

Teaching Children With Down Syndrome in the Early Years of School*

Amanda McFadden, Donna Tangen, Rebecca Spooner-Lane and Amanda Mergler
Queensland University of Technology, Australia

We explored 3 general classroom teachers' experiences of including a child with Down syndrome in their early years classrooms. Located at 3 different Australian school settings, 1 teacher was the head of a Preparatory class, 1 was a Year 3 teacher, and the third was a teacher of a split Preparatory/Year 1 class. Interview data were drawn from a larger study, in which data were gathered over a 5-month period through class observations and teacher interviews. The findings indicate that although there were highly inclusive experiences identified in the school sites, the school context played an important role in the inclusion of the child. Teachers indicated that receiving targeted information about Down syndrome and collaborative support from parents, teaching colleagues, and their wider school enabled them to work more inclusively with their student with Down syndrome in their classroom.

Keywords: Down syndrome, inclusive education, early years of schooling, teacher attitudes

Government, institutional policies, and systems have made inclusion mandatory in Australian education (see Australian Standards for Teachers [Australian Institute for Teaching and School Leadership, 2013]; Disability Discrimination Act [Commonwealth of Australia, 1992]). Of concern are the attitudes of general education teachers in supporting children with disabilities in their classroom in an inclusive manner. In this article, we argue that understanding teachers' attitudes is critical to understanding what supports are needed in relation to the challenges teachers face when working with children with Down syndrome in the early years classroom.

A major concern for teachers is their perceived inability to teach a whole group of children effectively when they also include a child in their class with a disability. Research has suggested that although teachers support the ideology of having children with disabilities in their class, they do not have the skills to effectively teach these students (Avramidis & Norwich, 2002). Research (Forlin, 2010; Forlin, Keen, & Barrett, 2008; Rose, 2010) reveals that teachers are concerned that they would have a reduced capacity to tend to the whole class when focusing on the student with a disability due to perceived behaviour and socioemotional challenges as well as the learning disabilities of these students. Teachers also felt that the students with learning difficulties would be a distraction for their peers, thus negatively impacting on the other students' learning. However, when Ruijs, Van der Veen, and Peetsma (2010) explored whether having children with disabilities in the general classroom adversely affected children who were identified as developing typically

Correspondence: Amanda McFadden, Queensland University of Technology, Kelvin Grove Campus, Victoria Park Road, Qld 4059, Australia. Email: a1.mcfadden@qut.edu.au

*This manuscript was accepted under the Editorship of Michael Arthur-Kelly.

for their age group they found that there was no significant difference in learning for children who were typically developing. Indeed, students in classes with more than 10% of peers who had disabilities reported more self-confidence than students in classes without students who had disabilities. These findings suggest that teachers' concerns about possible negative effects on class learning from having a child in the class who has a disability may be unfounded. The focus then must be on how teachers construct their attitudes about having children with disabilities in their classroom.

Although the focus of this paper is on early years teachers, teachers at all levels of schooling have expressed a concern that they do not feel prepared to teach students with disabilities in their class. In Horne and Timmons' (2009) research, teachers described that they feel unprepared to teach children with disabilities because they did not have the training or enough information about a range of disorders and teaching strategies to understand how to work with these children. In research by Dharan (2015), Florian and Rouse (2010), and Waitoller and Artiles (2013), teachers reported that they lacked the knowledge and training needed when they began teaching and therefore sought ongoing training to remain informed about current knowledge and understanding of inclusion of children with disabilities. Without regular information and training it would follow that teachers must rely on their existing information, knowledge, and experiences, which they indicated is inadequate.

Having some information is good in relation to the students that teachers have in their classrooms, but research suggests that it needs to be professional and targeted information. Huang and Diamond (2009), for example, explored teachers' responses to having information about specific types of disability and found this knowledge had a negative effect on teachers' attitudes. The two groups of teachers in the study were given information describing the characteristics of certain disabilities, with one group being told the name and characteristics of the disorder, whereas the other group did not have the specific labelling information, only the characteristics of the disorder. Teachers who had a label with the characteristics appeared to be influenced by the label; these teachers appeared to be discerning as to the type of disability they felt more comfortable about accepting into their classroom, indicating more willingness to include children with a disability involving motor skills (cerebral palsy) than children with learning difficulties, language difficulties, and/or behaviour problems (ADHD, Down syndrome, or severe intellectual disabilities). These findings concur with those of Sermier Dessemontet, Morin, and Crocker (2014), who found that less than half the teachers in their study would be willing to accept a child with an intellectual disability in their class, as they indicated that they did not feel competent to work with these children.

Forlin, Chambers, Loreman, Deppeler, and Sharma's (2013) report on inclusive education commissioned by the Australian Research Alliance for Children and Youth (ARACY) found that government provision of support for both students and teachers is contextualised to perceived needs in local areas. Further, their report indicated that support works best when there is a collaborative effort by all stakeholders. The report also suggested that there is a need to improve the skills of teachers and school leaders through consistent and effective training to assist them in learning strategies and understanding policies in relation to teaching students who have disabilities. These findings highlight the ongoing need to support teachers to better understand how to work with children who have disabilities. It is important, therefore, to note how teachers approach the notion of inclusive education. Varcoe and Boyle (2014), for example, found that although teachers were positively disposed to the idea of inclusion, many felt that they lacked the knowledge, skills, and resources to create a fully inclusive classroom.

Armstrong, Armstrong, and Spandagou (2011) described that the idea of inclusion is not fully agreed on, with some educators viewing it narrowly as disabilities, whereas others view it more broadly, as in it 'includes' all students. In spite of the confusion about the exact parameters and meaning of inclusion, Savolainen, Engelbrecht, Nel, and Malinen's (2012) study revealed that the more teachers believe that they are able to implement their understanding of inclusive practices, the more positive their attitudes towards inclusion are.

Including Children With Down Syndrome

As previously indicated, when teachers consider working with children who have disabilities they have indicated that they would prefer not to work with children who have Down syndrome. Working with these children includes some understanding that children with Down syndrome experience key areas of developmental delay. For example, language profiles indicate that children with Down syndrome experience more and greater language difficulties when compared to children of matched mental age (Abbeduto et al., 2001). Children who have Down syndrome typically display some form of intellectual impairment; however, there is a substantial variation in the intellectual impairment from one child to another (Davis, 2008). The engagement of children with Down syndrome in teaching and learning contexts relies on teachers' abilities to understand factors such as health conditions and cognitive delays that may impact the motivation and engagement of learners. But, first, teachers need to have this information at hand. Not knowing how to support children who present with these kinds of developmental delays can, in turn, have a negative impact on teachers' motivation. If teachers are not given background information on Down syndrome before the child enters the class or some training to work with these children is not provided, it seems understandable that teachers might be reticent in teaching children with Down syndrome in their class.

Fox, Farrell, and Davis (2004) found that there were three key factors that affected the successful inclusion of students with Down syndrome: the role teachers take in the management of support and organisation of the student's daily educational experience; that the outcomes of inclusion are strongly influenced by the ways in which the staff interact with others in the school; and that the accessibility of the curriculum is combined with the belief that the child is central to the learning process. Teachers' attitudes and practices, then, are central to the successful inclusion of children with Down syndrome. Rietveld (2008) found that many interactions between teachers and children with Down syndrome focused on the children's deficits, a trend that tends to exclude rather than include children with Down syndrome in the general classroom. Huang and Diamond (2009) suggested that in taking a deficit approach teachers identify students by stereotypical characteristics based on their own knowledge of a particular disability, such as Down syndrome, rather than exploring specific characteristics of the child in their class.

Norwich and Lewis (2001) investigated pedagogy for children with learning difficulties, including children with Down syndrome, and concluded that what is successful for these students would in fact work for all students. Significant to the current research, Norwich and Lewis suggested a need for teachers to value pedagogies based on the recognition of individual learning needs, which they called 'unique differences' (Norwich & Lewis, 2001). A similar study in the United Kingdom focused on the importance of connecting with individual learners, and making learning experiences meaningful was identified as being useful in inclusive education (Corbett, 2001). Shaddock et al. (2007) found that teachers who were successful in including students with disabilities in general education

TABLE 1
Demographics of Participants in the Research

Teacher's name	Grade teaching	Years teaching	Child's name	Child's age
Melanie	Prep	30	Liam	6
Angela	Year 3	8	Michael	9
Lisa	Prep–Year 1	22	John	7

Note. Pseudonyms have been used in all reporting of data.

classes were routinely collaborating with colleagues, parents, and other students rather than trying to work in isolation.

The current research explored three early years teachers' inclusion of students with Down syndrome to understand what the key issues were that shaped their experiences. Important to the research was understanding what factors supported and/or challenged their inclusion of children with Down syndrome in their classes. The guiding research questions were

- (1) What are the connections between teachers' attitudes and inclusion of a child with Down syndrome in their early years classroom?
- (2) What barriers and enablers worked to limit or support teachers teaching a child with Down syndrome?

Research Context

Participants. The participants in this research were all female teachers working in year levels from the Preparatory Year (Prep) to Year 3. All three teachers were purposefully selected as they were teaching a child with Down syndrome in a general classroom setting. As it happened, each of the participants was teaching a child with Down syndrome for the first time in their teaching careers. One teacher who had 30 years of teaching experience taught in a Prep class, one teacher with 22 years of experience taught in a split Prep/Year 1 class, and one teacher who had 8 years of teaching experience taught in a Year 3 class. All three teachers had in-class teacher aides to support them in working with the children. Although there is a comparison of data from the three participants, it should be noted that there are differences in class set-up and learning expectations between the Prep years and Year 3 students. These differences have been considered in the data analysis. Two teachers were employed at state schools and one in a private school in a large city in Queensland, Australia. Table 1 provides the demographics of the participants.

Research design. Data for the current paper were drawn from a larger qualitative collective case study gathered over a 5-month period. These data included two observation sessions in the teachers' classrooms at two different points, one session with the teacher discussing their lesson planning documents, and three semistructured interviews: one at the beginning of the research, one approximately 2 months later, and one at the end of the 5-month data collection period. The data for this paper are drawn specifically from the interviews. Participants were offered the opportunity to check the interview transcripts and provide comments or clarification. The interview questions included

- What experiences have shaped your practice the most when working with a child with Down syndrome in your classroom?
- How does your school and wider network support you as a teacher working with a child with Down syndrome?

- What has been particularly helpful and practical (or challenging) to you as a teacher of a student with Down syndrome?

Ethical clearance for the research was obtained by the Queensland University of Technology Human Research Ethics Committee and an ethics approval certificate was granted (120000297). Approval was also granted through Brisbane Catholic Education and Education Queensland. The research project was deemed to be a low-risk project. All participants were informed of the research's purpose as well as the aim of the research in the initial contact with participants. This included meeting with the principals of the schools where the teachers worked to advise them of the research's purpose. Participants were given an information sheet first and if they were interested were provided with a consent form. Written consent was gathered from the teachers involved. Information sheets were also provided for the principals and parents of the child with Down syndrome. Written consent was sought from the principals and from the parents prior to any data collection.

An inductive thematic analysis of the data collected was conducted to discover patterns and themes in the teachers' experiences (Patton, 2002). Following the transcription phase, open coding (also known as preliminary coding) was done. This process consists of sorting units of meaning (words, phrases, or sentences) that indicate in some way the participants' thinking in response to the interview questions. Themes from these data were derived and were analysed using a compare/contrast process (Creswell, 2013).

Results

The two main themes from the data are (a) teachers' attitudes and subsequent approaches in relation to including children with Down syndrome in general early years classrooms; and (b) challenges and support, including institutional support, support of parents/caregivers, and external support for teachers as perceived by these teachers. Each of these themes is discussed.

Teachers' Attitudes and Subsequent Teaching Approaches

Gaining an understanding of how teachers feel about inclusion is important because it helps us learn how teachers make connections between an abstract idea, such as inclusion, and utilising such abstraction in their teaching approach. Melanie described that all children are unique in their learning whether the child has Down syndrome or not:

With Down syndrome children you expect they're all going to be different, there's no two of them the same, so you know, I would expect that if I had two Down syndrome children in the class I would have to deal with them completely differently as well. I think that is my strongest message, that don't focus on the Down syndrome child as anything different from any other child really, but just adapt and change as their needs arise. (Melanie, Interview 1)

This data aligns with the findings of Corbett (2001), who described that more positive outcomes occurred when teachers connected with students as individual learners. Lisa expressed similar sentiments in relation to working with her student, John:

So when we are thinking about our students we are thinking about their ability not which year level they are at, and we cater as best we can. I cater to the needs of individual children whether they are John or anyone else. (Lisa, Interview 1)

Unlike Melanie and Lisa, Angela found it initially more difficult to consider a child with Down syndrome 'as anything different from any other child'. She was fully aware of her responsibility as Michael's teacher:

I toil with realising that I am a classroom teacher and I am responsible for Michael, not so much the school officer. I am the one who is accountable to parents, to the learning support people, the administration team . . . so I suppose it comes all back to the teacher. The teachers are the ones who are accountable for these children in the classroom and you sort of, in a sense, have to know everything about them if you can. (Angela, Interview 1)

Angela continued to struggle and at times felt a loss in confidence as she became overwhelmed by her responsibilities as a teacher of Michael. Angela described herself as feeling somewhat overwhelmed in relation to working with Michael and that these feelings affected her overall teaching. It would appear that Angela has focused on Michael's deficits (Rietveld, 2008), describing him as one of 'these children', and consequently struggled to understand how to include him as a member of her classroom.

At the heart of inclusive education is the provision of optimal learning opportunities for all children. All three teachers in the current study had expectations for their students' learning. Melanie's description of Liam indicated that she included him as a competent, contributing member of the classroom and designed and implemented her pedagogical approaches accordingly:

Targeting, always targeting the learning. First it was our numbers to five and writing 'L' consistently for 'Liam', and then we upped it so second term we wanted the whole name and numbers to ten. And we got it. Third term we are up to visual sight words and putting in sentences and reading. All the time making sure the goals are in reachable distance, never going beyond it so he is feeling achievement. (Melanie, Interview 1)

Lisa described her approach to working with John in a similar way:

When we look at John we are looking at a learner, we look at what he can do and focus on building from there. We don't think of John as having Down syndrome but we look at the whole child and think what does he need to be a successful learner, and how can we support him to do that? (Lisa, Interview 2)

Angela described that although Michael did not appear to have learned much over the year, in retrospect she realised that he was learning in her class:

It's really difficult because you might have all these great goals and expectations for his behaviour and, I mean, I look at the goals we set up at the start of the year and we really haven't achieved much. But at the same time, even though we haven't achieved much, we've achieved so much. He came at the start of the year and wasn't writing his name, but he can now at least attempt to write his name independently and he's starting to say the letters of his name. But I mean we have been doing that every day for the whole school year, so it's just really repetitive stuff for Michael and that is probably the key really, just being repetitive. (Angela, Interview 2)

It may have been that Angela felt more frustration than Melanie and Lisa because she was teaching in a Year 3 class where academic expectations are quite different to those in Prep and Year 1. All three teachers made references to having high expectations as a key facet of their teaching children with Down syndrome, as with any other child in their class. Melanie overtly challenged the assumption that because Liam had Down syndrome she should have lower expectations for his learning. Lisa expressed similar expectations for John.

In contrast, although expressing high expectations for Michael's learning on the one hand, Angela also expressed doubt about his ability to meet these expectations, yet she did not refuse to have him in her class. All three teachers had teacher aides to help them in their class and described that they worked closely with their teacher aides to support their students with Down syndrome. An anomaly for Angela, however, was that Michael attended a special education school 3 days a week. She identified that having his time

split between the two school sites had a negative impact on his learning; much of his time in her class was spent in managing his behaviour, which she mostly relied on her aide, Tammy, to do while she, Angela, attended to the learning of the rest of the students in the class. Angela had visited the special school that Michael attended 3 days a week and described that in this facility he was well supported and his learning ‘was at the top of the class’. It may be that Angela compared her understanding of the process of inclusion in the special school setting with her own classroom and felt that her class came up short. She did not describe what her concept of inclusive education was but did describe that she ‘toiled’ with the idea that she was the classroom teacher and therefore ‘responsible for Michael’. Angela did not appear to accept that even though the special school provided a supportive environment for Michael’s learning, she could have also provided a similar environment in her classroom. Instead, Angela appeared to have concerns that working with Michael would reduce her capacity to work with the other children in the class (Rose, 2010), leaving most of the work with Michael to the teacher aide, Tammy.

Challenges and Support to Including Children With Down Syndrome

Describing the various challenges and support to include children with Down syndrome in their classes was a prevalent theme for all three participants in the research. Melanie in particular described the challenges that came with a child who has difficulty communicating and how she tried to meet these challenges by, for example, modelling a rich language environment, having a high use of visuals to prompt communication, and Liam’s use of an iPad within the classroom. Melanie also encouraged Liam to use self-help skills and for the other members of the class to listen respectfully to what Liam was communicating. This approach assisted others in the class community to treat Liam with respect and to respect Liam’s attempts at communication.

Angela’s training was as an early childhood teacher and she used the strategies for this age group with Michael. She described his learning as at a toddler stage (around 2 or 3 years old) but that his body was that of an 8- or 9-year-old. Angela described Michael as a wilful child who liked to get his own way, so her focus was on managing his behaviour rather than academic achievement:

In terms of goals and expectations, sometimes it is just to get through the day. A lot of the times he will throw tantrums and there will be tears, but you have to be tough. (Angela, Interview 2)

Lisa worked very closely with her teacher aide, Amy, in planning curriculum to include John in the class activities. Having this additional support in the class helped to overcome many challenges that came along. Her approach was somewhat similar to Melanie’s in that she believed that John was a capable learner and a valued member of the class. Starting from this premise, she and her teacher’s aide worked out a program of high support for John:

Collaborative planning has positively impacted on our experience with John. Amy and I work particularly well together in terms of our philosophy and our collaborative approach. The fact that we communicate really quite regularly about John and what we are doing and what we really need to do and what is working and what isn’t working, is beneficial. (Lisa, Interview 1)

Institutional Support

As part of a transition to school strategy, Melanie and her principal made several visits to Liam’s previous school. Melanie described that she and her principal maintained an open dialogue about how they were going to include Liam as part of their school community.

This engagement demonstrated a whole-school approach to inclusive education where the principal provided effective leadership and organisational conditions conducive to inclusive education. Indeed, all the teachers in the school were aware and supportive of Liam's place in the school. As a result of this approach, Melanie felt better able to cope and supported in her work. Similar organisational support was evident in Lisa's school; Lisa described how this whole-school approach made her feel supported:

It is about the culture of the whole school and the expectation of the whole school, it's knowing that there are support people that I can go to if I have a group of students that I am concerned about. I have someone I can go to and say I am really concerned about these students I don't feel I am doing the best for these students, what else do you think I can do? (Lisa, Interview 1)

This whole-school approach facilitated a shared responsibility for the child that enabled the teacher to effectively access support and increased their capacity to work with the child. A mentoring program in Lisa's school created a base of collective values that facilitated the development of her capacity as a teacher working with a child with Down syndrome. Lisa identified collaboration with peers as one of her school's main approaches to building a culture of inclusion within the school. Angela, on the other hand, did not describe working within a whole-school approach to inclusion. Not feeling supported, she questioned Michael's position in the school and the benefit to him in being there:

His place here is because the school has offered him a place because the parents are part of the wider parish community. As to how much he gets out of it is the big question. (Angela, Interview 1)

Although Angela did not describe having this kind of whole-school support for inclusion, she did comment on the support she had from the school officer and other teacher aides:

Some teachers don't like having other people around when they are teaching or working and that is a challenge in itself, but I don't find it hard. I mean I've got two or three people in my room every single day for Michael and for the other kids in my class. (Angela, Interview 1)

Institutional support was described by all participants as important in helping them work with the children who had Down syndrome. For example, although Lisa expressed confidence about working with John, at the beginning stages of the school year she described how she needed more information and help in understanding the developmental needs of students with Down syndrome so that she could better prepare their curriculum, but this support was not realised:

I did flounder a bit with not knowing quite what to do. I think because we didn't have a document, a planning document or a curriculum document to support us; it was very unhelpful. We had some staffing issues in the Special Education Program and we had many changes in staffing and I felt like I just didn't have a direction or didn't quite know what I was trying to achieve with John. (Lisa, Interview 1)

As the year progressed, Lisa was provided with a great deal of support from the administration staff at the school and fellow teachers in relation to working with John.

Partnership With Parents/Caregivers

Parents and caregivers were identified as effective support by all three teachers in supplying information about the child and in discussing what would be best for their child. A positive partnership with Liam's parents proved useful in helping Melanie teach him in her classroom:

It helps us when mum comes in the afternoon and looks at the photos of what he has done and then validates his learning and also he can replicate what he has done last thing in the afternoon. And then mum is really keen to show dad and that empowers every kind of learning experience we have. (Melanie, Interview 2)

Angela commented that having developed an honest and open relationship with Michael's parents built on communication:

I am quite open with them. If he has had a really bad day or he's had a really good day. I think that it is important to be completely honest and we are not doing anyone a favour by not telling the truth. (Angela, Interview 2)

She felt that she could be honest with Michael's parents and that they would understand what she was doing in relation to supporting Michael in her class.

Lisa's situation highlights some of the complexities for teachers in working with children with Down syndrome; specifically, that families are complex and unique entities with no two situations being alike, and, although it is important to connect with the parents, other family members and carers need also to be considered:

John's mum's English isn't great so we don't communicate with mum very much at all, she comes in but it is mostly smiling and non-verbal communication, so she still feels welcome in our classroom. (Lisa, Interview 1)

Support operationalised within the school context for teachers in the current research clearly indicated that the teachers felt that the relationships they developed with parents and families were vital in supporting the classroom teacher in their roles.

Professional Development for Teachers

Another aspect in relation to a whole-school approach to inclusive education is providing teachers with access to extra external support mechanisms. Florian and Rouse (2010) and Waitoller and Artiles (2013) described how teachers wanted continuous training to keep informed about trends in inclusive education. The importance of professional development was a recurrent factor of high priority identified by the teachers in this research, with all three teachers expressing a desire for more professional development and information on Down syndrome. For example, both Melanie and Angela identified the Down Syndrome Association of Queensland (DSAQ) conference as a very significant and positive supporting factor:

The conference has been the best thing that I have had to support me and what I am doing and how I am going about things . . . It enabled me to reflect on some of the things I could be doing and gave me the background knowledge I needed. (Melanie, Interview 1)

In addition to the many resources she gathered from the DSAQ, Angela mentioned the benefits of attending a 2-day conference held by the association as part of her professional development in the year:

I also learned that you have to have realistic expectations of Michael's working memory and take this into account. So I have to teach and re-teach stuff, which does become repetitive, but they told us that kids with Down syndrome can't always hold a lot of information in their memories. That was useful to know. (Angela, Interview 2)

In the preceding passages, Angela is describing the benefits of hearing from peers who are experiencing similar situations to hers. Unlike Angela, both Melanie and Lisa had the support of the school administration team and other teachers working together to support Liam's and John's learning. Lisa, for example, described attending training to use iPads with John. Although having opportunities to engage in professional development was identified as beneficial, there were also problems associated with professional development

that hindered teachers' access to such activities. Angela described difficulties associated with having to balance being out of the classroom when she felt that she needed to be in the classroom to effectively support Michael. In particular, she was concerned that consistency in Michael's learning was adversely affected when she was away. Another problem mentioned by Lisa was that of getting funding to attend professional development:

Our difficulty now is to get funding to go to anything outside of school. The next conference about Down syndrome is a two day conference so I think the school are actually going to say no. In terms of TRS [teacher relief staff] it costs \$300 dollars a day to replace a teacher. (Lisa, Interview 2)

The findings of the study indicate that although there are some highly supportive inclusive school environments for children with Down syndrome, there continues to be gaps and inconsistencies in how schools and teachers understand the needs of children with Down syndrome in the early years of schooling and how best to address these needs.

Discussion

In this research we explored three early years teachers' inclusion of students with Down syndrome. The findings reveal that the idea of, and approach to, inclusion varied depending on the context of all three teachers in the study. Melanie and Lisa were working in the Prep years of schooling, whereas Angela was teaching a Year 3 class. Melanie's and Lisa's attitudes towards Liam and John seemed to be shaped by their expectations of a child's capabilities at the Prep level of learning, but also of a child with Down syndrome at a Prep level of learning. In contrast, Angela was teaching a Year 3 class and seemed to be frustrated that time working with Michael was spent primarily on behaviour management rather than academic learning. When she compared what she described as his advanced learning in the special school with his lack of learning in her class she seemed resigned that he was not going to achieve academically. She, therefore, focused mostly on behaviour management, viewing his capabilities for learning from a deficit point of view. This finding concurs with that of Rietveld (2008), who suggested many teachers of children with Down syndrome focus on the child's deficits, which tends to exclude rather than include them in the everyday running of the class. Of the three teachers, Angela struggled the most. She felt at times overwhelmed having Michael in the class, a finding that aligns with that described by Forlin (2010) where teachers who feel unprepared for the reality of working with children who do not fit their ideal of the 'norm' hold negative perceptions about their roles as inclusive educators. It seems that once Angela found out information from the DSAQ she felt better positioned to understand Michael's learning needs. More needs to be understood about the support that teachers need in the higher grades when they have children with Down syndrome in their class.

Melanie and Lisa were able to successfully include Liam and John in the everyday activities of their classes by suggesting that all children were different, and working with a child with Down syndrome meant including them with a focus on their needs as uniquely different to everyone's needs, particularly when targeted information helps to inform teachers of specific needs of children. This was found in the current research where all three teachers described being better informed about Down syndrome once they had learned about the DSAQ, which provided specific information about Down syndrome, but, more importantly, colleagues who could share their stories and strategies in relation to teaching children with Down syndrome. The teachers in the study were able to reflect on their teaching approaches and make changes where possible to support children's learning. This finding aligns with much of the literature that suggests teachers

have expressed a need for targeted information on inclusion and training to work with children who have disabilities (Forlin et al., 2013; Gilmore, Campbell, & Cuskelly, 2003; Horne & Timmons, 2009; Huang & Diamond, 2009). The finding from the current study indicates that the teachers felt that the more information and training they had and the more supported they felt about working with children who have Down syndrome, the more success they and their students had.

Limitations

A key limitation to the study is that we explored working with children with Down syndrome with three teachers only. A larger pool of participants would provide more extensive findings in this area that would better inform general education teachers about working with children who have Down syndrome. Another limitation is the relatively short span of time for data collection. Although a sample size of three is small, the richness of the data allowed for a detailed examination of each of the teacher's experiences.

The nature of this research relied on self-reported data from teachers. A limitation of this type of reliance on experiences as told by the participants is that they may be giving answers that they feel are correct, or answers that they feel have a high level of social desirability. Independent sampling of the emergent themes in future research is warranted to interrogate the findings further.

Conclusion

This research has highlighted the need for teachers in the early years of schooling to have appropriate information, training, and support to teach children with Down syndrome. Without these three key elements, teachers are challenged in trying to support children's learning. Findings indicated that teachers' attitudes towards working with children who have Down syndrome play a significant role in how they feel about including these children. A particular barrier in this area is a lack of agreement on what is actually meant by the term 'inclusion'. More research is needed to understand how to include children with Down syndrome beyond the Prep years so that all stakeholders gain a sense of achievement.

References

- Abbeduto, L., Pavetto, M., Kesin, E., Weissman, M. D., Karadottir, S., O'Brien, A., & Cawthon, S. (2001). The linguistic and cognitive profile of Down syndrome: Evidence from a comparison with fragile X syndrome. *Down Syndrome Research and Practice*, 7, 9–15. doi:10.3104/reports.109
- Armstrong, D., Armstrong, A. C., & Spandagou, I. (2011). Inclusion: By choice or by chance? *International Journal of Inclusive Education*, 15, 29–39. doi:10.1080/13603116.2010.496192
- Australian Institute for Teaching and School Leadership. (2013). *Australian Professional Standards for Teachers*. Retrieved from <https://educationstandards.nsw.edu.au/wps/portal/nesa/teacher-accreditation/how-accreditation-works/guide-to-accreditation/professional-standards>
- Avramidis, E., & Norwich, B. (2002). Teachers' attitudes towards integration/inclusion: A review of the literature. *European Journal of Special Needs Education*, 17, 129–147. doi:10.1080/08856250210129056
- Commonwealth of Australia. (1992). *Disability Discrimination Act 1992*. Retrieved from <https://www.legislation.gov.au/Details/C2016C00763>
- Corbett, J. (2001). *Supporting inclusive education: A connective pedagogy*. New York, NY: RoutledgeFalmer.
- Creswell, J. W. (2013). *Qualitative inquiry & research design: Choosing among five approaches* (3rd ed.). London, UK: Sage.
- Davis, A. S. (2008). Children with Down syndrome: Implications for assessment and intervention in the school. *School Psychology Quarterly*, 23, 271–281. doi:10.1037/1045-3830.23.2.271

- Dharan, V. M. (2015). Beginning teachers and diversity – why the need for extended critical professional support. *Asia-Pacific Journal of Teacher Education*, 43, 61–74. doi:10.1080/1359866X.2014.940840
- Florian, L., & Rouse, M. (2010). Teachers' professional learning and inclusive practice. In R. Rose (Ed.), *Confronting obstacles to inclusion: International responses to developing inclusive education* (pp. 185–199). London, UK: Routledge.
- Forlin, C. (2010). Teacher education for inclusion. In R. Rose (Ed.), *Confronting obstacles to inclusion. International responses to developing inclusive education* (pp. 155–170). London, UK: Routledge.
- Forlin, C., Chambers, D., Loreman, T., Deppeler, J., & Sharma, U. (2013). *Inclusive education for students with disability: A review of the best evidence in relation to theory and practice*. Canberra: Australian Research Alliance for Children & Youth.
- 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, 251–264. doi:10.1080/10349120802268396
- Fox, S., Farrell, P., & Davis, P. (2004). Factors associated with the effective inclusion of primary-aged pupils with Down's syndrome. *British Journal of Special Education*, 31, 184–190. doi:10.1111/j.0952-3383.2004.00353.x
- Gilmore, L., Campbell, J., & Cuskelly, M. (2003). Developmental expectations, personality stereotypes, and attitudes towards inclusive education: Community and teacher views of Down syndrome. *International Journal of Disability, Development and Education*, 50, 65–76. doi:10.1080/1034912032000053340
- Horne, P. E., & Timmons, V. (2009). Making it work: Teachers' perspectives on inclusion. *International Journal of Inclusive Education*, 13, 273–286. doi:10.1080/13603110701433964
- Huang, H.-H., & Diamond, K. E. (2009). Early childhood teachers' ideas about including children with disabilities in programmes designed for typically developing children. *International Journal of Disability, Development and Education*, 56, 169–182. doi:10.1080/10349120902868632
- Norwich, B., & Lewis, A. (2001). Mapping a pedagogy for special educational needs. *British Educational Research Journal*, 27, 313–329.
- Patton, M. Q. (2002). *Qualitative research & evaluation methods* (3rd ed.). Thousand Oaks, CA: Sage.
- Rietveld, C. M. (2008). Contextual factors affecting inclusion during children's transition from preschool to school. *Australian Journal of Early Childhood*, 33(3), 1–9.
- Rose, R. (Ed.). (2010). *Confronting obstacles to inclusion: International responses to developing inclusive education*. London, UK: Routledge.
- Ruijs, N. M., Van der Veen, I., & Peetsma, T. T. D. (2010). Inclusive education and students without special educational needs. *Educational Research*, 52, 351–390. doi:10.1080/00131881.2010.524749
- Savolainen, H., Engelbrecht, P., Nel, M., & Malinen, O.-P. (2012). Understanding teachers' attitudes and self-efficacy in inclusive education: Implications for pre-service and in-service teacher education. *European Journal of Special Needs Education*, 27, 51–68. doi:10.1080/08856257.2011.613603
- Sermier Dessemontet, R., Morin, D., & Crocker, A. G. (2014). Exploring the relations between in-service training, prior contacts and teachers' attitudes towards persons with intellectual disability. *International Journal of Disability, Development and Education*, 61, 16–26. doi:10.1080/1034912x.2014.878535
- Shaddock, A. J., Hook, J., Giorcelli, L., Smith, S., Elliott, A., Hoffman-Raap, L., ... Woolley, G. (2007). Improving the learning outcomes of students with disabilities in mainstream classes: A review of the literature from a practice standpoint. In A. Shaddock, B. Smyth King, & L. Giorcelli (Eds.), *A project to improve the learning outcomes of students with disabilities in the early, middle and post compulsory years of schooling* (pp. 10–125). Canberra: Australian Government Department of Education, Science and Training. Retrieved from http://pandora.nla.gov.au/pan/78123/20071019-1322/www.dest.gov.au/sectors/school_education/publications_resources/profiles/report.pdf
- Varcoe, L., & Boyle, C. (2014). Pre-service primary teachers' attitudes towards inclusive education. *Educational Psychology*, 34, 323–337. doi:10.1080/01443410.2013.785061
- Waitoller, F. R., & Artiles, A. J. (2013). A decade of professional development research for inclusive education: A critical review and notes for a research program. *Review of Educational Research*, 83, 319–356. doi:10.3102/0034654313483905