclusive schools: Research, practices and alternatives. *Australasian Journal of Special Education, 37*(02), 93-106.

Giangreco, M. F., & Broer, S. M. (2007). School-based screening to determine overreliance on paraprofessionals. *Focus on Autism and Other Developmental Disabilities, 22*(3), 149-158.

Giangreco, M. F., Broer, S. M., & Suter, J. C. (2011). Guidelines for selecting alternatives to overreliance on paraprofessionals: Field-testing in inclusion-oriented schools. *Remedial and Special Education, 32*(1), 22-38.

Giangreco, M. F., Doyle, M. B., & Suter, J. C. (2012). Constructively responding to requests for paraprofessionals: We keep asking the wrong questions. *Remedial and Special Education, 33*(6), 362-373.

Giangreco, M. F., Doyle, M. B., & Suter, J. C. (2014). Italian and American progress toward inclusive education: Common concerns and future directions. *Life Span and Disability, 17*(1), 119-136.

Giangreco, M. F., Edelman, S. W., & Broer, S. M. (2003). Schoolwide planning to improve paraeducator supports. *Exceptional Children, 70*(1), 63-78.

Giangreco, M. F., Suter, J. C., & Doyle, M. B. (2010). Paraprofessionals in inclusive schools: A review of recent research. *Journal of Educational and Psychological Consultation, 20*(1), 41-57.

Giangreco, M. F., Yuan, S., Mckenzie, B., Cameron, P., & Fialka, J. (2005). "Be careful what you wish for…": Five reasons to be concerned about the assignment of individual paraprofessionals. *TEACHING Exceptional Children, 37*(5), 28-34.

Hall, L. J., Grundon, G. S., Pope, C., & Romero, A. B. (2010). Training paraprofessionals to use behavioral strategies when educating learners with autism spectrum disorders across environments. *Behavioral Interventions, 25*, 37-51.

Hemmingsson, H., Borell, L., & Gustavsson, A. (2003). Participation in school: School assisstants creating opportunities and obstacles for pupils with disabilities. *OTJR: Occupation, Participation and Health, 23*(3), 88-98.

Howard, R., & Ford, J. (2007). The roles and responsibilities of teacher aides supporting students with special needs in secondary school settings. *Australasian Journal of Special Education, 31*(1), 25-43.

Humphrey, N., & Symes, W. (2011). Inclusive education for pupils with autistic spectrum disorders in secondary mainstream schools: teacher attitudes, experience and knowledge. *International Journal of Inclusive Education, 17*(1), 32-46.

Israel, M., Carnahan, C. R., Snyder, K. K., & Williamson, P. (2013). Supporting new teachers of students with significant disabilities through virtual coaching: A proposed model. *Remedial and Special Education, 34*(4), 195-204.

Kilanowski-Press, L., Foote, C. J., & Rinaldo, V. J. (2010). Inclusion classrooms and teachers: A survey of current practices. *International Journal of Special Education, 25*(3), 43-56.

Koegel, R., Kim, S., & Koegel, L. (2014). Training paraprofessionals to improve socialization in students with ASD. *Journal of Autism and Developmental Disorders, 44*(9), 2197-2208.

Lane, K., Fletcher, T., Carter, E. W., Dejuc, C., & Delorenzo, J. (2007). Paraprofessional-led phonological awareness training with youngsters at risk for reading and behavioral concerns. *Remedial and Special Education, 28*(5), 266-276.

Lindsay, S., Proulx, M., Thomson, N., & Scott, H. (2013). Educators' challenges of including children with Autism Spectrum Disorder in mainstream classrooms. *International Journal of Disability, Development and Education, 60*(4), 347-362.

Malmgren, K. W., Causton-Theoharis, J. N., & Trezek, B. J. (2005). Increasing peer interactions for students with behavioral disorders via paraprofessional training. *Behavioral Disorders, 31*(1), 95-106.

O'rourke, J., & Houghton, S. (2008). Perceptions of secondary school students with mild disabilities to the academic and social support mechanisms implemented in regular classrooms. *International Journal of Disability, Development and Education, 55*(3), 227-237.

Ofsted. (2006). Inclusion: Does it matter where pupils are taught? Provision and outcomes in different settings for pupils with learning difficulties and disabilities. Retrieved from http://www.education.gov.uk

Osborne, L. A., & Reed, P. (2011). School factors associated with mainstream progress in secondary education for included pupils with Autism Spectrum Disorders. *Research in Autism Spectrum Disorders, 5*(3), 1253-1263.

Pearce, M., & Forlin, C. (2005). Challenges and potential solutions for enabling inclusion in secondary schools. *Australasian Journal of Special Education, 29*(2), 93-105.

Phillipskpa. (2013). Australian Government Department of Education evaluation of the "More Support for Students with Disabilities" initiative. Retrieved from http://education.gov.au/evaluation-more-support-students-disabilities-initiative

Phillipskpa. (2014a). Australian Government Department of Education "More Support for Students with Disabilities" initiative evaluation case studies. Retrieved from http://education.gov.au/more-support-students-disabilities-case-studies

Phillipskpa. (2014b). Changing the roles of special education teachers. Retrieved from http://docs.education.gov.au/system/files/doc/other/changing_roles_of_special_education_teachers_cm.pdf

Punch, R., & Hyde, M. (2005). The social participation and career decision-making of hard-of-hearing adolescents in regular classes. *Deafness and Education International, 7*(3), 122-138.

Radford, J., Blatchford, P., & Webster, R. (2011). Opening up and closing down: How teachers and TAs manage turn-taking, topic and repair in mathematics lessons. *Learning and Instruction, 21*(5), 625-635.

Radford, J., Bosanquet, P., Webster, R., & Blatchford, P. (2015). Scaffolding learning for independence: Clarifying teacher and teaching assistant roles for children with special educational needs. *Learning and Instruction, 36*(0), 1-10.

Rakap, S., Jones, H. A., & Emery, A. K. (2014). Evaluation of a web-based professional development program (Project ACE) for teachers of children with autism spectrum disorders. *Teacher Education and Special Education*.

Robinson, S. E. (2011). Teaching paraprofessionals of students with autism to implement Pivotal Response Treatment in inclusive school settings using a brief video feedback training package. *Focus on Autism and Other Developmental Disabilities, 26*(2), 105-118.

Rubie-Davies, C. M., Blatchford, P., Webster, R., Koutsoubou, M., & Bassett, P. (2010). Enhancing learning? A comparison of teacher and teaching assistant

interactions with pupils. *School Effectiveness and School Improvement, 21*(4), 429-449.

Rutherford, G. (2012). In, out or somewhere in between? Disabled students' and teacher aides' experiences of school. *International Journal of Inclusive Education, 16*(8), 757-774.

Saggers, B., Hwang, Y.-S., & Mercer, K. L. (2011). Your voice counts: Listening to the voice of high school students with Autism Spectrum Disorder. *Australasian Journal of Special Education, 35*(02), 173-190.

Shaddock, A., Smyth, B., & Giorcelli, L. (2007). *A project to improve the learning outcomes of students with disabilities in the early, middle and post compulsory years of schooling*. Canberra: Australian Government Department of Education, Science and Training.

Simpson, R. L., Boer-Ott, S. R. D., & Smith-Myles, B. (2003). Inclusion of learners with autism spectrum disorders in general education settings. *Topics in Language Disorders, 23*(2), 116-133.

Solis, M., Vaughn, S., Swanson, E., & Mcculley, L. (2012). Collaborative models of instruction: The empirical foundations of inclusion and co-teaching. *Psychology in the Schools, 49*(5), 498-510.

Soto-Chodiman, R., Pooley, J. A., Cohen, L., & Taylor, M. F. (2012). Students with ASD in mainstream primary education settings: Teachers' experiences in Western Australian classrooms. *Australasian Journal of Special Education, 36, pp 97-111, 36*, 97-111.

Stephenson, J., & Carter, M. (2014). The work of teacher aides in Australia: An analysis of job advertisements. *International Journal of Special Education, 29*(3), 145-153.

Subbann, P., & Sharma, U. (2006). Primary school teachers' perceptions of inclusive education in Victoria, Australia. *International Journal of Special Education, 21*(1), 42-52.

Suter, J. C., & Giangreco, M. F. (2009). Numbers that count: Exploring special education and paraprofessional service delivery in inclusion-oriented schools. *Journal of Special Education 43*(2), 81-93.

Symes, W., & Humphrey, N. (2011a). The deployment, training and teacher relationships of teaching assistants supporting pupils with autistic spectrum disorders (ASD) in mainstream secondary schools. *British Journal of Special Education, 38*(2), 57-64.

Symes, W., & Humphrey, N. (2011b). School factors that facilitate or hinder the ability of teaching assistants to effectively support pupils with autism spectrum disorders (ASDs) in mainstream secondary schools. *Journal of Research in Special Educational Needs, 11*(3), 153-161.

Symes, W., & Humphrey, N. (2012). Including pupils with autistic spectrum disorders in the classroom: the role of teaching assistants. *European Journal of Special Needs Education, 27*(4), 517-532.

Tews, L., & Lupart, J. (2008). Students with disabilities' perspectives of the role and impact of paraprofessionals in inclusive education settings. *Journal of Policy and Practice in Intellectual Disabilities, 5*(1), 39-46.

Vadasy, P. F., Sanders, E. A., & Tudor, S. (2007). Effectiveness of paraeducator-supplemented individual instruction: Beyond basic decoding skills. *Journal of Learning Disabilities, 40*(6), 508-525.

Victorian Equal Opportunity & Human Rights Commission. (2012). *Held back: The experiences of students with disabilities in Victorian schools*. Melbourne: VEOHRC.

Webster, R., & Blatchford, P. (2012). Supporting learning?: How effective are teaching assistants? In P. Adey & J. Dillon (Eds.), *Bad Education: Debunking Myths in Education* (pp. 77-92). Maidenhead: Open University Press.

Webster, R., & Blatchford, P. (2013). The educational experiences of pupils with a statement for special educational needs in mainstream primary schools: Results from a systematic observation study. *European Journal of Special Needs Education, 28*(4), 463-479.

Webster, R., & Blatchford, P. (2015). Worlds apart? The nature and quality of the educational experiences of pupils with a statement for special educational needs in mainstream primary schools. *British Educational Research Journal, 41*(2), 324-342.

Webster, R., Blatchford, P., Bassett, P., Brown, P., Martin, C., & Russell, A. (2010). Double standards and first principles: Framing teaching assistant support for pupils with special educational needs. *European Journal of Special Needs Education, 25*(4), 319-336.

Webster, R., Blatchford, P., & Russell, A. (2013). Challenging and changing how schools use teaching assistants: Findings from the Effective Deployment of Teaching Assistants project. *School Leadership & Management, 33*(1), 78-96.

Werts, M. G., Harris, S., Young Tillery, C., & Roark, R. (2004). What parents tell us about paraeducators. *Remedial and Special Education, 25*(4), 232-239.

Whitburn, B. (2013). The dissection of paraprofessional support in inclusive education: 'You're in mainstream with a chaperone'. *Australasian Journal of Special Education, 37*(02), 147-161.