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ORIGINAL ARTICLE

Benefits and Challenges of a Hybrid Distance Education Program for Autistic School-Age Students: Parent, Student and Teacher Perspectives[†]

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Abstract

Parents whose autistic[1] child's needs are not met within mainstream schooling may seek alternative modes of education, such as home or distance education. There is a paucity of research on the delivery of home or distance education programs for autistic students. This study reports on the experiences of parents, students and teachers in the inaugural year of Australia's first hybrid distance education program (distance education with parent/carers as supervisors) specifically designed for autistic students. Interviews with eight parents, four students and two teachers gathered their perceptions of the program's benefits, challenges and suggestions for improvements. All parents, students and teachers reported positive overall perceptions of and experiences in the program, and a range of outcomes for students and parents. Flexibility was identified as a key benefit of the program. Challenges identified included a lack of opportunities for students' social interactions and the effort required of parents to support their child's participation. Additional longitudinal research is needed to determine the long-term impact of programs of this type and to evaluate strategies for increasing student independence.

There is substantial evidence indicating that for many autistic children and their families, mainstream schooling is an unhappy and unsatisfactory experience (Roberts & Simpson, 2016). Studies investigating the experiences of autistic students and/or their parents in mainstream schooling report student and parent perceptions of a range of issues leading to a sense of exclusion and inadequate learning (Harrington, 2014; Kendall & Taylor, 2016; Tomlinson et al., 2020; Williams et al., 2019).

Autistic students and parents cite a lack of appropriate teaching approaches and supports in mainstream schooling as limiting the student's capacity to access the curriculum and realise their academic potential (Humphrey & Lewis, 2008; Tomlinson et al., 2020). It is unsurprising therefore that some parents choose to remove their autistic child from mainstream schooling and seek alternative educational options, such as home education. In a recent review, five key motivations were identified: a school's lack of flexible and inclusive practices, school staff's insufficient understanding of autism,

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[1]This article uses identify-first language ('autistic person') in line with the preferences of the autistic community as reported in empirical studies, including studies with the autistic community (Kenny et al., 2016).

the exclusionary nature of mainstream school, experiences of bullying, and their child's subsequent mental health issues (O'Hagan et al., 2021). Included in this review were the only two Australian studies examining the experiences of mothers home educating their autistic children (i.e., Kidd & Kaczmarek, 2010; McDonald & Lopes, 2014). While the decision to home educate is not taken lightly, parents may feel that they have no other choice (Cheney & Bruck, 2017; Kendall & Taylor, 2016; McDonald & Lopes, 2014) given the impact of mainstream schooling on the wellbeing of their child (Danker et al., 2016). O'Hagan et al. (2021) found that parents who homeschooled felt a sense of empowerment, enjoyed reduced family stress and reported increased satisfaction with their child's academic progress. However, they also experienced the additional pressure and time constraints of being both parent and teacher, felt they received inadequate support in their home educator role, and had additional financial costs. Parents considered the benefits had resulted from the individualised approach of in-home education, in addition to the fewer social and sensory demands on their child in the home setting.

Given home-educating parents' expressed need for additional support and respite in their role as home teacher, educational models that can provide these, together with an individualised education program in a setting free from sensory and social pressures, may provide an attractive alternative. One such option is distance education using interactive telecommunication systems (either synchronous or asynchronous) to share information between the teacher and student, and teacher and parent, whereby the educational program is designed and delivered by an institution, such as a school, and students are geographically separated from the teaching staff (Schlosser & Simonson, 2010). The key feature distinguishing distance education from home education is that the primary responsibility for designing and delivering the educational program and monitoring and assessing student progress is with professional teaching staff, not the parent.

To date, only two small qualitative studies, one in Australia (McDonald & Lopes, 2014) and one in the United States (Bryant, 2011) have examined the experiences of autistic students and their parents in taking part in a distance education program. McDonald and Lopes (2014) reported on the experiences of two families in a program (Schools of Isolated and Distance Education; SIDE) that featured an individualised education plan, one-on-one teaching where required, adjustments to student workloads, flexibility with deadlines for completion of work, and allowing students to study at a time that suited their own situation. Students could visit the SIDE main school site a number of times a week for social interaction with other students. Both families indicated that these additional individualised services in combination with access to appropriately trained teachers, the highly organised and flexible nature of the program and the social opportunities afforded by the visits to the main school site provided valuable support for both student and parent.

Bryant (2011) examined the experiences of three gifted autistic high school students who enrolled in a virtual academy, an online remote learning mode available in the United States, which also incorporates parental involvement. Students benefited from the ability to work at a comfortable pace, set a schedule and control external factors, such as teacher and peer interactions. Parents reported that the significant input required of them was integral to any success in the program. Bryant (2011) also noted that opportunities for socialisation were limited.

In Australia, although education departments and private providers offer generic support for home education and general support for students with disabilities, none provide autism-specific support. Recognising the potential for an alternative to home education for autistic students in Australia, in 2020 Autism Spectrum Australia (Aspect), Australia's largest provider of specialist autism schooling, introduced a formal distance education program. To provide feedback on the first year of the Aspect Distance Education Program's (DEP) implementation and, given the paucity of research on the delivery of distance education programs for autistic students, the aim of this exploratory study was to assess and report on the experiences of stakeholders in the program over a 1-year period. The research questions were as follows:

1. What are the motivations of parents in enrolling their child in a distance education program for autistic students?
2. What are the benefits, challenges and outcomes of a distance education program for autistic students from the perspective of the participating parents, students and teachers?

Method

Recruitment and Consent

Following approval from the Macquarie University Human Research Ethics Committee (Approval number 52020628514460), all 14 families with a child enrolled in Aspect's DEP in 2020 and the two teachers delivering the program were invited by email to participate in the study. A participant information pack was included, providing information about the project, and an informed consent form. Parents and teachers provided written consent for their own participation. Both teachers and eight parents consented to participate. One of the parents had two children enrolled in the DEP. Based on the advice of the teachers delivering the program as to which students had communication skills that suited them to take part in an interview, parents of four students were asked to discuss the research with their child to determine if the child wished to participate. Consequently, each of these four parents provided written consent for their child to participate. In addition, at the time of interview with a student, their verbal consent was obtained.

Participants

A total of eight parents (P), four students (S) and both teachers (T) took part in the study. Student age, gender and cognitive assessment scores were obtained from school files, with parental consent. Eight of the nine students were male and the age range of students as at the end of the school year was 10 to 13 years ($M = 10.75$ years). All students were enrolled in the primary school curriculum. Immediately prior to joining Aspect's DEP, four of the eight families were homeschooling their child with no support, three children were enrolled in mainstream schools (of which two were in a support class) and one child was briefly enrolled in a distance education program coordinated by a local private school. Cognitive assessments on file reported one student with an intellectual disability and eight students with intellectual functioning within the broad average range.

Aspect's DEP

Aspect's DEP comprises online lessons and interactive activities, with students working at their own pace to complete set learning activities, connect and collaborate with peers in a secure online environment, and participate in 'offline' set tasks under supervision from a teacher. Online lessons were either small groups (four to five students) for the key learning areas of English, maths, science and history; large group (all students) for morning registration, physical education, art and afternoon check; and one-on-one sessions two to three times per week for each student, with the area covered dependent on the individual students' needs. During the time allocated for one-on-one sessions, students who were not involved in the session engaged in set tasks offline. Students were grouped into two classes for key learning areas based on the level of support they required. Individual learning programs were developed in collaboration with parents and external therapists and the students where possible and with consideration of the student's interests. Autism-specific goals and supports were incorporated into the program, including a focus on social-emotional learning and social communication, use of visual supports, communication supports (e.g., Picture Exchange Communication System), and a range of sensory supports.

It was intended that all students would participate in a 3-day in-person residential session along with the other students enrolled in the program in each of the four school terms. However, for the school year reported on in this study, due to government restrictions on gatherings resulting from the COVID-19 pandemic, in-person residential sessions were conducted only in Terms 1 and 4. In Term 1, four of the students attended, and in Term 4, all nine students attended. The session for Term 3 was run as a virtual event and the session for Term 2 was cancelled.

To be eligible for the DEP, a student must have a current diagnosis of autism spectrum disorder and be geographically isolated or have individual circumstances preventing them from accessing an in-person educational setting. A parent or adult support person must be willing and able to act as a supervisor. In this role, they are required to supervise the student at all times during the school day, facilitate learning through academic and emotional support, ensure the student follows the course developed by the school and addresses the set tasks and experiences provided by the school, and liaise with the DEP teacher regarding the student's work and progress.

Data Collection

Interviews were semistructured using a schedule of set questions in a set order, while allowing the participant during the interview to tell the researcher about any issue of interest or concern to them. Interviews were conducted either via telephone or video call (Zoom) by a research assistant with qualifications and experience as a school teacher, and were audio-recorded with the participant's consent. *Interview 1* was conducted during the first school term. Parents were asked questions about their motivation and expectations about the distance program (e.g., 'Can you tell me a little about your child's experiences at school before now and what led you to enrol him/her in the program' and 'Do you anticipate any particular benefits and challenges for you/your child as a result of being in the program?'). Teachers were also asked about their expectations for the program, for themselves and for the students (e.g., 'What do you think might be the particular benefits of a distance program for the students enrolled?' and 'Do you anticipate any particular challenges?'). *Interview 2* was conducted in the final school term of 2020 to elicit participants' perspectives on their experience in the program, including their overall perceptions of the program (e.g., 'Did the program meet your expectations?'); any impact or outcome from the program, either positive or negative, for either the parents or students (e.g., 'Did the program result in any changes for you/your child/the students over the course of the year?'); challenges they experienced in taking part in the program; and suggestions for how the program could be improved. One parent took part in Interview 1 only. Of the four students who participated, two students took part in Interview 1 and the other two students took part in Interview 2. Copies of the interview protocols are available from the fourth author on request.

Data Analysis

All interviews were transcribed by an independent transcription service and imported into NVivo 12 software (QSR International, 2020) for coding and analysis. A member of the research team read and re-read all transcripts, hand coding to identify any content relating to the study's research questions. All other members of the research team read a sample of transcripts. The research team then met to discuss and agree on a tentative coding framework. Using qualitative content analysis (Hsieh & Shannon, 2005), a member of the research team applied the tentative coding framework to first code the data deductively into categories, and then used a constant comparative method (Corbin & Strauss, 2015) to iteratively regroup, merge, recode and subcode to identify tentative themes (Braun & Clarke, 2006). Both divergent and convergent views were actively sought, with participants' perceptions constantly compared for similarities and differences.

Results

Parents' Motivations for Enrolling

Two key themes were identified that related to parents' reasons for enrolling their child in the Aspect DEP: *negative experiences of schooling* and *difficulties associated with homeschooling.*

Negative experiences of schooling

Each of the eight parents who took part in the study reported that they had unsatisfactory and unhappy experiences when their child had attended a school in person, either in mainstream classes in a mainstream school ($n = 6$) or in a support unit in a mainstream school ($n = 3$). Five of the children had attended two or more schools.

Parents described a lack of suitable supports for their child in mainstream classrooms, leading to a lack of engagement in learning and behaviour issues. Other issues for their child were dealing with sensory issues in the school environment (e.g., loud bells and sirens), coping with ongoing changes in teachers and classrooms, and their social interactions with other mainstream students:

> He did a short period of time in mainstream school with an aide, but it just didn't work. He went to a couple of different schools. Um, and, yeah, it just didn't work for him. He was stressed all the time. (P2)

For most of the children, these negative experiences in a traditional school had resulted in the parent keeping their child away from school, at home. One parent described the struggle:

> It got to the point where he was just refusing to go to school. He worked out that if I dragged him to school and as soon as I let him go and he ran out the front gate, that they wouldn't touch him. So it just got to the point where he was just at home. (P1)

A student also expressed unhappiness about school: 'I needed something new. Just, I needed to get out of hell … Anything could be better than there' (S2).

Difficulties associated with homeschooling

Parents who had been homeschooling their child reported that, although this was a better option than a traditional school, one or more aspects of home education were difficult or unsatisfactory. This included their own lack of professional teaching expertise; the time required of the parent to be the homeschooling teacher, and the stress this placed on them and relationships in the family; and the stress that being a home teacher placed on the parent–child relationship:

> I found even when I was trying to do the distance education with him, he didn't — he thought I was making it more difficult for him, if that makes sense. He thought that I was asking more of him than what was required. But I wasn't. I was trying to show him how to do things properly. But I guess because it's mum they kind of, yeah, he takes instruction better from someone else than he does from me. (P7)

Two families whose child had been enrolled in a mainstream school prior to the DEP had been considering homeschooling their child, but the parents had not felt confident in their ability to undertake this: '… that's why I decided to sign up for a distance education because I'm not a teacher. So it is really hard to do homeschooling without a background of a teacher and the knowledge that they have' (P3).

Program Experiences: Benefits and Challenges

Three themes were identified in the participants' assessments of their experiences in the program, which encompassed both the benefits and challenges they perceived: *overall, a positive experience*; *flexibility and an individualised learning program*; and *level of parental involvement*.

Overall, a positive experience

All parents and students who were interviewed and both teachers reported positively about their overall perception of, and experience in, the program. P1 commented, 'It's been amazing really. . . . My husband and I have seen the benefits so much'. One of the students interviewed described all aspects of the program as positive:

> Everything was really, really, really good. . . . I like everything in the school. I can't begin to explain how much I like the place. I'd stick with it for the rest of my life. . . . There's nothing I didn't like and basically I liked — honestly, nothing went wrong. It was all — everything was great. (S3)

One of the two teachers described the program as a success: 'Overall, I definitely think we've hit the nail on the head with this program. I think it's wonderful. . . . I think it's just been really successful' (T2).

All parents and students interviewed reported that being in the program was better than the student's schooling experience prior to joining the program, with one parent commenting, 'I knew it was going to be better than what we were doing, and it has been. It's an improvement, definitely' (P7), and a student commenting that 'I think it's nicer than being homeschooled' (S1).

Flexibility and an individualised learning program

In general, participants viewed the adaptation of the program to each individual student's needs as a positive feature of the program and considered that it had enabled improved student engagement and learning. As stated by one student, 'It's like they understand us more than anyone else' (S2).

Some participants noted the benefit of having the student's work set to suit their own pace and level: 'They do give him the work, but they also don't overwork him as well to the point where he starts getting stressed out and doesn't want to do it anymore' (P7). Others noted that the physical/sensory comfort of being in their own home environment and lack of distraction from other students also enabled improved student engagement and learning.

Teachers and parents reported that the flexibility of scheduling activities in the program allowed students to work individually and engage with group classes at times that suited them, and to attend therapy appointments: 'Having that flexibility has really, really helped and helped as a family unit too. Yeah, like you've been able to still have a routine around the whole family with it, if that makes sense' (P3).

The level of student–teacher interaction and communication provided in the program was viewed as enabling teachers to closely and directly monitor the student's progress with their work and thus adapt the program to the student's needs:

> His teacher will message him, and he'll message her and ring — he'll ring her, or she'll ring him if he needs help. She's great. If he's stuck on something, she actually gets him to choose something to work through with her. Because a lot of the time she was asking him if he needed help and he'll say no just because he wants to just quickly do his work and get it over with. I think she realised that, so now she gets him to pick something. He has to pick something to work with her through, which is really good. (P7)

However, both teachers reported that they had experienced a number of challenges when individualising the learning program for each student to provide flexibility. This included judging the right level and right amount of work to give to a student; incorporating a student's interests into activities for the student; not being physically with the student when implementing an activity, a strategy or approach to help the student but instead relying on the parent to implement; and communication with parents about the student's level and amount of work:

> *You send all the activities and things and mums and dads do them with the kids. For the parents to then say at the end of the week, Oh, those activities were too hard. Why didn't you tell me — like you check in with them every day. (T2)*

The teachers also reported difficulties in fitting in all the work needed to deliver an individualised program for each student, compared with the amount of the work required of them in a typical classroom. This included fitting in one-on-one meetings with all students who needed them, the amount of work and time required to mark students' work, and the amount of work required to customise learning programs to meet the students' needs:

> *Marking is a lot, where marking in the past wasn't such a big deal . . . But now, these students want to know how they've done. So they want to know — they want it all marked and sent back and so that they can see what their results are. (T1)*

Level of parental involvement

Parents indicated that the level of their involvement in their child's schoolwork played a significant role in their experience in the program. Some parents reported that their close involvement was essential for their child's participation in the program. This was particularly so for those students who had difficulties with being organised, planning their work, or setting their own routine: 'I mean, these kids can't — I mean, [he] can't find his pencil. So to think that he's going to be able to manage his own workload, that's just not going to happen' (P1).

Some parents also noted that their close involvement was essential for getting the student to engage in the schoolwork, and stay on task and not get distracted, keeping track that their child was doing the schoolwork required of them, and knowing when the schoolwork may be too difficult for their child:

> *For me the challenge is knowing that he's doing what he's meant to be doing, that's the only thing. I have to keep checking. I get him to show me the list that [the teacher] has done up, the stuff that he has to do and when he has to clock on. (P5)*

Some parents valued the involvement they were able to have with their child's schoolwork because it enabled the parent to clearly see the level that their child was working at, and the child's strengths, needs and challenges. Both teachers reported that when parents had been able to be involved as partners in the teaching role, it had worked well. On the other hand, one parent who had previously been homeschooling her child was very relieved to be able to hand the teaching responsibility to a professional teacher, which had the consequent benefit of an improved relationship with her child and less stress on her and the family.

Some parents described the experience as being hard work or difficult but related that this effort had been worth it for the improved outcomes that the program had provided:

> *It has been a really hard year. I'm not going to tell anyone it's been easy. It has been hard — just as hard as it was last year but it's rewarding and that's the difference. It is hard work but when you see the benefits of where he's come from in 12 months, you wouldn't believe it. (P1)*

Outcomes

Three themes were identified in parents' and teachers' descriptions about the outcomes from participating in the program: *student engagement and learning, mental health and emotional wellbeing*, and *opportunities for students' social interactions*.

Student engagement and learning

Parents reported that the program had resulted in their child showing greater and/or positive engagement with their schoolwork, and this was also reflected in students' comments about their schoolwork: 'It's a bit harder, which I like, since I'm — I'm actually learning something' (S3). One teacher suggested that the degree of student engagement was dependent on whether the student actively chose to be in the program.

Six of the parents interviewed and both teachers also reported positive outcomes for student learning and academic progress. One parent said, 'So he's been able to academically thrive. . . . last year, he wouldn't go into the school library. He's now reading whole novels' (P1). One teacher reported that although academic progress had been positive for most students in the program, a few students had not progressed academically.

Participants gave mixed reports regarding a student becoming an independent learner in the program. One teacher considered that the program was enabling some students to learn independently of their parents, one parent reported needing to find the right balance between supporting the student and allowing the student to work independently, and another parent reported that a disadvantage was that their child had become more dependent on a parent's presence to support the student's participation:

> *He's always around me. So, even if he's answering a question or something online, he'll look at me before he answers. It's like he's trying to — he needs that validation because he's so used to having me there all the time. (P3)*

In discussing the students' engagement and learning, one parent and both teachers commented on the type of student best suited to take part in the program. The parent reported that they would advise other parents that the program would be especially challenging for any student who had difficulty with learning. The teachers considered that students best suited to the program were those whose learning is hindered greatly when in a typical classroom setting, who have a clear vision for what they want to do in the future and how they want to learn, or who chose to be in the program and wanted or preferred to learn in this distance mode.

Mental health and emotional wellbeing

Six of the parents interviewed and both teachers reported positive outcomes for students' mental health. One teacher noted, 'I think a lot of, like, a lot of our students learning from home, their anxiety has reduced a lot' (T2), and a parent said,

> *So because he's had the time to be able to go to all those appointments and work on all those extra things, and not be exhausted, his emotional development has come a long way — you know, his mental health has improved. (P1)*

Parents also reported that their child's behaviour had improved as a direct result of their participation in the program:

> *Overall, the behaviour is better . . . his own behaviour is improving. It's not perfect and no child is going to be perfect, but his own, I guess, self-awareness and his own self-control has improved, which then that flows on to the rest of the family too. (P3)*

However, one parent reported that the amount of time her child now spent on screen to take part in the program had disturbed the child's sleep patterns.

Reported outcomes for parent wellbeing were mixed. Some parents reported that the program had in some way meant less stress or anxiety for them: 'In terms of the stress that I used to have, I don't have this stress anymore' (P6). However, others reported either being exhausted, having no downtime, or feeling burdened by the amount of time and effort required of them: 'Every day was — like I was exhausted and I still am exhausted. . . . I mean, I don't have a life [laughs]. I don't get a break' (P1). One of the teachers noted the amount of pressure that the program had placed on parents.

One parent reported wanting to give up in the initial weeks of the program, but had stayed on and, although still finding the load to be difficult, at the end of 2020 considered that for the benefits gained it was worth the effort and had subsequently enrolled a second child in the program. This parent suggested that they would advise any parent who was considering enrolling their child in the program to be aware of the commitment required of them as the home teacher.

Another parent reported considering not continuing with the program after the next school term, as she had found it to be very isolating for herself, with no respite from assisting her child with the school-work and needing to find more time to undertake her paid work. Both parents suggested the need for some form of additional support or respite for parents in the home teacher role. One parent suggested that others (such as family members or paid employees) could be trained so that they could take on the home teacher role if the parent was unable to for some reason. This parent noted that this would also be beneficial by decreasing the student's dependency on her alone as the home teacher.

Both teachers acknowledged that for some parents, the pressure and effort required had been stressful and challenging, particularly to perform and balance the dual roles of parent and home teacher. Teachers also noted that parents with more than one child enrolled in the program may have found it challenging as they juggled their attention and workload between the two students.

Some parents and one teacher reported that the students' participation in the program had relieved some stress from the wider family:

> It's taken a big stress off all of us because of the tension between [S] and I having to be teacher and mother, that was obviously affecting everyone. My husband was finding it really challenging as well and he said to me, look, maybe we have to send him back to school because it's just not working, what we were doing before. My other son was missing out on having that time with me to help him with his schoolwork. It's yeah, just having [S] taken care of with them has helped all of us. It's taken a big stress off the whole family. (P7)

Two parents reported particular instances where a student's wider family had been impacted negatively: 'My partner's working seven days a week because I'm not at work. It's not a great situation. It takes its toll — it does take its toll as far as that goes' (P8).

Opportunities for students' social interactions

Reported outcomes for students' social interactions with other students were mixed. Some parents and students reported that compared to other educational settings, the program had provided more opportunities for the student to socialise with other students and make friends, and two parents reported that the program had helped their child to practise and improve their social skills:

> The bizarre thing is, he's actually made great friends. He knows all the kids really well. So socially, it's been fantastic and he's so excited going up and catching up with the kids again. They play on the computer every day, after school together. Often, even in the school holidays, they've caught up on the computer as well. (P1)

One student reported better friendships: 'I had a few friends, but it wasn't as good as my friends right now' (S2). Both teachers reported observing positive social interactions and friendships in the program's online environment. However, other parents and one teacher noted that students were missing out of the benefits of face-to-face interactions with peers:

They don't have the social interactions as what you do in a typical playground or school setting as such. And I think most of these kids would have play dates and stuff if they were in a school — like an actual school setting. (T2)

Parents suggested the program could include more opportunities for students to have regular face-to-face interactions with peers, although it should be noted one face-to-face residential was cancelled and one was converted to online due to COVID-19. Nevertheless, parents suggested a number of ways that face-to-face interaction could be increased, including opportunities for social/recreational activities that fitted within the program's curriculum, such as art or physical exercise and sport, either with students in the Aspect DEP who lived within a local area or, alternatively, DEP students could be included in face-to-face activities or outings with students from a local Aspect school or class.

Other Challenges

It is worthwhile noting that although the program was delivered during the COVID-19 pandemic, including a period of lockdown, the only negative impact associated with COVID-19 restrictions noted by participants was the inability of the program to provide an in-person residential week for two of the four school terms. One teacher reported that an additional challenge had been posed by technology issues in the home environment, which were out of the teacher's control, and one parent mentioned difficulties with computer breakdowns.

Discussion

Motivations for Enrolling

Although in the general population parents may choose home education for ideological reasons (Morton, 2010), parents of autistic children generally appear to opt for homeschooling as a 'last resort' when school has failed to meet their child's needs. This was clearly the case in the present study. All families indicated their decision to enrol in distance education was a last resort. Reasons for withdrawing children from conventional school revolved primarily around perceived inadequacies in the school system to address student needs and lack of suitable supports. These issues were viewed as adversely affecting child emotional health, resulting in anxiety, challenging behaviour, and school refusal in some instances. These findings are broadly consistent with previous research on autistic students specifically (Kidd & Kaczmarek, 2010; McDonald & Lopes, 2014) and students with disability more generally (Arora, 2006; Kendall & Taylor, 2016; Morton, 2010).

While there has certainly been an increasing focus on inclusion in Australia over the past several decades, there is evidence that adjustments to accommodate students have generally involved minimal changes to teaching practices (Carter et al., 2021; Shaddock et al., 2007). The results of the present study indicate that for a subsample of students on the autism spectrum, schools have clearly failed to adequately accommodate their needs in the view of parents. Similar findings for Australian schools have been reported by Kidd and Kaczmarek (2010). Specific issues that were reported as being not adequately addressed included sensory sensitivities, difficulty coping with change and difficulty with social interaction. These represent areas in which schools should pay particular attention, given practical evidence-based strategies are available to address a number of these issues (e.g., Flynn & Healy, 2012; Sterling-Turner & Jordan, 2007).

It is worth noting that in the current study five of the eight families had previously enrolled in home-schooling options but found them unsatisfactory for a variety of reasons, including their own lack of professional expertise and difficulty simultaneously coping with both parent and teacher roles. The Aspect DEP offered a number of features that may have addressed these concerns, including a structured learning program designed and delivered by expert professional teachers who took responsibility for the child's learning, a structured school day, individualised learning plans and opportunities for their child to have social contact with other students and build friendships. Several of the parents interviewed by Kidd and Kaczmarek (2010), especially those who felt they had no other choice but to homeschool, reported that they would have benefited from educational support for homeschooling.

One challenging issue for the Aspect DEP is the question of possible reintegration of students into conventional schooling options. Given the history of the students and the active choice of families to pursue distance education, this may not be an option that parents or students would be willing to consider. Where families are willing to consider such an option, the issue of how such reintegration would be supported needs to be examined.

Benefits, Challenges and Outcomes

Participants offered overall positive views on the program. In particular, the degree of flexibility was a key theme. This included flexibility in allowing students to work at their own pace and level, in the management of sensory issues and in scheduling. Kidd and Kaczmarek (2010) also reported that parents found flexibility in homeschooling to be a benefit. Flexibility was also a key issue identified by McDonald and Lopes (2014) for students supported within a distance education program. Another key benefit in the present research identified by parents was the level of teacher involvement with students, although this did come at the cost of high workloads reported by teachers. That parents clearly valued the support and individualised program development of the teachers contrasts with the findings of Kidd and Kaczmarek (2010), who reported a lack of adequate educative support of parents who undertook more conventional homeschooling.

A number of challenges were noted by parents. In particular, the level of parent involvement and time commitment was a challenge for some families, especially where children were not self-organised and needed monitoring to stay engaged in tasks. This contributed to reported increases in family stress for some participants, consistent with the findings of McDonald and Lopes (2014), where families homeschooled children with access to an educational support service. Although the Aspect DEP is a distance education program with educational delivery by specialist teachers, given the nature of the students, the level of commitment by parents was necessarily greater than might be expected of parents of typically developing students.

In most cases, students were reported as more engaged, their learning increased, and improvements were noted in behaviour and mental health, which is consistent with prior research (see O'Hagan et al., 2021), but findings were more mixed with regard to students becoming independent learners. While some students developed friendships through online exchanges and improvements in social skills were observed, there was also the view of some parents that students may be missing out on the opportunity for face-to-face interactions. Only two of the planned four residential sessions for the Aspect DEP were run as a result of COVID-19-related restrictions and attendance was incomplete. The extent to which concerns regarding opportunities to develop face-to-face relationships would be addressed by the additional residential sessions is unknown. Regardless, parents offered a number of suggestions to improve opportunities for social interaction that are worthy of consideration, including face-to-face activities with other Aspect DEP students in their local area.

Limitations and Future Research

There are a number of limitations of the current study that should be acknowledged. The sample size was small and this precluded substantive examination of the influence of previous educational

experience (e.g., past homeschooling versus alternative distance education programs) on participant perspectives on the Aspect DEP. Exploration of these issues may be possible with larger-scale research.

A qualitative approach was appropriate for this initial exploratory study of the Aspect DEP model. Nevertheless, qualitative research has limited generalisability and causal effects cannot be inferred. Consequently, larger-scale quantitative longitudinal studies using objective measures would be appropriate in future to examine the long-term impact of the program on student learning, behaviour, wellbeing, and family stress. In particular, exploration of differential outcomes between traditional homeschooling and autism-specific distance education options would be of importance.

For some families in the current study, stress was exacerbated by the program-associated time commitment of parents, particularly for students who had difficulty with organisational skills or ability to work on tasks independently. A range of strategies to assist students to develop organisational and self-management skills, including on-task behaviour (e.g., Carr et al., 2014; Southall & Gast, 2011), have been developed and researched, but not in the specific context of distance education. An important future focus of the Aspect DEP could be to develop and evaluate the effectiveness of distance implementation of interventions to improve self-management and task-related behaviour. This has the potential to increase the independence of students, decrease parental time commitment, and reduce family stress.

O'Hagan et al. (2021) have recommended that autistic students be included in future research on home education options. In the current study, students were included where this was judged appropriate by teaching staff. The participating students offered some contributions, but these were generally brief and limited. Strategies should be considered to enhance the quality and quantity of student voice. For example, more regular interviews or audio diaries from students may offer additional insights into their experiences of the program.

Conclusion

The present study provides preliminary evidence on the possible outcomes, benefits and challenges of a distance education model from the perspective of teachers, parents and autistic students. Long-term studies will be required to further explore the potential outcomes and benefits identified as well as develop strategies to address the challenges.

References

Arora, T. C. M. J. (2006). Elective home education and special educational needs. *Journal of Research in Special Educational Needs*, *6*(1), 55–66. https://doi.org/10.1111/j.1471-3802.2006.00059.x

Braun, V., & Clarke, V. (2006). Using thematic analysis in psychology. *Qualitative Research in Psychology*, *3*(2), 77–101. https://doi.org/10.1191/1478088706qp063oa

Bryant, L. E. (2011). *The academic and social implications of virtual learning environments for gifted high school students with an autism spectrum disorder* [Unpublished doctoral dissertation]. University of Arkansas at Little Rock. https://www.learntechlib.org/p/128894/

Carr, M. E., Moore, D. W., & Anderson, A. (2014). Self-management interventions on students with autism: A meta-analysis of single-subject research. *Exceptional Children*, *81*(1), 28–44. https://doi.org/10.1177/0014402914532235

Carter, M., Webster, A., Stephenson, J., Waddy, N., Stevens, R., Clements, M., & Morris, T. (2021). The nature of adjustments and monitoring for students with special educational needs in mainstream schools. *Australasian Journal of Special and Inclusive Education*. Advance online publication. https://doi.org/10.1017/jsi.2021.21

Cheney, L., & Bruck, S. (2017). Home education. *Aspect Practice Research Insights*, *10*, 1–4. https://tinyurl.com/65ta5bp6

Corbin, J., & Strauss, A. (2015). *Basics of qualitative research: Techniques and procedures for developing grounded theory* (4th ed.). SAGE.

Danker, J., Strnadová, I., & Cumming, T. M. (2016). School experiences of students with autism spectrum disorder within the context of student wellbeing: A review and analysis of the literature. *Australasian Journal of Special and Inclusive Education*, *40*(1), 59–78. https://doi.org/10.1017/jse.2016.1

Flynn, L., & Healy, O. (2012). A review of treatments for deficits in social skills and self-help skills in autism spectrum disorder. *Research in Autism Spectrum Disorders*, *6*(1), 431–441. https://doi.org/10.1016/j.rasd.2011.06.016

Harrington, C. (2014). *Square pegs in round holes: The mainstream schooling experiences of students with an autism spectrum disorder and their parents* [Unpublished doctoral dissertation]. The University of Queensland. https://espace.library.uq.edu.au/view/UQ:344164

Hsieh, H.-F., & Shannon, S. E. (2005). Three approaches to qualitative content analysis. *Qualitative Health Research*, *15*(9), 1277–1288. https://doi.org/10.1177/1049732305276687

Humphrey, N., & Lewis, S. (2008). 'Make me normal': The views and experiences of pupils on the autistic spectrum in mainstream secondary schools. *Autism*, *12*(1), 23–46. https://doi.org/10.1177/1362361307085267

Kendall, L., & Taylor, E. (2016). 'We can't make him fit into the system': Parental reflections on the reasons why home education is the only option for their child who has special educational needs. *Education 3-13*, *44*(3), 297–310. https://doi.org/10.1080/03004279.2014.974647

Kenny, L., Hattersley, C., Molins, B., Buckley, C., Povey, C., & Pellicano, E. (2016). Which terms should be used to describe autism? Perspectives from the UK autism community. *Autism*, *20*(4), 442–462. https://doi.org/10.1177/1362361315588200

Kidd, T., & Kaczmarek, E. (2010). The experiences of mothers home educating their children with autism spectrum disorder. *Issues in Educational Research*, *20*(3), 257–275. http://www.iier.org.au/iier20/kidd.html

McDonald, J., & Lopes, E. (2014). How parents home educate their children with an autism spectrum disorder with the support of the Schools of Isolated and Distance Education. *International Journal of Inclusive Education*, *18*(1), 1–17. https://doi.org/10.1080/13603116.2012.751634

Morton, R. (2010). Home education: Constructions of choice. *International Electronic Journal of Elementary Education*, *3*(1), 45–56. https://www.iejee.com/index.php/IEJEE/article/download/238/234

O'Hagan, S., Bond, C., & Hebron, J. (2021). What do we know about home education and autism? *A thematic synthesis review. Research in Autism Spectrum Disorders*, *80*, Article 101711. https://doi.org/10.1016/j.rasd.2020.101711

QSR International. (2020). *NVivo 12* [Computer software]. https://www.qsrinternational.com/nvivo-qualitative-data-analysis-software/home

Roberts, J., & Simpson, K. (2016). A review of research into stakeholder perspectives on inclusion of students with autism in mainstream schools. *International Journal of Inclusive Education*, *20*(10), 1084–1096. https://doi.org/10.1080/13603116.2016.1145267

Schlosser, L. A., & Simonson, M. (2010). Defining distance education. In L. A. Schlosser & M. Simonson (Eds.), *Distance education: Definitions and glossary of terms* (3rd ed., pp. 1–37). Information Age Publishing.

Shaddock, A., Smyth King, 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. Part 1: Research objectives, methodology, analyses, outcomes and findings, and implications for classroom practice*. Australian Government Department of Education, Science and Training. http://tiny.cc/yqjytz

Southall, C. M., & Gast, D. L. (2011). Self-management procedures: A comparison across the autism spectrum. *Education and Training in Autism and Developmental Disabilities*, *46*(2), 155–171. https://www.jstor.org/stable/23879688

Sterling-Turner, H. E., & Jordan, S. S. (2007). Interventions addressing transition difficulties for individuals with autism. *Psychology in the Schools*, *44*(7), 681–690. https://doi.org/10.1002/pits.20257

Tomlinson, C., Bond, C., & Hebron, J. (2020). The school experiences of autistic girls and adolescents: A systematic review. *European Journal of Special Needs Education*, *35*(2), 203–219. https://doi.org/10.1080/08856257.2019.1643154

Williams, E. I., Gleeson, K., & Jones, B. E. (2019). How pupils on the autism spectrum make sense of themselves in the context of their experiences in a mainstream school setting: A qualitative metasynthesis. *Autism*, *23*(1), 8–28. https://doi.org/10.1177/1362361317723836