

**A CASE STUDY OF PARENT, TEACHER AND STUDENT ATTITUDES TOWARDS
DISABILITY AND PEER SOCIAL INTERACTIONS IN A YEAR 2 PRIMARY
SCHOOL CLASSROOM**

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Abstract

Inclusion is a philosophical approach to education which proposes that all students have the right to attend their local school. There is currently little research on parent, teacher and student views towards the inclusion of students with disabilities in regular New Zealand primary schools. Through the use of semi-structured interviews, parental perspectives of the experiences of students with Down syndrome in regular New Zealand schools were obtained. The perspective of a classroom teacher on the inclusion of children with Down syndrome in a regular classroom was also gathered. The peer interactions of a small group of typically developing students in a regular classroom were examined, along with their attitudes towards peers with disabilities and their social skills. Findings indicated that typically developing students interacted primarily with their peers about academic tasks. All of the students displayed neutral or positive attitudes towards peers with disabilities and a positive correlation was found between their attitudes and social skills. The parents and teacher reported experiencing both inclusive and non-inclusive practices at regular schools, and suggested that teacher attitudes towards inclusion could be improved to increase inclusive practices. The parents and teacher reported that specific training in inclusive practices should be provided. It was concluded from these findings that there is a shortfall between policy and the practices of teachers in regular classrooms. It is proposed that this shortfall may be rectified through increased support and education in inclusionary practices for teachers.

Chapter One: Introduction

1.1 Overview

Inclusive education is a global movement centered on the participation and achievement of students with disabilities in regular schools. This introduction to inclusive education explores education before the inclusive movement, the benefits of inclusive education, international guidelines for inclusive practice and New Zealand legislation related to inclusion. The need for an increase in inclusive practices is highlighted through an examination of recent reports on inclusion in New Zealand schools.

1.2 The Historical Context of Inclusive Education: The Medical Model

Historically, education in New Zealand was not considered to be an option for individuals with disabilities, let alone a basic human right. Generally, individuals with disabilities were regarded as trainable but not educable, and were often separated from society (Stace, 2007). It was not until public opinion began to change in the late nineteenth century that education was introduced for some individuals with disabilities by the New Zealand Government (Wills, 2009). Separate schools were built for children who were deaf or hard of hearing, allowing them to receive an education. These schools did not accept children with other disabilities, who were still regarded as uneducable. As with all practices, the education available was informed by the societal views of the time, which were largely based on the medical model.

The medical model attributes any educational difficulties that an individual might have to their inherent deficits, rather than to their environment (Ainscow, 2007). Education systems influenced by the medical model view students with disabilities as less educable than their typically developing peers (Skidmore, 2002). This results in alternative curriculums for students with disabilities, and a lack of participation with the typical student body (Skidmore, 2002). Additionally, classroom support is designed to fix the perceived weakness within the

student, rather than to give teaching instruction tailored to the student's needs (Skidmore, 2002). As Ballard (1996) emphasises, this education system allows for the segregation of students with disabilities because instead of the responsibility to teach all students being placed on the staff, students have the responsibility to learn the material regardless of their situation. As a result of this, students who receive an education under the influence of this model often attend separate schools or units than their typical peers, and receive an entirely separate curriculum, often devoted to simple and inappropriate tasks (Wills, 2009).

1.3 Inclusive Education

During the 1980s society began to react against the medical model, moving away from segregation and towards inclusion (Wills, 2009). This was primarily achieved through the introduction of the social justice model which views disability not as an inherent deficit within the individual, but as an issue within society (Florian, Rose, & Tilstone, 1998). Essentially, disability arises when society views individual differences as an abnormal occurrence and fails to support these differences (Carrington & MacArthur, 2012). For instance, while the medical model espouses that it is an individual's responsibility to ensure they can gain physical access to a classroom, proponents of inclusion would state that it is society's responsibility to provide a wheelchair, ramp, or automatic doors. In contrast to the medical model in which the responsibility for access is on the individual, the inclusive model proposes that this is society's responsibility.

Based on this social justice philosophy, inclusive education can be defined as all children being educated at their local school with no barriers to their presence, participation, or achievement in the school's culture and curricula (Carrington & MacArthur, 2012). Schools which are inclusive not only provide physically accessible spaces but they promote a culture of acceptance within their student body (Skidmore, 2002). It is important at inclusive schools that all children form friendships in and out of the classroom, so they can participate

in all school activities (MacArthur, 2009). Inclusive schools also believe that all students are capable of achieving academically and provide a range of teaching methods for the benefit of all students.

Inclusive education has become a global movement, with efforts to promote inclusive classrooms occurring in the United Kingdom (Laws & Kelly, 2005), America (Cameron, Cook, & Tankersley, 2012), Australia (Carrington & MacArthur, 2012), Canada (Dyson, 2012), China (Dyson, 2012), the Middle East (Gaad, 2015), Scandinavia (Dolva, Gustavsson, Borell, & Hemmingsson, 2011), and Europe (de Boer, Pijl, Minnaert, & Post, 2014).

1.4 The Benefits of Inclusive Education

The New Zealand Education Review Office is the government department responsible for the evaluation and reporting of education in New Zealand primary and secondary schools and early childhood services (Education Review Office, 2016). The Education Review Office has noted three potential benefits of inclusion in a past report (Education Review Office, 2010). The first benefit is that students with disabilities have the opportunity to socialise with their peers and to prepare for life in society. The second benefit is that peers learn to understand and empathise with individuals who have disabilities, and understand that society should accept people regardless of their strengths and weaknesses. The third benefit is that teachers are provided with an opportunity to learn alternative methods of teaching and to develop professional networks which can be used to help future students.

The Education Review Office's first proposed benefit is important to many parents of children with disabilities as they place high importance on their children forming friendships with their peers (Guralnick, Connor, & Hammond, 1995). Research tends to support the claim that children with disabilities who are educated in inclusive schools will form positive relationships with their peers. For example, children with disabilities who have the opportunity to interact with their peers in regular settings enjoy an average level of

acceptance (Laws, Taylor, Bennie, & Buckley, 1996), have higher self-esteem and emotional development (Guralnick et al., 1995; Madden & Slavin, 1983), and are more social than children with disabilities who attend special schools or separate units within a regular school (Karin, Ellen, Evelien, Mieke, & Katja, 2012). Furthermore, as both Guralnick (1990) and Brown and Conroy (2011) have highlighted, social development is influenced by the opportunity for social interaction. Children with disabilities attending inclusive schools have an increased opportunity to interact with typically developing peers compared to children who are placed in special education settings, and this is likely to result in better social development. These findings support the claim that children with disabilities who attend inclusive schools can form quality friendships with their peers and the inclusive school environment may well prepare them for their working life.

The second benefit proposed by the Education Review Office, that peers will become more accepting of individuals with disabilities, is also supported by the literature. Several studies have found that children who attend inclusive schools develop more positive attitudes towards their peers with disabilities (Georgiadi, Kalyva, Kourkoutas, & Tsakiris, 2012; Krahé & Altwasser, 2006; Madden & Slavin, 1983) and are more understanding of the difficulties that individuals with a disability might face (Kalyva & Agaliotis, 2009). In contrast, children who attend schools which place students in separate special education units have been found to hold more negative attitudes than their peers from inclusive schools and their peers from schools where no students with disabilities are enrolled (Favazza & Odom, 1997; Vignes et al., 2009). This highlights the importance of ensuring that students with disabilities are included in their regular class, and are not seen as belonging to a separate body of students within the school, which appears to be more damaging than enrolling students in special education schools. However, it is encouraging that when all children are included in the classroom, students become more accepting of and positive towards others' differences.

The final benefit raised by the Education Review Office is that teachers are provided with an opportunity for professional development which will benefit current and future students. While it is indisputable that teachers are provided with the opportunity to expand their knowledge and practices, it is debatable as to how often quality professional development occurs. Both international and national research suggests that general classroom teachers often do not teach their students with special education needs, but leave this job to the teacher aides (Broer, Doyle, & Giangreco, 2005; Cameron et al., 2012; Egilson & Traustadottir, 2009; Giangreco, Edelman, Luiselli, & MacFarland, 1997; Whinnery, Fuchs, & Fuchs, 1991). With over 90% of teacher aides in some settings consistently reporting inadequate training and no opportunity for professional development (Abbott, McConkey, & Dobbins, 2011; Carter, O'Rourke, Sisco, & Pelsue, 2009; Moran & Abbott, 2002), it is uncertain how often general classroom teachers receive the training that the Education Review Office cites as a benefit of inclusion.

1.5 The Basis of New Zealand's Legislation

New Zealand legislation is founded on several United Nations documents which, while not legally binding, provide a basis for the treatment of individuals with disabilities. New Zealand has signed three United Nations declarations which are relevant to inclusive education.

The first is the Universal Declaration on Human Rights which states in Article 26 that education will promote tolerance and friendship, and that parents can choose to send their child to a regular school (United Nations General Assembly, 1948).

The second is the United Nations Convention on the Rights of the Child, where Article 3 states that all children have a right to services and facilities which conform to high standards (United Nations General Assembly, 1989). This article reinforces the fact that children with disabilities have the right to attend a school which is as inclusive as it claims to

be. Article 12 of this declaration states that a child's viewpoint must be considered with regard to significant decisions about their life (United Nations General Assembly, 1989). Respecting children's views is particularly relevant when considered in conjunction with the research which states that children wish to be included with their typically developing peers (Broer et al., 2005; Egilson & Traustadottir, 2009; Rutherford, 2009).

The final document is the United Nations Convention on the Rights of People with Disabilities (United Nations General Assembly, 2007). This declaration states in Article 24 that all people with disabilities are entitled to an inclusive education which will allow them to achieve their full academic and social potential and which will encourage their participation in society (United Nations General Assembly, 2007). By signing these declarations, New Zealand has established that it supports the rights of individuals with disabilities and the right to an inclusive education.

1.6 Past New Zealand Legislation and Policy

Prior to the amendments in legislation discussed below, students with special education needs attended special education units (Moore et al., 1999). This separation was common practice in New Zealand from 1877, and continued until 1989 when legislative changes were made to the New Zealand Education Act (Ministry of Education, 1989).

The amendments made in 1989 to the New Zealand Education Act (Ministry of Education, 1989) allowed all individuals with special education needs to enrol at any State school. This was a clear step away from the common isolation of students with special education needs that had been established in 1877. However, despite being legally allowed to attend a regular school, students were expected to adhere to the school's practices, with few allowances being made in the schooling system for students' individual needs (Moore et al., 1999).

In 1996 the New Zealand government issued the Special Education 2000 Policy which was a clear move away from mainstreaming and towards inclusion. The policy was intended to promote inclusive practices in regular schools through increased professional development for teachers (Kearney & Kane, 2006). However, in practice it became a policy which allocated funding, with Kearney and Kane (2006) suggesting that very few general education teachers benefitted from training on inclusive practice. Wills (2006) goes further in his suggestion that the policy required schools to complete a greater amount of paperwork for students with disabilities and that this led to students being refused enrolment in schools who now felt that students required more processing for less funding.

Inclusive education was also considered in the New Zealand Disability Strategy (New Zealand Government, 2001). The strategy reiterated that all students had the right to enrol at state schools. It also stated that schools were accountable for fulfilling the needs of special education students and that they were required to promote inclusive settings designed to meet the individual needs of students (New Zealand Government, 2001).

1.7 Current New Zealand Policy

More recently, the *Success For All – Every School, Every Child* plan was introduced by the New Zealand Government (Ministry of Education, 2010). The plan was designed to aid regular schools in achieving inclusion for their students with special education needs. It stated that the overall goal for New Zealand schools was to have all schools demonstrating inclusive practices by 2014. Additional goals included teachers being supported by the Ministry of Education to become confident educators, and all students being present, engaged, and achieving at their local schools (Ministry of Education, 2010).

To increase support to schools, the New Zealand Government has established a webpage with resources for implementing inclusion (Ministry of Education, 2015b). The webpage can be found on the Te Kete Ipurangi website, which provides free resources to

teachers and parents in New Zealand. The inclusion webpage has guides on various topics designed to increase teacher knowledge and promote inclusive practices. Teachers are able to find information on specific disabilities, or look up articles covering topics such as assessment, peer relationships, and removing barriers to learning (Ministry of Education, 2015b).

The Te Kete Ipurangi website also contains the *Teacher and Teachers' Aides Working Together* programme (Ministry of Education, 2016b). The programme has nine modules based around the role of the teacher, the role of the teacher aide, teachers examining existing attitudes towards disability, teachers working with students' strengths, and teachers building a strong working relationship with teacher aides. The programme is designed to be delivered to teachers and provides presentations, workbooks and activities.

Schools are also guided by the National Administration Guidelines (New Zealand Government, 2013) and the National Education Goals (New Zealand Government, 2004). The National Administration Guidelines require New Zealand schools to identify students who have special education needs and to implement teaching and learning strategies for these students. They also require schools to provide opportunities for all students to achieve in all areas of the New Zealand curriculum, and to provide a physically and emotionally safe school for all students (New Zealand Government, 2013). The National Education Goals are also relevant to inclusion, and require schools to remove barriers to education, and to identify and support students with special education needs (New Zealand Government, 2004).

In addition to the National Administration Guidelines and the National Education Goals, every school is also required to develop a school policy on inclusion. These policies are publically available and often include the right of students with special education needs to enrol at the school, the role of the class teacher and support staff, and information regarding the Ongoing Resourcing Schemes and Individual Education Plans. Often, schools will also

outline additional programmes such as Reading Recovery, English Language Workshops, or Gifted and Talented Workshops.

It should be noted that The Education Act (Ministry of Education, 1989) is currently under review. It is expected that a first bill will be drafted and presented to parliament in 2016 before proceeding through the select committee proceedings (Ministry of Education, 2015a). It is likely that changes will be centred on educational goals, on resource allocation, and on promoting choice and celebrating diversity (Ministry of Education, 2015a). Such revisions will likely support inclusive education and will ideally increase inclusive practices in schools around New Zealand.

1.8 Is Inclusion Being Achieved in New Zealand?

Data from New Zealand classrooms provides evidence that many students with disabilities are not receiving an inclusive education (Education Review Office, 2015; MacArthur, Gaffney, Kelly, & Sharp, 2007; Rutherford, 2009). The most recent report from the Education Review Office illustrates the lack of inclusion in New Zealand schools (Education Review Office, 2015). The Education Review Office examined 152 schools, all of which had enrolled a child with special education needs. The report states that 78% of the schools were “mostly inclusive”, and that 50% of the schools actively promoted the achievement of students with special education needs (Education Review Office, 2015). Unfortunately, the report does not include a definition for the term “mostly inclusive”. However, it is noted that these schools often employ a Special Education Needs Coordinator (SENCO) to aid staff, and that they provide children with an Individual Education Plan as required by the Ministry of Education for students who receive funding. It was also mentioned that these schools implement buddy and mentor systems in order to promote social participation and academic achievement, although this appears to consist of pairing children with disabilities with older students instead of encouraging relationships with their same-age

peers. While these figures show the efforts of many schools to be inclusive, it appears that they are focused on the academic component of inclusion, which may be having a detrimental effect on children's social participation with peers.

The report also neglects to mention the schools which did not label themselves as inclusive. For instance, the report mentioned that many students had been denied enrolment at schools not included in the study but failed to include these figures in their calculation of the percentage of New Zealand schools which are inclusive. Thus, the claim that 78% of New Zealand schools are "mostly inclusive" is not entirely accurate and may not be a true representation of inclusion in schools around the country.

Recent qualitative research provides further evidence of this failure of inclusion in New Zealand schools (MacArthur et al., 2007; Rutherford, 2009). A study by MacArthur and colleagues (2007), sought the opinion of New Zealand children with disabilities aged 11 to 14 years, along with their teachers' opinions. The children reported that they were positive about their schools overall but that they were often bullied by other students and that their teachers overlooked this. The teachers reported that they had low academic and social expectations for the children and that they were more likely to discipline antisocial behaviour exhibited by children with disabilities than the same behaviour exhibited by their peers. There is a clear discrepancy between inclusive education and the attitudes and practices that these teachers are reporting.

A similar study by Rutherford (2009) interviewed ten students from across the South Island of New Zealand. The students were aged from 8 to 17 years and all of them received teacher aide support at school. Each student reported that they felt isolated from their peers, had little independence from their teacher aides and had very little to do with their classroom teachers. While each student felt positive about the academic support that they received from their teacher aides, they reported that their social involvement at school suffered because of

their association with the teacher aide in the classroom. In several cases, it was noted that the students attempted to separate themselves from their teacher aide to the detriment of their academic achievement. The students also reported that the general classroom teacher often ignored their needs and expected the teacher aide to devise an entirely separate lesson plan. In one case, a student with a visual impairment reported that his teacher insisted he sit at the back of the classroom with a teacher aide when a simple move to the front of the classroom could have allowed him to read the board and participate with the rest of his classroom peers (Rutherford, 2009). Clearly, these students have not been experiencing inclusion while attending school. Although the students have been physically present in their classroom, their statements are consistent with the issues highlighted by the ERO report (2010). While the students' schools have made plans to ensure academic achievement they have not promoted positive attitudes among teachers or encouraged social interaction with peers.

1.9 Summary

In summary, education for individuals with disabilities in New Zealand was introduced in the early twentieth century, and has progressed from segregated schools to include a combination of special units, placements in regular classrooms and inclusive schools. Internationally, the United Nations has established a series of decrees designed to protect the rights of those with disabilities to an inclusive education. New Zealand had established legislation and policy in line with these decrees, promoting inclusion in all schools. Unfortunately, research indicates that the practice in many classrooms has not yet allowed students with disabilities to be included academically, socially, and culturally. Feedback from students with disabilities indicates that social inclusion is an aspect of their schooling experience which needs improvement.

Chapter Two: Literature Review

2.1 Search Strategy

The literature reviewed in this chapter was selected through a search of the PsycINFO and ERIC databases. Keywords and phrases were selected using the EBSCO hosts thesaurus function which allows for changes in the terminology used in articles over time.

Combinations of the following keywords were searched: Inclusion; Mainstreaming (Educational); Down* Syndrome; Disabilities; Disability Discrimination; Disabled (Attitudes Toward); Social Acceptance; Psychosocial Development; Peer Relations; Intervention; Child Attitudes; Teacher Attitudes; Parental Attitudes; Social Skills; Social Skills Training; Social Support.

Search results were limited to peer-reviewed articles published in English, and were all registered as using a sample of school-aged children. Results which focused on foreign policies, adults with disabilities, and family dynamics were excluded. The suitable articles were selected and their references were examined for additional articles. These additional articles were obtained through the search engine Google Scholar and the University of Canterbury library catalogue. In total, 4 articles on teacher attitudes, 5 articles on the role of the teacher aide, 12 articles on peer attitudes towards disability, and 8 articles on improving social skills were found.

2.2 A Review of Literature on Attitudes toward Disability

2.2.1 The importance of attitude to inclusive education. Attitudes towards children with disabilities are currently a significant barrier to inclusion. Data from New Zealand schools indicates that both teacher and peer attitudes can be unwelcoming in nature, and are often not facilitative of participation within many schools labelled as inclusive (Chadinha, 2014; MacArthur et al., 2007; Macartney & Morton, 2013; Rietveld, 2010; Rutherford, 2009). It is important to assess and improve these attitudes so that children with disabilities

receive their education in an inclusive environment where they are able to form positive relationships with their typically developing peers.

2.2.2 Teacher attitudes. Several studies have examined the attitudes that teachers hold towards students with disabilities and have found that teachers generally hold negative attitudes towards inclusive education (Campbell, Gilmore, & Cuskelly, 2003; Causton-Theohans & Malmgren, 2005; Gilmore, Campbell, & Cuskelly, 2003; Kim, Park, & Snell, 2005). The studies which have investigated how to promote positive teacher attitudes have found that training and professional development can have a significant positive effect (Campbell et al., 2003; Causton-Theohans & Malmgren, 2005; Kim et al., 2005).

A quantitative study published by Gilmore, Campbell, and Cuskelly (2003) examined the attitudes that early education, primary, and secondary school teachers held towards the inclusion of students with Down syndrome. The authors used a self-developed survey which covered knowledge about Down syndrome and beliefs about inclusive education for students with Down syndrome. A total of 538 teachers responded to the survey, 51% of whom were primary school teachers. Responses showed that 91% of the teachers thought inclusive education was socially beneficial for students with Down syndrome and 97% thought inclusive education was beneficial for the social development of typically developing students. However, only 24% of the teachers believed that inclusion was the best option for students with Down syndrome. The remaining 76% of teachers believed that students with Down syndrome should either be placed in a classroom with younger students, attend a special education school, or attend a special education unit in a regular school. While these beliefs were specific to students with Down syndrome, it seems probable that many teachers would hold similar views towards the inclusion of other students with disabilities.

The same authors conducted a second quantitative study which used a within groups design to examine the views of 274 students training to become teachers (Campbell et al.,

2003). The students were asked to complete two measures at the beginning and end of their 13 week semester. The first measure was a self-developed questionnaire covering knowledge about Down syndrome and beliefs about inclusive education. The second measure was the *Interactions with Disabled Persons Scale* (IDP; Gething & Wheeler, 1992), which assesses general attitudes towards disability through 20 items which require participants to respond on a 5-point Likert scale. In between the completion of these measures, participants were required to attend their standard university lectures which covered inclusive education, as well as interview and assess community member's beliefs on Down syndrome and inclusive education. A comparison of pre- and post-intervention questionnaire results indicated that the students significantly increased their knowledge and reduced their stereotypical views of individuals with Down syndrome post intervention. The students' views on inclusive education also became significantly more positive. At the beginning of the semester, a significant number of the students thought that inclusive education would be detrimental to the education (28%), social development (25%), and emotional development (38%) of children with Down syndrome. At the end of the semester, 90% of the students believed inclusion was educationally beneficial, 95% believed it was socially beneficial, and 86% believed it was emotionally beneficial for students with Down syndrome. The students had also become more positive towards individuals with disability, as measured on the IDP. Thus, it appears that the coursework the students completed improved their attitudes towards the inclusion of students with disabilities.

A between-groups study by Kim, Park, and Snell (2005) also examined the effect that providing information about disability and inclusion could have on teacher attitudes. Thirty classroom teachers with students with disabilities in their classrooms were recruited and evenly divided into experimental and control groups. Both groups completed the *Teacher Efficacy Scale for General Educators of Inclusive Classrooms* (Deemer & Minke, 1999) and

the *Teachers' Attitude Scale on Inclusion* (Green & Stoneman, 1989) pre- and post-intervention. The efficacy scale provides a measure of how teachers instruct students with disabilities and is comprised of 25 items which are responded to on a 5-point Likert scale. The teacher's attitude scale evaluates teacher attitudes towards inclusion and is comprised of 32 items, also with a 5-point Likert scale. Teachers placed in the intervention group received a weekly newsletter for 8 weeks, which provided information on special education, information on inclusion, information on the student with the disability, and successful case studies. The information on the student covered their performance for the week, educational goals for the next week, and strategies for inclusion. Results from the efficacy scale showed that teachers' efficacy on giving instructions to students with disabilities significantly improved for those in the intervention group, but not for those in the control group. Results on the attitude scale showed that teachers in the intervention group had significantly more positive attitudes after the intervention than teachers in the control group, which indicates that the information provided to them improved their attitudes towards inclusion. These findings would have been strengthened by direct observations of teacher-student interactions, nonetheless, the study provides evidence that information can positively impact teacher attitudes towards students with disabilities and the concept of inclusive education.

A quantitative study conducted by Hsien, Brown, and Bortoli (2009) analysed whether teachers' attitudes towards inclusive education were related to their level of education. The authors examined the views and education of 36 general and special education teachers. The participants completed a self-developed questionnaire, which had three sections. The first section covered demographic information. The second section comprised 36 items covering attitudes and beliefs about inclusive education, and participants responded on a 5-point Likert scale. The third section was comprised of four open questions, which allowed the teachers to elaborate on their views of inclusive education. Results indicated that teachers with a post-

graduate level of education were significantly more likely to view inclusive education as an improvement to the education system, with 100 % indicating they agreed with inclusion, compared to 71% of Bachelor degree holders. Teachers without special education training were significantly more likely to believe they couldn't meet the needs of all students in an inclusive classroom than were teachers with special education training (75% vs 16%). This small scale study provides further evidence that teacher education is related to positive attitudes towards inclusion in the classroom.

This international research shows that classroom teachers often believe that inclusive education is not suitable for individuals with disabilities. This belief about inclusive education appears to affect teacher attitudes towards including students with disabilities in their classrooms, and may also affect teacher behaviour towards students. Encouragingly, teacher attitudes appear to be easily improved through simple education on disabilities and inclusion. A further summary of this research can be found in Table 1, which presents the design, measures used, and statistical findings of each study.

Table 1
Studies examining teacher attitudes towards inclusive education

Author	Participants	Study Design	Measures	Intervention	Results
Campbell, Gilmore, and Cuskelly (2003)	538 teachers	Descriptive – Qualitative Study	Self-developed survey (knowledge of Down syndrome and attitudes towards inclusive education).		76% of teachers thought that special education was the best option for students with Down syndrome
Gilmore, Campbell, and Cuskelly (2003)	274 student teachers	Experimental - Within-groups design	Self-developed survey (knowledge of Down syndrome and attitudes towards inclusive education). <i>Interactions with Disabled Persons Scale</i>	Lectures on inclusive education. Interview and assess community member's views on inclusive education	At t2 80-90% of participants believed inclusive education was beneficial. Knowledge of Down syndrome was increased.
Hsien, Brown, and Bortoli (2009)	36 general and special education teachers	Experimental - Between-groups design	Self-developed survey (attitudes towards inclusive education).		Teachers with higher education were more likely than teachers with lower education to believe in inclusive education ($\chi^2=14.79$, $df = 6$, $p = .011$).
Kim, Park, and Snell (2005)	30 primary school teachers	Experimental- Between-groups design	<i>Teacher Efficacy Scale for General Educators of Inclusive Classrooms.</i> <i>Teachers' Attitude Scale on Inclusion</i>	Weekly newsletter providing inclusion strategies and educational goals.	Teachers improved the quality of their instructions to students with disabilities, and improved their attitudes towards inclusion ($F(1, 27) = 13.37$, $p < .001$)

2.2.3 The role of the classroom teacher and teacher aides. The perceived roles and responsibilities of classroom teachers and teacher aides also have a direct impact on the inclusion of students with disabilities. Many studies have found that the majority of teachers prefer to let teacher aides teach their students with disabilities but are unsure about the teacher aide's role (Abbott et al., 2011; Broer et al., 2005; Cameron et al., 2012; Carter et al., 2009; Chadinha, 2014; Egilson & Traustadottir, 2009; Fox, Farrell, & Davis, 2004; Moran & Abbott, 2002; Patterson, 2006; Ratcliff, Jones, Vaden, Sheen, & Hunt, 2011; Rubie-Davies, Blatchford, Webster, Koutsoubou, & Bassett, 2010; Rutherford, 2009).

A qualitative study conducted by Patterson (2006) gathered the views of 22 teacher aides through the use of a semi-structured interview. The teacher aides reported between 1 and 24 years of experience. The semi-structured interviews were conducted over the phone and covered demographic information, the teacher aides' perceptions of their workday, their relationships with other staff members and students' parents, and any overall concerns regarding their job. Each interview lasted 30 to 40 minutes, and was recorded and transcribed. Findings showed that all teacher aides indicated that they did teach at least one student each day. However, while 100% of teacher aides reported being asked to complete clerical tasks and being expected modify work for students with special education needs, 81% believed that the classroom teacher needed to allow them more time for these tasks. A majority of teacher aides (90%) also reported being asked to remove any student who misbehaved from the classroom. Many teacher aides (81%) also reported that their job descriptions were not clearly defined, and that they were not treated as equal to other staff members. Overall, teacher aides' reported perceptions indicate that teachers and teacher aides disagree on their roles, responsibilities and statuses.

Ratcliffe et al. (2011) examined the views of teacher aides and teachers, utilising a survey and direct observations in inclusive classrooms. The surveys comprised forced choice

questions concerning the role of teacher aides. The survey was completed by 159 teachers, and 161 teacher aides. Twenty-three of the teacher aides were then randomly selected to participate in school observations, which were conducted for 40 minutes across classroom and break times. The survey results indicated that both classroom teachers and teacher aides were unsure about the role of the teacher aide. There was also a significant disagreement between teachers and teacher aides; teachers reported that they often considered the view of the teacher aide and teacher aides reported that their view was rarely considered. The observations showed that managing student behaviour was the most common task for teacher aides in the classroom and playground. They spent an average of 19.4 minutes during the 40 minute session managing student behaviour, equating to 48.5% of the session. The second most common activity completed by teacher aides was providing direct academic instruction to groups of students (average = 7.7 minutes). It is possible that these activities contributed to the uncertainty that teacher aides held regarding their role, as it is likely that they would primarily expect to teach individual students rather than manage the behaviour of all students.

A New Zealand study also used direct observations in order to examine the difference between teacher and teacher aide roles in the classroom (Rubie-Davies et al., 2010). The researchers recorded 34 lessons in an inclusive primary school classroom, 16 of which focused on teacher aide and student interactions, and 16 of which focused on classroom teacher and student interactions. The first finding was that the classroom teacher primarily addressed the whole class, whereas the teacher aide primarily addressed the student they were working with. The second finding was that both teachers and teacher aides commonly asked students questions, promoted task engagement, organised students, responded to questions, and managed the behaviour of pupils. This indicates that the type of interactions teachers and teacher aides have with students is similar. However, the observations also showed that teachers were more formal, provided clear explanations of concepts which were linked to

students' previous knowledge, and provided prompts and feedback. Conversely, teacher aides were often confused about the lesson material, gave students the answers, and were focused on task completion rather than understanding concepts. The authors propose that this difference in the teacher aide's behaviour is due to a lack of training, and because the classroom teacher did not involve the teacher aide in lesson planning.

A British study completed by Cameron, Cook, and Tankersley (2012), also compared the interactions between students, classroom teachers, and teacher aides, but the researchers limited their comparisons to 1 on 1 interactions. Direct observations were conducted in 17 regular classrooms with 9 to 10 year olds, comparing students with severe disabilities (n = 13), mild disabilities (n = 13), and no disabilities (n = 13). The observations ranged from 30 to 60 minutes in duration and were completed over 14 weeks. The recordings were coded using the *Inclusive Classroom Observation System* (ICOS; Cameron, 2004), which measures student-teacher interactions in the classroom. The ICOS requires observers to record all student-teacher interactions in 10 second intervals and code the interactions as either social, academic, procedural, functional or behavioural. Findings showed a significant difference between classroom teacher and teacher-aide interactions with the three groups of students, indicating that the amount of time they spent interacting with students was related to whether or not the student was typically developing, had a mild disability, or had a severe disability. Teacher aides interacted most frequently with children with severe disabilities (87% of interactions), then children with mild disabilities (10%), then children with no disabilities (2.3%). Classroom teacher interactions followed the same pattern but to a lesser extent, as they interacted with students with severe disabilities in 42% of interactions, students with mild disabilities in 36% of interactions, and typically developing students in 26% of interactions. This shows that while teachers in this study were engaging with their students with the highest needs, the teacher aides were required to spend a significant amount of time

building on the teacher's interactions (a total of 1035 interactions were recorded between the teacher aide and students with severe disabilities, compared to 283 between the classroom teacher and the same students). The authors note that these findings may have been influenced by the teachers' knowledge of the observations, and suggest further research to verify results. This study provides evidence that teachers delegated a significant amount of teaching to the teacher aide, even though they did interact with the students with disabilities.

More recently, a small scale mixed methods study conducted in New Zealand examined the views of teachers and teacher-aides as well as their interactions with students (Chadinha, 2014). Semi-structured interviews were conducted with three teachers, one specialist teacher, and four teacher aides. The semi-structured interviews covered demographic information and views on inclusive education. The teachers and teacher aides were also observed in two classrooms and the playground where they interacted with typically developing students and two students with Down syndrome. The direct observations were completed in twenty minute sessions, and ran three times per week, for four weeks. Findings from the semi-structured interviews revealed that teacher aides were seldom involved in planning lessons with the classroom teacher and were not involved in IEP meetings, but were expected to plan separate work for the students with Down syndrome. Findings from the direct observations showed that students primarily interacted with the teacher-aides ($N = 419$ for student 1; $N = 503$ for student 2), and very rarely with their classroom teacher ($N = 111$ for student 1; $N = 34$ for student 2) or peers ($N = 50$ for student 1; $N = 51$ for student 2). Although the small scale of this study limits its generalisability the findings are consistent with results from other research and suggests that many classroom teachers give the responsibility of teaching students with disabilities to teacher aides.

These studies provide evidence that many classroom teachers prefer to let teacher aides interact with their students with disabilities. Additionally, many teachers and teacher aides

are uncertain of the teacher aide's role in the classroom, which appears to be impacting the inclusion of many students with disabilities. For a further comparison of these studies, please refer to Table 2 below.

Table 2

Studies examining the role of classroom teachers and teacher aides

Author	Participants	Study Design	Measures	Results
Cameron, Cook, and Tankersley (2012)	39 Students, aged 9-10 years. 17 Teachers. 17 Teacher Aides	Descriptive - Quantitative	Direct Observations over 14 weeks. Coded using ICOS.	Teachers and Teacher Aides interacted the most with students with severe disabilities. The total number of interactions for these students was greater for aides than teachers (1035 vs 283)
Chadinha (2014)	3 Teachers. 1 Specialist Teacher. 4 Teacher Aides. 2 Students, aged 9 and 12	Descriptive - Mixed-Methods. Ecological perspective.	Semi-Structured Interview (teacher aide's role). Direct Observations over 4 weeks.	Teacher Aides planned individual work, but were not involved in the teachers' lesson planning. Aides interacted with the two students significantly more than the teachers (419 vs 111; 503 vs 34)
Patterson (2006)	22 Teacher Aides	Descriptive- Qualitative	Semi-Structured Interview (duties, working relationships, job concerns).	81% of teacher aides stated their role was not clearly defined.
Ratcliffe, Jones, Vaden, Sheen, and Hunt (2011)	159 Teachers. 161 Teacher Aides	Descriptive - Mixed-Methods	Self-Developed Survey (role of teacher aide). 40 min. Direct Observations.	Teachers and Teacher Aides were unsure of the Aide's role. Aides spent the majority of time managing the behaviour of students without special education needs.
Rubie-Davies, Blatchford, Webster, Koutsoubou, and Bassett (2010)	1 Primary School classroom	Descriptive- Quantitative	Direct Observation of 34 lessons. Self-Developed Codes.	The teacher primarily interacted with the whole class. The teacher aide interacted with individual students. Teachers were more competent in their interactions.

2.2.4 Peer Attitudes

2.2.4.1 Qualitative research on peer attitudes. As outlined in the introduction chapter above, New Zealand qualitative research suggests that the opportunity for students with disabilities to receive an inclusive education can be limited by negative peer attitudes (Chadinha, 2014; MacArthur et al., 2007; Rietveld, 2010; Rutherford, 2009). However, qualitative research from Scandinavian countries has found that students can hold positive attitudes towards peers with disabilities (Dolva et al., 2011; Dolva, Hemmingsson, Gustavsson, & Borell, 2010; Nilholm & Alm, 2010). Qualitative research which shows both negative and positive findings will be discussed below.

A New Zealand study, conducted by MacArthur, Sharp, Kelly, and Gaffney (2007) examined the experiences of seven New Zealand students with disabilities. The students were aged between 11 and 14 years old, and attended regular schools. The authors completed semi-structured interviews with the students, caregivers, teachers, and principals. Each interview focused on the participants' experiences at school and their self-identity. The interviews were coded for themes, and the authors reported several common findings across schools. The primary finding with regard to peer relationships was that the students with disabilities reported themselves as different to other students, and they believed that teachers and peers treated them negatively because of their differences. As such, both teacher aides and students with disabilities reported that they attempted to emphasise similarities as much as possible. Secondly, all the students with disabilities reported that they were bullied by their peers. Teachers agreed with this finding, and explained that they often ignored the retaliatory behaviours from students with disabilities. They did not, however, report intervening in the bullying to prevent it. The statements reported in this study provide strong evidence that many students with disabilities are excluded from school activities by their peers and suggests that teachers may see peer exclusion as something they do not have control over.

A Norwegian observational study conducted by Dolva et al. (2010) explored the peer interactions of six students with Down syndrome in their regular classrooms. The students were ten years old, and the observations were conducted over a four month time period. It was found that social interactions between the typically developing students (N = not reported) and the students with Down syndrome often occurred during the students' lunch breaks, when the students were free to choose activities where individual competence was not a contributing factor to the success of the activity. For example, the researchers observed that the chosen activity of sledging allowed for the equal participation of both the student with Down syndrome and his/her peer. Similarly, simple playground activities based around a popular song were another student-led activity where all students were competent and able to participate equally. The researchers also noted that during many games, all typically developing children adjusted their behaviour so as to ensure the child with Down syndrome could participate on equal terms given their abilities, for example, pushing the child more gently on account of his impaired balance, in a popular game involving rolling down a hill. These observed behaviours indicate that the children were positive towards the inclusion of their peers with disabilities in many social activities. The focus of this study was on the types of peer interactions that occurred, not the frequency of interactions. Thus, it is not clear whether these equal interactions were the most common type of interactions, or whether unsuccessful or negative interactions also occurred frequently. Despite this, the study does provide evidence that typically developing children can hold positive attitudes and that these attitudes are reflected in positive behaviours towards their peers with disabilities.

A second article published by Dolva et al. (2011) explored how teacher aides promoted social interaction between these six students with Down syndrome and their typically developing peers in the classroom. Each of the six classroom teachers and teacher aides completed a semi-structured interview. The interview covered their experience of the peer

interactions between the students with Down syndrome and the typically developing students, as well as strategies they used to facilitate inclusion. The findings showed less positive peer attitudes towards the inclusion of the students with disabilities than the lunchtime observations; during classroom activities where performance was important for success, the children with Down syndrome were often excluded. The teacher aides stated how important it was to plan activities where the student was able to participate with the rest of the class, but did not mention teaching the typically developing students to be more accepting. This discrepancy between the reported behaviour on the playground and in the classroom is interesting, and reflects the difficulty in ensuring that students with disabilities are included both academically and socially by their peers. While this study could also have benefitted from observing the frequency of peer interactions, the findings illustrate that peer attitudes can differ between contexts and affect the overall level of inclusion that students with disabilities experience.

A case study of an inclusive classroom in Sweden also supports the claim that students can be socially inclusive of peers with disabilities (Nilholm & Alm, 2010). The researchers interviewed and observed a fifth grade classroom of 15 students, 5 of whom had disabilities. The semi-structured interviews with the students were 10 to 15 minutes in duration, and covered how they felt about school, their friendships, and whether they had a best friend. The students also completed a self-developed questionnaire with *yes/no* alternatives for 11 items addressing their friendships. The researchers also observed the students for a total of 34 days over a two-year time period, where they focused on recording teacher strategies, teacher-student interactions, and the class work completed. Results indicated that all students felt as though they were a valued member of the classroom, with 100% of students stating they felt secure in the classroom and had someone to play with during breaks. Significantly, the students' opinions were supported by the researcher's observations. They reported that no

children were socially isolated, although the students with disabilities were chosen as a playmate slightly less on average than the typically developing students; they were selected as a playmate by peers an average of 2.8 times while typically developing students were selected 3.9 times by peers. While this study did not explicitly examine attitudes, by examining behaviours and friendships it suggests that attitudes towards students with disabilities were positive, as all students were included in the social aspects of the classroom activities.

It can be seen from these qualitative studies that peers' attitudes towards students with disabilities can be an important factor in whether they are excluded from or included in both the classroom and playground settings.

2.2.4.2 Quantitative research on peer attitudes. Quantitative research also provides evidence that typically developing students can have positive attitudes towards their peers with disabilities (Avramidis & Norwich, 2002; Dyson, 2005; Gasser, Malti, & Buholzer, 2014; Ralli et al., 2011).

A quantitative study conducted by Dyson (2005) examined the attitudes that 5 and 6 year old typically developing children in inclusive classrooms held towards peers with disabilities. Each of the 77 children were interviewed using *The Primary Student Survey of Handicapped Persons* (PSSHP; Esposito & Peach, 1983). The PSSHP requires the researcher to ask each child six questions based around the child's awareness of individuals with disabilities and the child's attitude towards individuals with disabilities. The findings from the survey indicated that the children were unaware of non-physical disabilities; 76% of the students who gave appropriate responses characterised a student with a disability as having a physical difference and as being unable to play. Despite this limitation in understanding the intellectual components of disabilities, 83% of the children held a positive attitude towards their peers with disabilities. As 75% of the students in the study had contact with a peer with

an intellectual disability, it is likely that this lack of understanding is due to the students' inherent inability to understand intellectual disability, and not due to a lack of contact. It is important to note that a high number of the children in this study provided irrelevant or no answers to some of the items, so these results must be interpreted with caution. However, the results from this study are consistent with the qualitative research which has found that young children are generally positive towards their peers with disabilities.

A second quantitative study completed with 566 British pupils aged from 9 to 10 years also showed that students had positive attitudes towards their peers with disabilities (Avramidis, 2010). The researchers completed individual semi-structured interviews with each student in order to investigate peer-assessed social behaviours and the social hierarchy of each classroom. It was reported that pupils with disabilities or special education needs were as equally likely to be included in friendship groups as the typically developing students. When these friendships are considered in conjunction with the fact that the males with special education needs were also rated as more likely to break rules and the female students were more likely to be rated as shy, there is evidence that the typically developing children made allowances for anti-social behaviour to ensure reciprocal friendships were established. Although large in scale, the study relied on the students to self-report the peer groups in their classroom, so it is possible that the children exaggerated the inclusion of students with disabilities in order to appear more accepting.

A third study examined potential differences in attitude according to the age and gender of students (Ralli et al., 2011). A sample of 327 students aged 9 to 12 years were recruited, and asked to complete a self-developed questionnaire. The questionnaire was comprised of open and closed questions regarding students with disabilities, and included a rating scale which assessed the students' attitudes towards inclusion. Overall, the results indicated that students were positive towards the concept of inclusion, but that female students were

significantly more accepting of inclusion than male students. The authors also reported that 75% of the children surveyed did not understand potential causes of disabilities, regardless of age or gender. The younger students, aged 9, defined disabilities primarily by physical differences. The older students, aged 11 and 12 gave similar responses, although many did incorporate educational differences into their definition of disability. It is probable that this lack of understanding is because no students in the study had contact with peers with disabilities in an academic setting. Thus, clearer results may have been obtained if the researchers had included students from schools where individuals with disabilities were enrolled, or if they had provided students with a definition of disability.

A fourth study (Gasser et al., 2014) used a between-groups design to examine the moral and psychological judgements that 422 students aged 6, 9, and 12 years expressed towards peers with disabilities. The children were recruited from inclusive classrooms where a student with a disability was enrolled ($N = 226$) and from non-inclusive classrooms where no students with disabilities were enrolled ($N = 196$). Each child was interviewed individually in two twenty minute sessions, where they were asked to respond to short vignettes on a character with a disability. Overall, 89% of students reported that the exclusion of children with disabilities was wrong, and there was no significant difference in responses between students from inclusive classrooms and students from non-inclusive classrooms. There was a significant difference with regards to age, with 12 year olds being more likely than 6 year olds to judge exclusion as wrong (99% vs 70%), and 9 year olds also being more likely than 6 year olds to judge exclusion as wrong (93% vs 70%). The authors also reported that 6 year olds were significantly less likely to include peers with disabilities than 9 and 12 year olds in hypothetical scenarios. This finding contradicts results from other studies, which have reported that younger students are more positive towards peers with disabilities (Dyson, 2005; Ralli et al., 2011). Given that this study focused on moral judgements about exclusion,

it is possible that the students' behaviour towards peers with disabilities may have differed from their expressed beliefs about the hypothetical scenarios they were presented with.

These qualitative and quantitative studies show that students are capable of holding positive attitudes towards their peers with disabilities. Although several of the quantitative studies must be interpreted with caution due to the children's misunderstanding of disabilities, the findings are encouraging. Essentially, these studies illustrate that social inclusion is achievable when typically developing students have positive attitudes towards students with disabilities. A summary of both the qualitative and quantitative studies discussed are presented below in Table 3.

Table 3

Studies examining typically developing students' attitudes towards peers with disabilities

Author	Participants	Study Design	Measures	Results
Avramidis (2010)	566 students, aged 9-10	Descriptive- Qualitative	Semi-Structured Interview (friendships)	Students with disabilities were equally likely to be included in friendship groups as typically developing peers $\chi^2(565) = .29, p = .59$
Dolva, Gustavsson, Borell, and Hemmingsson (2011)	6 students w/disabilities, aged 10 6 teachers 6 teacher aides	Descriptive- Mixed Methods	Direct Observation over 4 months. Semi-structured interviews (peer interactions and strategies to facilitate inclusion)	The students were not included by their peers in the classroom.
Dolva, Hemmingsson, Gustavsson, and Borell (2010)	6 students w/disabilities, aged 10	Descriptive- Quantitative	Direct Observations over 4 months.	Equal interactions between the students and peers were observed during break times.
Dyson (2005)	77 typically developing students, aged 5-6	Descriptive- Quantitative	PSSHHP	83% of students held positive attitudes towards peers with disabilities
Gasser, Malti, and Buholzer (2014)	422 typically developing students, aged 6, 9, and 12	Descriptive- Quantitative Between groups	Semi-Structured Interview (respond to vignette of child w/disability)	89% of students reported that exclusion was wrong. 6 year olds were more likely to exhibit a negative attitude towards peers with disabilities.
MacArthur, Gaffney, Kelly, and Sharp (2007)	7 students w/disabilities, aged 11-14	Descriptive- Qualitative	Semi-Structured Interview (school experience and self-identity)	All students reported experiencing bullying from peers.

Nilholm and Alm (2010)	5 students w/disabilities, aged 9-10 10 typically developing peers, aged 9-10	Descriptive-Mixed Methods Case Study	Semi-Structured Interview (friendships). Self-Developed Survey (friendships) Direct Observations over 2 years (teacher-student interactions and teacher strategies)	All children were socially included in the classroom and playground.
Ralli, Margeti, Doudoni, Panteleimidou, Rozou, and Evaggelopoulou (2011)	327 typically developing students, aged 9-12	Descriptive-Quantitative	Self-Developed Survey (knowledge of disabilities; attitude towards inclusion)	Overall, students were positive towards inclusion. Female students were more positive towards the inclusion of peers with disabilities than male students, $Z = -2.44, p < .05$

2.2.4.3 Interventions designed to promote positive peer attitudes. A number of studies examining students' attitudes towards peers with disabilities have shown that a positive attitude is possible. As stated above, younger students appear to be more positive towards disability than older students (Avramidis, 2010; Dyson, 2005; Ralli et al., 2011), although a recent study by Gasser, Malti, and Buholzer (2014) reported that younger students were less positive towards disability than older students.

Several studies have capitalised on students' neutral and positive attitudes towards peers with disabilities, and have found that younger students benefit from interventions which involve low or no contact with individuals with disabilities (Campbell, Ferguson, Herzinger, Jackson, & Marino, 2004; de Boer et al., 2014; Favazza & Odom, 1997; Meyer & Ostrosky, 2016). Generally, female students also appear to be more positive towards peers with disabilities than male students following interventions (Arampatzi, Mouratidou, Evaggelinou, Koidou, & Barkoukis, 2011; de Boer et al., 2014; Gannon & McGilloway, 2009; Georgiadi et al., 2012; Ralli et al., 2011; Sirlopu et al., 2008; Vignes et al., 2009).

Favazza and Odom (1997) conducted a between-groups study with 46 typically developing kindergarten students where 32 of the students had at least one classmate with a disability ($M = 5$ years 4 months). The researchers divided the students into three groups; no contact, low contact, and high contact. Students in the no contact condition had zero contact with peers with disabilities, and students in the low contact condition saw peers with disabilities during their school lunch time. Students in the high contact condition attended a nine week programme where they read books about disabilities and were given 15 minutes of structured playtime with peers with disabilities 3 times per week. All students were tested on the *Acceptance Scale for Kindergarteners* (ASK; Favazza & Odom, 1996), which is an 18 item questionnaire with a 3 point response scale. Each question reflects the acceptance or non-acceptance of individuals with disabilities. Results indicated that at pre-testing, all

students held negative attitudes towards peers with disabilities. At post-testing, students in the high-contact group displayed positive attitudes, while students in the low-contact and no contact conditions still held negative attitudes, a difference which was maintained at the 5 month follow-up testing. This difference was statistically significant, which indicates that the intervention had a positive effect on students' attitudes. As the intervention was comprised of both contact and educational literature, it is not possible to determine the degree to which each component, or the interaction of components, resulted in the students' increased positive attitudes.

More recent within-groups research examined the effect of educational literature on attitudes towards peers with disability in a sample of 271 students aged 4 to 12 years old (de Boer et al., 2014). Each student attended six 45 minute lessons on disabilities over three weeks. Younger children were presented with picture books about children with disabilities, while older students were presented with more advanced books and movies. Each student completed a measure of attitude at pre-intervention, post-intervention, and at a one year follow-up. Younger students completed the *Acceptance Scale for Kindergarten – Revised* (ASK- R; Favazza & Odom, 1999). The ASK-R is comprised of 18 questions with a 3-point response scale, and each question is based upon the acceptance or non-acceptance of peers with disabilities. Older students completed the *Attitude Survey to Inclusive Education* (ASIE; de Boer, Timmerman, Pijl, & Minnaert, 2012) which provides a vignette of a student with a disability, and asks children four questions designed to gauge their attitudes towards peers with disabilities. Results showed that the intervention had no effect on older students, but that younger students held significantly more positive attitudes at the post-test. This study shows that younger and older students require different interventions, but also illustrates that the attitudes of younger students can be improved in the short-term relatively easily.

A similar between-groups experimental study was conducted with 576 students aged between 8 and 12 years of age (Campbell et al., 2004). Students were provided with video vignettes of a boy behaving typically, and a boy displaying autistic behaviours. Each video provided either descriptive information of the behaviour or descriptive and explanatory information for the behaviour. After watching the videos, students completed the *Adjective Checklist* (ACL; Siperstein, 1980) as a measure of attitude, and the *Shared Activities Questionnaire* (SAQ; Morgan, Walker, Bieberich, & Bell, 1996) as a measure of behavioural intentions. The ACL is comprised of 16 positive adjectives and 16 negative adjectives, and it requires students to select the adjectives which they believe best describe an individual. The SAQ assesses the willingness of children to engage in social, recreational and academic activities with another child. Ordinarily, the SAQ has 32 items, but the authors selected 12 items for use in this study. Findings showed that younger students who were provided with descriptive and explanatory information had more positive attitudes towards the boy with autism spectrum disorder, while older students provided with descriptive and explanatory information had negative attitudes. The combination of descriptive and explanatory information was associated with more positive behavioural intentions in all grades when compared to the children who received only descriptive information. As no pre-test of attitude or behavioural intentions was undertaken, it is possible that students held positive attitudes before the intervention and caution must be taken in attributing change to the intervention. However, the findings indicate that information provided to children about disabilities should be selected carefully so as to not decrease positive attitudes.

Interestingly, a between-groups study conducted by Meyer and Ostrosky (2016), found that an acceptance programme using only literature had no effect on the number of friendships for students with disabilities. The study examined the friendships of 26 students with disabilities enrolled in 6 separate inclusive classrooms, all of which had typically

developing children enrolled along with the students with disabilities. In total, there were 110 students who participated in either the intervention or the control condition (M = 5 years 9 months). Each classroom was randomly assigned to either the intervention condition or the control condition, and the programmes in each condition ran for 6 weeks, and involved 3 sessions per week. Each intervention session involved reading and discussing a picture book on disabilities, 15 minutes of free playtime, and a weekly reading book on disabilities to take home. Each control group session involved reading and discussing a picture book on science, 15 minutes of structured playtime, and a weekly reading book on a science topic to take home. At pre- and post-test, students completed the *Sociometric Peer Rating Scale* (Asher, Singleton, Tinsley, & Hymel, 1979) and a *Child Friendship Nomination* measure (Parker & Asher, 1993). The *Sociometric Peer Rating Scale* was completed by showing each student individual pictures of their peers and asking them to place the pictures in a box according to whether they liked to play with the peer *a lot*, *a little*, or *not at all*. The *Child Friendship Nomination* measure also involved students being presented with photos of their peers. They were asked to turn over the pictures of their friends, then their three best friends, then their very best friend. An independent samples t-test indicated that students with disabilities in the control condition gained best friends after the programme, while students with disabilities who were in the intervention programme did not. The authors propose that this is due to the structured play component in the science programme, which they believe allowed for more equal peer interactions than the free play sessions in the intervention programme. This interpretation is consistent with research which suggests that students with disabilities may have difficulty with unstructured play (DeKlyen & Odom, 1989), and provides insight into the type of interactions that interventions should aim to incorporate in order to promote positive attitudes and friendships.

The above research show that the attitudes of typically developing children towards children with disabilities can be positively influenced by structured contact with children with disabilities, and through the presentation of information about the causes of disabilities. Table 4 provides a further comparison of these studies, along with relevant statistical results for each study.

Table 4

Studies examining interventions designed to promote positive peer attitudes

Author	Participants	Study Design	Measures	Intervention	Results
Campbell, Ferguson, Herzinger, Jackson, and Marino (2004)	576 typically developing students, aged 8-12	Experimental between-groups	<i>Adjective Checklist Social Activities Questionnaire</i>	Two video vignettes were provided showing typical and autistic behaviour. Each video was dubbed with descriptive or descriptive and explanatory information	Younger students were more positive than older students towards the peer w/autism $F(2, 562) = 3.23, p < .05$.
de Boer, Pijl, Minnaert, and Post (2014)	271 typically developing students, aged 4-12	Experimental within-groups	<i>Acceptance Scale for Kindergarten-Revised Attitude Survey to Inclusive Education</i>	Six 45 min. lessons on disabilities using picture books and educational videos	Younger students became more positive towards peers w/disabilities
Favazza and Odom (1997)	46 typically developing students, aged 5-6	Experimental between groups	<i>Acceptance Scale for Kindergarten</i>	Control: No contact with peers w/disabilities Group One: Saw peers w/disabilities at break times Group Two: 9 week programme, read books on disabilities and interacted with peers w/disabilities 3 times per week	Students in Group Two developed positive attitudes towards their peers w/disabilities while other students remained negative ($F(2, 41) = 6.96, p = .003$)
Meyer and Ostrosky (2016)	84 typically developing students 26 students w/disabilities All aged 5-6	Experimental between groups	<i>Sociometric Peer Rating Scale</i> <i>Child Friendship Nomination Measure</i>	Six week programme involving 15 min. reading on topic and 15 min. peer interactions, thrice weekly. Group One topic: Science Group Two topic: Disabilities	Students w/disabilities in Group One had more friendships at the end of the programme than students w/disabilities in Group Two

2.3 A Review of Literature on Social Skills

2. 3. 1 Social Skills. Many definitions of inclusion identify social participation as a crucial aspect of the inclusive movement (Carrington & MacArthur, 2012; Kearney, 2011; MacArthur, 2009). Parents of children with disabilities regularly report that they place their child in an education setting, whether special or inclusive, that they believe will benefit their child socially (Guralnick et al., 1995; Hollingsworth & Buysse, 2009; Lalvani, 2013). Children with disabilities identify that being socially included with their typically developing peers is important to them, and reciprocal friendships are often an outcome they want to gain from school (Broer et al., 2005; Egilson & Traustadottir, 2009; Rutherford, 2009).

Many children with disabilities have more difficulty with social skills than their typically developing peers (Fidler, 2005; Guralnick, 1990; Guralnick, Hammond, Connor, & Neville, 2006; Guralnick, Neville, Hammond, & Connor, 2007; Hines & Bennett, 1996; Koster, Pijl, Nakken, & Van Houten, 2010; Nilholm & Alm, 2010). Research suggests that these children have difficulty with group play (Guralnick, 1990), are less able to organise their peers into group activities (Guralnick, 1990; Guralnick et al., 2006), are more likely to be targets of bullying (Farmer, Wike, Alexander, Rodkin, & Mehtaji, 2015) and have increased rates of conflict-prone interactions (Guralnick et al., 2006).

An important finding is that children with disabilities may not naturally improve their social skills over time. Guralnick et al. (2006) observed 63 children with disabilities at 5 years old, and again at 7 years old. Each child received three 60 minute play sessions with three unfamiliar typically developing peers in a laboratory setting at Time 1 and 2. Each session was coded using the *Play Observation Scale* (POS; Rubin, 1989) and an adapted version of the *Individual Social Behavior Scale* (ISBS; White & Watts, 1973). The POS is used by observers to code the quality of social participation and play during each ten second interval of an observation session. The ISBS is used to continuously record and code 25

positive and negative social behaviours over the observation period. Direct observations using these two coding systems showed that not only were there no increases in peer interactions, but that children experienced the same social difficulties over the two year period. While this study did not observe the children in their natural environment, these findings do illustrate that many children with disabilities have social difficulties which do not resolve without intervention.

An observational study conducted by Linn, Goodman, and Lender (2000) examined the play behaviour of 14 children with Down syndrome and 14 typically developing children matched in mental age. Therefore, the mean age of the children with Down syndrome was 4 years and 5 months, and the mean age of the typically developing children was 2 years and 2 months. Each child attended a play session in a laboratory for between 30 and 60 minutes, where a researcher was available to interact with the child while their mother read a magazine. The researchers coded 47 minutes of each session using self-developed codes, and reported that the children with Down syndrome were significantly more passive in their play than the typically developing children. While this study did not examine peer interactions, it is probable that the passive behaviour exhibited by the children with Down syndrome would occur in play situations where peers were involved.

A quantitative study by Guralnick, Connor, and Johnson (2009) examined the peer networks of 27 children with Down syndrome, 27 typically developing children matched for chronological age, and 27 typically developing children matched for mental age. The average age for the children with Down syndrome and their chronologically matched peers was 5 years and 6 months and the average age of the children matched in mental age was 3 years and 2 months. The children's mothers were asked to complete the *Social Skills Rating System* (SSRS; Gresham & Elliott, 1990) and the *Social Contact Questionnaire* (SCQ; Guralnick, 1997). The SSRS is a measure of general social skills and requires parents to respond on a 3-

point scale indicating whether their child *never*, *sometimes*, or *very often* displays each skill. The SCQ consists of five separate scales which ask parents about their child's friendships. Results indicated that when given the opportunity to interact with peers, children with Down syndrome interacted significantly less frequently than their typically developing chronologically-matched peers. Furthermore, 15% of mothers of children with Down syndrome were unable to identify a regular playmate of their child, indicating that many children with Down syndrome may struggle to form friendships with their typically developing peers.

2. 3. 2 Interventions to promote social skills. Many types of interventions designed to promote inclusion rely on typically developing peers either incidentally or purposefully modelling social skills to students with disabilities (Frederickson & Turner, 2003; Haring & Breen, 1992; Harper, Symon, & Frea, 2008; Kalyva & Avramidis, 2005; Kamps et al., 2002; Mason et al., 2014; Shotton, 1998; Shukla, Kennedy, & Cushing, 1999).

A study employing a multiple-baseline design to examine a peer intervention was conducted by Haring and Breen (1992). Two boys with autism spectrum disorder were recruited as focus students, along with 9 of their typically developing peers. The 11 students, all aged 12 to 13 years, met weekly for 30 minute sessions for 5 weeks, where they were provided with food and drink and given an interaction schedule and daily data sheets. During the meetings, the typically developing students discussed strategies that they could use in their interactions with the two focus students. The typically developing students were asked to interact with the two focus students daily during the week and to record whether an interaction occurred and to rate it as *good*, *okay*, or *not good*. Researchers also observed the students during break times, and coded interactions using their self-developed codes. Through the data sheets returned by peers and the researchers' direct observations of the students' during break times, a significant change was apparent. The typically developing

students reported an increase in the frequency of their interactions with the focus students, and noted that the interactions had become more successful, which was corroborated by the independent observers. Specifically, the first focus student experienced an increase from 1.2 interactions per day during the baseline phase, to experiencing 7.44 interactions during the intervention phase. The second focus students increased his interactions from 2.6 interactions per day in baseline, to 8.03 interactions during the intervention phase. This small-scale study provides a good indication that students with disabilities can learn through increased interactions with their peers, particularly when peers are aware of the goal of the intervention and are willing to participate.

Frederickson and Turner (2003) aimed to implicitly teach social skills through informal peer interactions using a between-groups study design. They recruited 20 students aged between 6 and 12, all of whom were classified as having disabilities. Half of the students with disabilities received the intervention along with 4 to 8 typically developing peers, while the other students were placed on a waitlist. The intervention ran for 6 weeks, with students meeting in groups each week for 20 to 30 minutes. Every meeting followed the same structure. First, both the students with disabilities and the typically developing students would state a positive event that had occurred to them during the past week. Following this, any child with a problem was invited to speak and the group generated strategies to solve the problem. This meeting structure is intended to promote incidental peer modelling of listening, turn-taking, and complimenting, which the typically developing peers model during the problem solving discussions. In order to measure changes in the friendships of the students with special education needs, students completed the *Sociometric Rating Scale* (Asher & Dodge, 1986) and teachers completed the *Teacher's Rating Scale of Child's Actual Behavior* (Hatter, 1985). The *Sociometric Rating Scale* asks children to rate from 1 to 5 how much they like to play with every other child in their class. The *Teacher's Rating Scale of Child's Actual*

Behavior requires teachers to respond to 15 items measuring a student's academic competence, athletic competence, physical appearance, behavioural conduct and social acceptance. Results from the pre- and post-intervention administration of the *Sociometric Rating Scale* showed that the students with disabilities in the intervention group were more accepted by their peers after the intervention, while students with disabilities in the control group were not. However, pre- and post-test teacher ratings on the *Teacher's Rating Scale of Child's Actual Behavior* indicated that there was no significant difference in the children's social acceptance or behavioural conduct between the intervention and control group. It should be noted that these measures are not designed to detect change in social skills, so while the intervention aimed to teach social skills it is not possible to ascertain whether this was achieved. Nevertheless, the improvement in peer acceptance ratings for the children with disabilities is encouraging and indicates that the intervention had a positive effect on friendships.

A recent intervention study aimed to teach social play skills to children diagnosed with Attention-Deficit Hyperactivity Disorder (Wilkes, Cordier, Bundy, Docking, & Munro, 2011). The researchers recruited 7 children with ADHD and 7 typically developing peers who were familiar to the participants with ADHD. The mean age of the children with ADHD was 7 years 6 months and the mean age of the typically developing children was 7 years 3 months. Each child with ADHD was paired with a typically developing child, and the pairs attended the 7 weekly intervention sessions together. Each session began with a 20 minute video review of the previous session, where a therapist highlighted to the children how well they had played together, along with skills they needed to work on such as listening to each other. This review was followed by a 20 minute play session where the children could work on the skills the therapist had just discussed with them. The children's play actions were rated using the *Test of Playfulness* (TOP; Bundy, 2004), a 29 item scale with a 4-point response

system which measures self-control, use of imagination, motivation, and the skill of reading and interpreting social cues. The pre- and post-test results on the TOP showed that both the children with ADHD and their playmates improved their social play. An 18 month follow-up session with 5 of the pairs showed that these gains had been maintained for both children (Wilkes-Gillan, Bundy, Cordier, & Lincoln, 2014), demonstrating the benefits that social skill interventions can have for both typically developing children and children with disabilities.

A between-groups study conducted with 44 children with disabilities aged 8 to 11 years also reported promising findings (Koenig et al., 2010). Half of the children attended weekly 75 minute meetings, for a total of 16 weeks, while the other children were placed on a wait list. Each session involved four or five participants with disabilities, and two typically developing peer tutors. During each session, the children were required to participate in activities which involved problem solving, listening to peers, taking turns, tolerating frustration, and playing cooperatively. Pre- and post- intervention, all children were evaluated on their social skills by independent raters using the *Clinical Global Impressions Scale* (CGIS; Rydell, Hadekull, & Bohlin, 1997) and by their parents using the *Social Competence Inventory* (SCI; Guy, 1976). The CGIS is used to rate overall improvement on a set of skills, and scores range from 1 - *very much improved* to 7 - *very much worse*. The SCI assesses a child's social skills and is comprised of 24 items with a 5-point Likert scale. A comparison of the pre- and post-intervention scores on the CGIS revealed that the raters, who were blind to whether participants were in the intervention or control condition, scored children who had received the intervention as improved on their social skills and the children in the control condition as not improved. Contrastingly, none of the children in either group were rated by their parents as improved in their social skills using the SCI. It is possible that this difference resulted from parents being aware of which group their child was placed in, or perhaps parents rated the child's performance outside of intervention sessions. If the latter is the case,

it suggests that the children did not generalise the new skills that the independent raters observed during the intervention sessions.

A second type of intervention involves teaching a group of typically developing children to explicitly teach social skills to a focus child. This has been researched in preschool (Kalyva & Avramidis, 2005), primary school (Harper et al., 2008; Kamps et al., 2002; Mason et al., 2014), and high school settings (Shukla et al., 1999).

Kalyva and Avramidis (2005) conducted a between-groups experimental study with 30 preschool children aged from 3 years 7 months to 4 years 10 months. Each of the 5 children with autism spectrum disorder (ASD) were placed into a group with 5 of the typically developing children, creating five separate groups with 6 participants in each group. Each group attended a teacher-led programme involving thirty minutes of circle time once a week, for twelve weeks. Peers in the intervention group were informed that the purpose of the group was to help the children with ASD learn how to play, while those in the control group were not informed. During circle time, the teacher led the children in various activities such as singing nursery rhymes and playing with specific toys, with the same activities for intervention and control groups. Direct observations of the interactions for children with ASD were completed for one hour of circle time (two sessions) during the baseline, intervention, and follow-up phases. Findings showed that the mean number of successful interactions between the children with ASD and the typically developing children increased over the twelve weeks for children in the intervention group, but not those in the control. This statistically significant difference in interactions between the intervention and control groups was maintained at the 2 month follow-up. This small scale study is consistent with the research from Haring and Breen (1992) discussed above, which also found that successful peer interactions for male students with disabilities were increased when peers were aware of the intervention's aim.

A multiple baseline study conducted by Harper, Symon and Frea (2008) taught typically developing primary school students to interact with their peers with disabilities. Two boys with autism spectrum disorder (aged 8 and 9 years) were recruited as focus students, along with 6 typically developing peers also aged 8 and 9. The peers attended 7 training sessions, which ran for twenty minutes across seven consecutive school days. The sessions covered how to gain the attention of the focus students, how to vary activities, how to narrate the activities, how to positively reinforce the focus students' initiation attempts, and how to take turns during activities. Direct observations of the two focus students were conducted in the playground for a duration of ten minutes, across 37 sessions, and coded according to the researchers' self-developed codes. Results showed that both of the focus students increased their initiations towards peers. Student 1 demonstrated an average of less than one initiation attempt per session during baseline, but increased this to 4.8 occurrences during the intervention phase. Student 2 also increased his initiation attempts from below one, to 3.2 attempts per session. Both students also increased their turn-taking, increasing from zero attempts during baseline, to 12.5 acts (student 1) and 2.5 acts (student 2) during the intervention phase. Although these are promising results, the student with lower communication skills did not increase his initiating or turn-taking actions as quickly as the other focus child. This suggests that peer interventions may require more time to be effective for students with greater difficulties.

A study using an ABA design with primary school students also reported success with a peer-based intervention designed to teach social skills to children with disabilities (Kamps et al., 2002). The researcher selected 5 students aged 9 and 10 diagnosed with autism spectrum disorder, and 51 typically developing peers aged 8 to 10 years to participate in the intervention. All students were divided into three groups according to their classroom; group one attended intervention sessions where they were trained to tutor each other on facts and

vocabulary from their social studies curriculum, while group two attended intervention sessions where they were trained to tutor each other in social skills (initiating and responding to peers, cooperating, and engaging in positive interactions) and group three was a control group who received no sessions. Both intervention groups attended three to four 30 minute sessions per week, for a total of eight weeks. During the intervention sessions, students were encouraged to interact with each other while learning the new skills. Direct observations were conducted for five minutes during the sessions. The *Social Interaction Code* (SIC; Niemeyer & McEvoy, 1989) which is used to record initiations, responses and interaction duration, was used to determine the frequency and length of the peer interactions for the students with ASD. Results showed that the children with ASD in the intervention groups increased their duration of peer interactions from less than 30 seconds to more than 190 seconds. It is unclear whether the students in the social skills group learned any social skills, as no measure was taken. However, it is promising that the frequency and duration of peer interactions increased for these children with ASD simply through receiving an opportunity to interact with their typically developing peers.

Shukla, Kennedy and Cushing (1999) implemented a buddy system in a regular high school with 3 students with disabilities and 3 typically developing students, aged from twelve to fifteen years old. The intervention involved the typically developing students working with the students with disabilities in place of their teacher aide in a set class (e.g. during 3-5 history lessons each week) for a period of two to three weeks. The typically developing students were trained in lesson planning and social support behaviours. The social support behaviours included greetings, introducing an acquaintance, providing physical aid, and participating on a shared activity. The students were observed in every lesson where the buddy system was implemented, and engagement and social interactions were recorded using the *Social Interaction Checklist*. Results showed that there was a higher level of social

interaction between the typically developing student and the student with disabilities in the intervention phase. Visual analysis of scatterplots showed that interactions during baseline ranged from 10 to 200 seconds in duration, but increased in duration to over 899 seconds for participants during the peer support phase. There was also a higher frequency of bidirectional social support behaviour, and an increase in the active engagement of two of the three students with disabilities following the intervention. These findings are encouraging and suggest that the students with disabilities improved their skills to engage in longer peer interactions. Further research could examine how the typically developing students changed their social support behaviours, which would provide insight as to which aspect of the intervention was most effective.

This research demonstrates that children with disabilities can learn social skills from their typically developing peers in order to more easily participate in social activities. This learning appears to occur through both incidental modelling and explicit teaching of social skills, and has been successful for skills such as listening, turn-taking, sharing, and initiating interactions. When considered in conjunction with the findings presented above which show that typically developing peers are positive towards students with disabilities, the findings from these social skills studies emphasise that inclusion in social settings is possible for children with disabilities. A summary of the social skill studies discussed above are presented in Table 5 for further comparison.

Table 5

Studies examining interventions designed to promote the social skills of children with disabilities

Author	Participants	Study Design	Measures	Intervention	Results
Frederickson and Turner (2003)	20 students w/disabilities aged 6-12 Unspecified number of same-age typically developing peers	Experimental Between-groups	<i>Sociometric Rating Scale</i> <i>Teacher's Rating Scale of Child's Actual Behavior</i>	Weekly 30 min session for 6 weeks (discuss students' problems and generate solutions)	Students w/disabilities in the intervention group were rated as more accepted by peers at post-test; control students were not, $F(1, 17) = 9.03, p < .01$
Haring and Breen (1992)	2 students w/disabilities 9 typically developing students All aged 12-13	Descriptive Multiple Baseline	Student self-report of interactions Direct Observations	Weekly 30 min sessions (food and drink, discuss interactions)	Both students increased their daily peer interactions (1.2 to 7.44 and 2.6 to 8.03)
Harper, Symon, and Frea (2008)	2 students w/ASD 6 typically developing peers All children aged 8-9	Descriptive Multiple Baseline	Direct Observations (10 min. 37 playground sessions)	7, 20 min, training sessions across 7 school days. Trained on gaining attention, taking turns, positive reinforcement.	Both students increased their initiating and turn-taking attempts during the intervention phase.
Kalyva and Avramidis (2005)	5 children w/autism 25 typically developing peers All children aged 3-4	Experimental between- groups	Direct Observation (2 hr sessions in baseline, intervention, and follow-up phases)	1 weekly 30 min session for 12 weeks. Group 1: told purpose of meetings was to help children learn how to play Group 2: given no information	The mean number of successful interactions increased over the twelve weeks for children in the intervention group, but not those in the control group, $Z = -1.78, p < 0.05$

Kamps, Royer, Dugan, Kravits, Gonzalez-Lopez, Garcia, Carnazzo, Morrison, and Kane (2002)	5 students w/ASD 51 typically developing peers All students aged 8-10	Experimental ABA design	Direct Observations (5 min. each session) <i>Social Interaction Code (SIC)</i>	Group 1: trained in facts and vocabulary Group 2: trained in social skills Group 3: control Group 1 and 2 attended 3 sessions per week for 8 weeks	Students w/ASD in Groups 1 and 2 increased the length of their interactions with typically developing peers
Koenig, White, Pachler, Lau, Lewis, Klin, and Scahill (2010)	44 children w/disabilities aged 8-11 8 typically developing peers	Experimental between-groups	<i>Clinical Global Impressions Scale (CGIS)</i> <i>Social Competence Inventory (SCI)</i> ,	Group 1: Wait-list Group 2: 16 weekly 75 min. meetings. Children required to listen, take turns, play cooperatively.	Children in the Group 1 were rated as not improved, and children in Group 2 were rated as improved on the CGIS.
Shukla, Kennedy and Cushing (1999)	3 students w/disabilities 3 typically developing peers All students aged 12-15	Descriptive quantitative	Direct Observations (in selected lessons) <i>Social Interaction Checklist</i>	Buddy system (helping with work, introducing to peers) in selected classes, over 3 weeks	Students increased the duration of their interactions with typically developing peers.
Wilkes-Gillan, Bundy, Cordier, and Lincoln (2014)	5 children w/ADHD, aged 8 5 typically developing peers aged 6-11	Experimental within-groups	<i>Test of Playfulness</i>	Weekly sessions, 20 minute review of previous session, and 20 minutes of play	The children with ADHD improved their social skills $Z = 0.14, p = 0.89$

2.4 Summary

The above literature review indicates that attitudes and skill levels are key to the success or failure of inclusive education. Teacher attitudes towards inclusive education are often not positive, although research shows that further training can have a positive impact on attitudes and inclusive behaviour. Furthermore, teacher attitudes and skill level have also been shown to impact the roles and responsibilities of teacher aides who report they are uncertain of their duties and often disagree with teacher perceptions. Peer attitudes and the social capabilities of peers also determine the extent to which students with disabilities are included in the classroom and playground, and impact many interventions designed to increase inclusion in schools.

2.5 Rationale

It is clear from the studies presented above that the attitudes of many different parties contribute to the school environment that students with disabilities experience. The beliefs, attitudes, and skills of teachers, teacher aides, parents, and typically developing students combine to form an environment which can be inclusive or exclusive towards students with disabilities. It is crucial to understand the attitudes and level of skill of all these parties in order to inform and improve the experiences of future students with disabilities in New Zealand classrooms.

2.6 The Current Study

The aim of this study is to gather information about the experiences of students with Down syndrome and the attitudes and social skills of typically developing students in regular New Zealand schools. Parents of students with Down syndrome were interviewed to provide information on their children's experiences of school and a teacher of a regular Year 2 classroom was interviewed about her experiences of inclusion. The attitudes, social skills and peer interactions of the teacher's typically developing students were then analysed to gain an

understanding of the environment in a typical New Zealand classroom. Specifically, the following research questions were investigated:

1. What do the typical peer and teacher interactions look like in a regular New Zealand classroom?
2. What are the attitudes of typically developing students in a regular New Zealand class towards peers with disabilities?
3. What are the social skills of typically developing students in a regular New Zealand class?
4. Are attitudes towards peers with disabilities and social skills related?
5. What views does a regular primary school teacher in New Zealand hold towards inclusive education?
6. What experiences have parents of children with Down syndrome had with their children's regular schools?

Chapter Three: Method

3.1 Research Design

This research is a descriptive case study with an ecological orientation (Bronfenbrenner, 1986). The ecological orientation ensures that the students' behaviours are not considered in isolation but that their wider environments and the individuals they are in contact with are taken into account (Rietveld, 1989).

A case study can be defined as an in-depth examination of a single event, subject, or setting which investigates specific research questions (Bogdan & Biklen, 2007; Gillham, 2000; Yin, 2009). Case studies rely not only on the embracement of contextual conditions, but on the utilisation of multiple data sources (Gillham, 2000; Yin, 2009). These multiple data sources are triangulated, or drawn together, to form an accurate depiction of the event, subject, or setting and allow for data analysis (Gillham, 2000; Yin, 2009).

Although case studies do not allow for generalisation the same procedures can be employed with other groups to find similar or varying results (Yin, 2009). However, it is worth noting that case studies have the advantage of being indisputable in their occurrence. As Gillham (2000) explains, general conclusions can be drawn from the single event investigated, despite the fact that the event will never be identical to similar events, simply because the event happened and action must be taken.

This study also uses both quantitative and qualitative measures in a complementary manner, which is otherwise known as a mixed-methods approach. The mixed-methods approach has been described as pragmatic and grounded in the real world (Giddings, 2006; Johnson & Onwuegbuzie, 2004). It allows researchers to consider the context of their results, which often produces insightful and complex findings which are relevant to a wide audience (Giddings, 2006; Hay, 2016; Johnson & Onwuegbuzie, 2004). The mixed-method approach

also allows for clearer data presentation, increased generalisation, and a more accurate understanding of the research topic being investigated (Johnson & Onwuegbuzie, 2004).

The diagram below shows how this case study employs quantitative and qualitative measures in order to gather in-depth results from a classroom which can be considered within the wider context of New Zealand society.

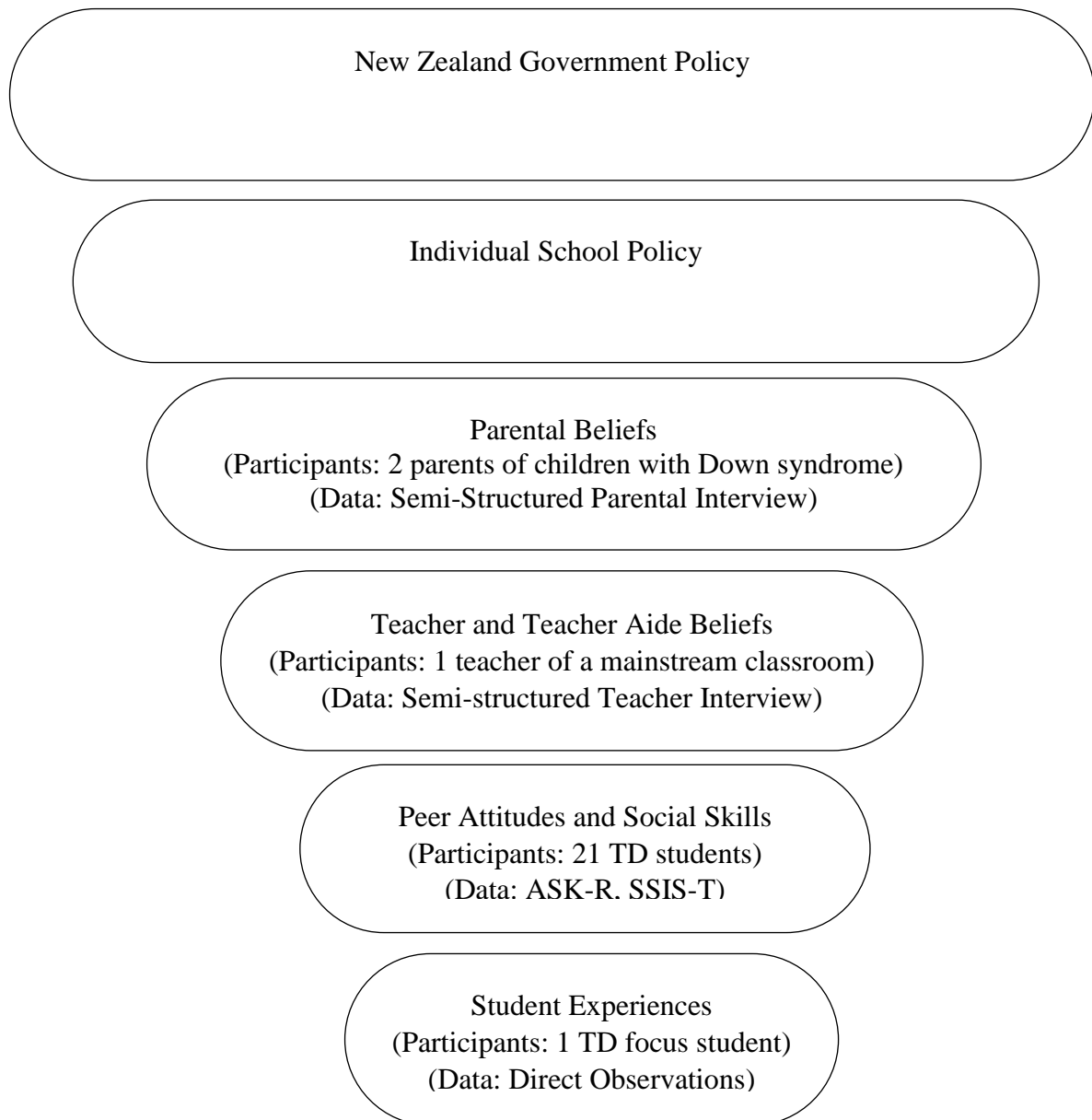


Figure 1. Quantitative and qualitative measures utilised in the current study, shown in their wider context.

Note: Participants and data collection method in parentheses.

Note: TD refers to typically developing.

3.2 Ethical Considerations

Prior to advertising for participants and negotiating entry into schools, the project received approval from the Educational Research Human Ethics Committee of the University of Canterbury (see Appendix A). The original project involved an intervention for three focus children with Down syndrome and their classes of typically developing peers, so information sheets and consent forms were developed for the focus children and their parents. The forms provided details regarding the two experimental conditions and the control condition, and separate forms detailing the requirements of either the experimental or control conditions were designed for the Board of Trustees, school principals, teachers, typically developing peers, and peers' parents. Appendices B to I contain all information and consent forms.

3.3 Participants

3.3.1 Recruitment. Initially, participants were approached through several means: a club which provides recreational opportunities for individuals with Down syndrome, an early intervention service for children with disabilities, and a nationwide organisation which provides services to individuals with disabilities. An email was sent out with a recruitment notice listing the eligibility criteria for study participation. The criteria stated that the child with a diagnosis of Down syndrome must be aged 5 to 7 years and attend a regular school in a large New Zealand city. A copy of the notice has been attached in Appendix J.

Responses were received from three parents, all of whom gave consent for their children to participate. However, none of the three schools attended by the children gave permission for the study to proceed, citing parental concern over video recording and a lack of time for the intervention. Therefore, personal networks were used to recruit a regular school in the same district as one of the previously approached schools. The school was provided with the information and consent sheets intended for the original control school (see Appendices D1, D3, E1, E3, F1, F3, G1, G3, H1, and H3), and permission to proceed with

gathering information on attitudes, social skills, and peer interactions was given by the school principal, the classroom teacher, and the majority of the children's parents. All parents who gave consent were informed about and consented to the video recordings, and all students involved also gave their informed assent.

Thus, the recruitment phase resulted in the following participants giving their consent to participate in the study: Two of the three families of children with Down syndrome agreed to complete an interview on their experiences with inclusive education. One teacher of a regular classroom also agreed to complete an interview on her experiences with inclusive education. Twenty-one typically developing students from the teacher's classroom were recruited for an examination of peer attitudes towards disability, a sub-set of ten students were selected for an evaluation of social skills, and 1 student was selected to be the focus of observations of peer interactions in the classroom. Figure 2 shows how these participants provide an overview of the experiences of children in New Zealand schools when considered as components of the overall classroom environment.

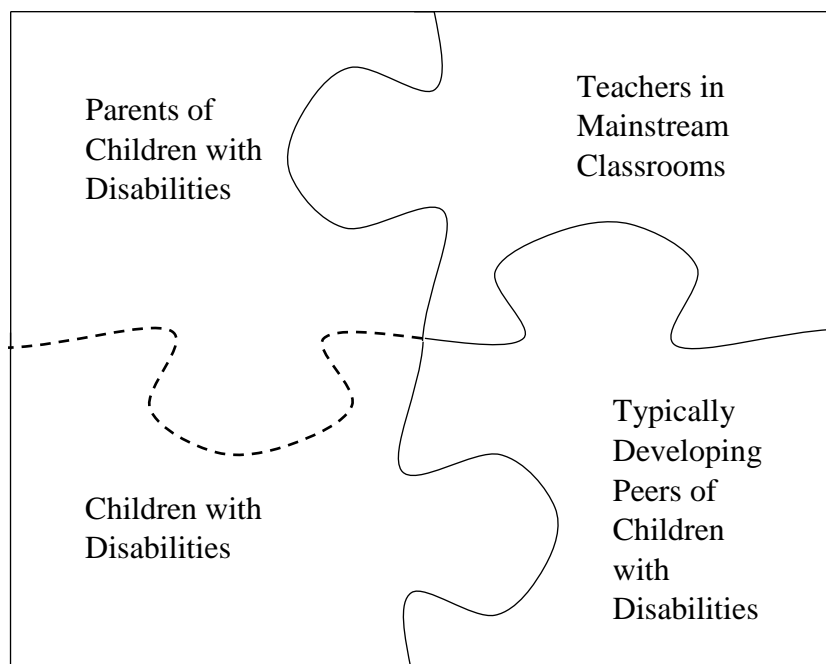


Figure 2: The participants involved in this study and how they form a classroom environment.

3.3.2 Participant characteristics

3.3.2.1 Parents of children with Down syndrome. Although one family withdrew from the study when their child's school denied permission to proceed, two families agreed to complete a semi-structured interview about their children's experiences at school. The characteristics of the two children with Down syndrome and their parents are presented below, and pseudonyms have been used to conserve their identities.

Emma's parents were aged between 31 and 40 years, and Emma was 6 years and 6 months old. Emma attended a State Integrated Christian School and was included in a regular classroom with new entrant students. The school was categorised as a Decile 8 school, indicating that enrolled students were primarily from higher socio-economic status households (deciles range from 1 to 10 and increased government funding is allocated to schools with lower decile ratings). Emma's only diagnosis at the time of this study was Down syndrome.

The second child, Connor, was aged 7 years and two months. His mother was between the ages of 21 and 30 years and his father was aged between 31 and 40 years old. Connor attended a Decile 8 regular primary school full-time and was placed in a Year 2 classroom. At the time of this study Connor was diagnosed with Down syndrome and Autism Spectrum Disorder. He also had an eye condition which necessitated his placement at the front of the classroom.

3.3.2.2 Classroom Teacher. The classroom teacher was female and aged between 21 and 30 years. Following high school, she completed a Bachelor's Degree in Teaching and Learning which, in addition to teacher registration, is the only required qualification to become a primary school teacher in New Zealand. In addition to gaining her Bachelor's

Degree, she completed an Honours year, focusing on behaviour management in the classroom. She has a Master's Degree in Special and Inclusive Education.

The teacher previously worked as a reliever teacher for three years and had worked full-time as a classroom teacher for 18 months. The school involved in this study followed an “innovative learning environment” approach, where students swap classrooms, teachers, and peers throughout the school day (Ministry of Education, 2016a). Thus, the classroom teacher was in sole charge of the 21 students in this study from 9 a.m. to 11.30 a.m. each day, following which they received instruction from another teacher.

3.3.2.3 Students. The 21 students in this study were all enrolled in a Year 2 classroom at a Decile 9 regular school. Twenty-one of the students received parental consent to participate in the study and gave their informed assent. These students ranged in age from 6.1 to 7.0 years at the beginning of the study (14 females and 7 males). Five students and their parents did not give permission to be included in the study (2 female, 3 male) and were therefore not included in video recordings or questionnaires. No student had a disability, although one student was noted by the teacher as having high needs due to behavioural issues.

All 21 students with permission to participate in the study were asked to complete the *Attitude Scale for Kindergarten - Revised* (ASK-R). One student declined which gave a total of 20 responses. These students ranged in age from 6 years and 2 months to 7 years old at the time of questionnaire completion. From the 20 students who completed the ASK-R, 10 were selected to be evaluated on their social skills using the *Social Skills Rating Scale – Teacher Version* (SSIS-T). To select the students, the researcher separated the class list by gender and selected every second female and every second male student until 10 students were selected. This provided a balanced sample with regard to gender and was deemed manageable for the

teacher's workload. These students ranged in age from 6 years and 2 months, to 7 years old at the time of SSIS-T completion.

A typically developing focus student aged 6 years and 4 months was also selected for video recording during an informal observation of the 21 students in the classroom. The decision to select a single student was based on the practicality of recording all interactions accurately and is consistent with previous research which examined peer interactions by focusing on the interactions between a single student and their peers (Dolva et al., 2010; Haring & Breen, 1992; Harper et al., 2008; Kalyva & Avramidis, 2005; Kamps et al., 2002; Shukla et al., 1999).

The selection criteria for the focus student was that the student had chosen a seat at a group desk and that they interacted with another student at least once during a fifteen minute time period. The focus student was not informed that she would be the focus of the video recordings so as to not alter her behaviour. The classroom teacher also remained unaware of whether one student or a range of students had been selected so as to prevent any additional attention being paid to the focus student.

A summary of the students involved in this study can be found on the following page in Table 6, along with the measures that each student completed.

Table 6
Student participants' gender, age, and completed measures

Student	Gender	Age	Completed ASK-R	SSIS-T Evaluation
1	F	6y 10m	yes	yes
2	M	6y 2m	yes	yes
3	F	6y 9m	yes	yes
4	F	6y 6m	yes	yes
5	F	7y 0m	yes	yes
6	M	7y 0m	yes	yes
7	F	6y 5m	yes	yes
8	M	6y 10m	yes	yes
9	M	6y 10m	yes	yes
10	M	6y 7m	yes	yes
11	F	7y 0m	yes	
12	F	6y 5m	yes	
13	F	6y 1m	yes	
14	F	6y 3m	yes	
15	M	6y 8m	yes	
16	F	6y 5m	yes	
17	F	6y 3m	yes	
18	F	6y 8m	yes	
19*	F	6y 4m	yes	
20	M	6y 5m	yes	
21	F	6y 10m	no	

Note: An * indicates the focus student

3.4 Setting

The school in this study was a Decile 9 primary school located in a New Zealand city. The school had one Year 8 student with severe intellectual disability enrolled. In the Year 2 classroom there were 21 students present during the video observations. The children without permission to be videoed worked in another classroom. This was common practice among the year group and the teacher reported this was without detriment to the students' academic or social functioning.

Students in the classroom were situated at group desks, with three to six students in each group. The researcher was situated at the back of the classroom with a view of all the

students. This allowed for the researcher to direct the camera to follow students around the classroom without impacting the students' interactions or access to classroom materials. Each session was conducted during a literacy session where students were completing written work and had the opportunity to interact.

3.5 Materials

3.5.1 Video and audio equipment. Video recording was completed in high definition with a Panasonic Lumix DMC TZ55 digital camera placed on a tripod. Audio recording was completed with an Olympus DS-2400 Digital Voice Recorder and the audio files were converted from a DS2 format to a standard MP3 format using free Olympus software.

3.6 Measures and Procedure

This study used a mixed methods approach to collecting data, employing both quantitative and qualitative measures. The quantitative measures include the *Acceptance Scale for Kindergarten – Revised* (Favazza & Odom, 1999), the *Social Skills Improvement System Rating Scales – Teacher Version* (Gresham & Elliott, 2008), and the direct observations conducted in the classroom. Supplementary qualitative information was provided through the semi-structured interview conducted with parents of children with Down syndrome and the classroom teacher.

3.6.1 Semi-structured parent interview. Semi-structured interviews were conducted with the parents of two children with Down syndrome who had initially applied to participate in the study. Interviews were conducted at their place of residence, ranged between 12 and 20 minutes in duration, and were audio recorded to allow for transcription and participants' revision.

The nine self-developed questions for the parental semi-structured interview were based on a questionnaire developed by Chadinha (2014). Questions covered the parents' demographic information, the child's educational background, early intervention services the

child received and the child's current friendships. A copy of the interview questions can be found in Appendix O.

3.6.2 Semi-structured teacher interview. A semi-structured interview was conducted with the classroom teacher in order to gather demographic information and views on inclusion. The interview, based on a similar questionnaire developed by Chadinha (2014), was conducted in the teacher's classroom and covered demographic information, teaching experience, and views on inclusive education. One of the fourteen questions required the teacher to respond on a self-developed 5-point Likert scale as to how confident they felt working with students with disabilities. The scale ranged from *1 – not confident*, to *5 – very confident*.

The interview was audio recorded to allow for transcription and to allow for any participant revisions. The interview was 18 minutes in duration. For a full copy of the interview questions, please refer to Appendix N.

3.6.3 Classroom observations. The video camera was set up to record the focus student and her classroom interactions with peers and the teacher, excluding any peers who did not have permission to be recorded. The primary reason for using a video camera to record interactions was to ensure accurate coding and to allow for inter-rater reliability of the behavioural codes to be calculated.

Twenty-one videos were recorded in the classroom over a five week time period, with the first session functioning as a practice session. Prior to this practice session, students not participating in the study were provided with wristbands and assured that they would not be recorded if they re-entered the classroom while the researcher was present.

Video recording occurred in fifteen minute sessions, four times per week, during literacy sessions where students had the opportunity to interact with one another (between 9 a.m. and 10 a.m. on Thursdays and Fridays). The camera was set up at the back of the

classroom, and recording commenced when children had received their wristbands for the day during an everyday transition period between activities (circle time to desk work). This allowed for normal classroom activity to continue without interruption to the teacher or students.

A direct observation form was developed to record and code the interactions between the focus student, their classroom teacher and their peers. The observation form was developed from the *Inclusive Classroom Observation System* (ICOS; Cameron et al., 2012). The ICOS classifies teacher and teacher aide instructions into academic, behavioural, social, functional, and procedural categories but it does not allow for student responses or peer interactions to be recorded. Thus, the five categories from the ICOS were kept, but the definitions were expanded to include peer interactions (see Table 7 below). Based on similar research examining peer interactions in the classroom (Chadinha, 2014), space was also developed on the form to allow for the coding of successful and unsuccessful student responses, peer gender, dyadic peer interactions, group peer interactions, visitor interactions, and whole-class instruction.

In addition to this coding form, an interaction duration recording form was developed. The form used the same five categories of interactions (academic, behavioural, social, functional, and procedural) and allowed for the length of each peer and teacher interaction to be recorded and summed across the sessions. For a copy of the detailed coding instructions and definitions, a copy of the direct observation sheet, and a copy of the duration recording form, please refer to Appendix M.

Table 7

Classroom observation categories and their operational definitions

Interaction Type	Definition
Academic	An interaction which pertains directly to the lesson content being covered in class, such as mathematics instructions, a discussion of a science topic, or reading aloud.
Behavioural	An interaction which refers to behaviour. These may be instructional in nature, and teach appropriate skills through explaining, describing or questioning. For example, “it is important not to run with scissors because you might hurt somebody”. Interactions may also be non-instructional and includes praise, reprimands, or redirections. For example, “I like the way you are sitting quietly today”.
Social	An interaction which either encourages or is about socialising. For example “why don’t you go and play with Sarah?” or “I really love your t-shirt!” Social interaction may also include behaviours such as smiling, waving, or hand holding.
Functional	An interaction which pertains to independent or community living, self-care, recreation, or personal safety.
Procedural	An interaction which is related to routine activities or everyday classroom management. For example “please get out your writing books and a pencil”

3.6.4 Acceptance Scale for Kindergarten - Revised. *The Acceptance Scale for*

Kindergarten - Revised (ASK-R; Favazza & Odom, 1999) was selected over the original ASK measure (Favazza & Odom, 1996) for its improved statistical reliability and its use of person-first language. The measure was also chosen because it is suitable to administer to groups and it is designed for young children.

Contact was established with the author, Patricia Favazza, and permission was received to use the measure and the instruction manual as the measure is not commercially available. The ASK-R is comprised of 18 questions with each question relating to acceptance or non-acceptance of children with disabilities. Each question is read aloud and the children respond by marking a happy, neutral or sad face indicating that their response is a *yes*, *maybe*, or *no*. The children are given an opportunity to practice marking their responses before beginning

the test, and their answer sheets are colour-coded to ensure they can follow along with the verbal instructions. The questions and response scale for the ASK-R can be found in Appendix K.

The ASK-R has been assessed for reliability using a sample of 57 children aged 5 to 6 years. The authors administered the ASK-R to the children and reported a Cronbach's alpha coefficient of .87, and a Spearman-Brown split-half of .91 (Favazza, Phillipson, & Kumar, 2000).

The ASK-R has also been tested for construct validity, and was able to acceptably discriminate between children who had various levels of contact with peers with disabilities. The measure also has high face validity, with the questions relating directly to acceptance of children with disabilities (Favazza et al., 2000).

In the current study, the ASK-R was completed by students over the five weeks of video observations. The 20 students were separated into 4 groups, as the instruction manual for the measure suggests testing students in groups of no more than 7. Students were seated around a table and supplied with a pencil and a response paper. The researcher ascertained that the students understood the concept of disability before beginning the ASK-R, and repeated the definition as necessary throughout administration. Students were instructed not to look at other student's answers and were told that it was very important not to talk about their answers afterwards. The practice page of the ASK-R was completed to ensure that students understood the procedure, before moving on to the test questions. Each item was read aloud and repeated if required, with the researcher verifying each student had answered before proceeding to the next item. The total administration time was between 10 and 15 minutes for each group of students.

3.6.5 Social Skills Improvement System – Rating Scales. The *Social Skills Improvement System – Rating Scales* (SSIS-RS; Gresham & Elliott, 2008) is an updated

version of the widely used *Social Skills Rating System* (SSRS; Gresham & Elliott, 1990). It was selected for use in this study because it takes only 10 to 15 minutes for teachers to complete, and because the social skills subscale is easily separated from the problem behaviour subscale and the academic competence subscale which were not relevant to this study. The measure covers a range of social skills, including communication, cooperation, assertion, responsibility, empathy, engagement, and self-control.

The teacher-rated social skills subscale (SSIS-T) requires teachers to respond to 46 items on a 4-point scale, by selecting whether the focus child has *never*, *seldom*, *often*, or *almost always* exhibited a behaviour in the last two months. For each question, the teacher is also asked to indicate on a 3-point scale whether they think the behaviour is *not important*, *important*, or *critical* for success in their classroom. A copy of the SSIS-T form and the response scale is provided in Appendix L.

Research on the SSIS-RS has examined the test-retest reliability, the inter-rater reliability, and the internal consistency of the measure. Teacher ratings on the social skills scale have moderate test-retest reliability, with a correlation coefficient of .82 (Gresham, Elliott, Cook, Vance, & Kettler, 2010). The inter-rater reliability of the social skills scale was also reported as moderate, with teacher dyads yielding an average agreement of $r = .70$, $p < .01$ while teacher-parent dyads yielded an average agreement of $r = .30$, $p < .01$, and teacher-student dyads yielded an average agreement of $r = .21$, $p < .01$. The authors' comparison of these values using a test for dependent correlations showed that the correlations were not statistically different, with p values of $p = .19$, $p = .50$, and $p = .50$ for the teacher, teacher-parent, and teacher-student dyads, respectively. The small effect sizes obtained for teacher-parent ($d = .24$) and teacher-student dyads ($d = .15$) also indicate that there was little disagreement between the groups of raters, supporting the inter-rater reliability of the scale (Gresham, Elliott, Vance, & Cook, 2011).

The internal consistency of the SSIS-RS is high, with the teacher estimate for the social skills scale calculated at $\alpha = .97$, and estimates for each social skill sub-scale reported as equal to or greater than $\alpha = .86$ (Gresham et al., 2011).

The convergent and divergent validity of the SSIS-RS has also been examined. Overall, the scale has moderate to high correlations with the original SSRS, with the *Behavioral Assessment System*, and with the *Vineland Adaptive Behavior Scale*, providing support for its convergent validity (Gresham et al., 2010). It was also found that teachers, parents, and students tended to agree more on their ratings of similar constructs than on dissimilar constructs, which provides further support for the convergent and divergent validity of each scale and subscale.

In the current study, the classroom teacher was provided with ten copies of the SSIS-T, pre-filled with the names of the students being evaluated. She completed the forms over 2 weeks at her convenience with each form taking approximately 10 minutes to complete.

3.7 Data Analysis

3. 7. 1 Qualitative data analysis. The data collected through the semi-structured interviews were collated into a Microsoft Word document to allow for analysis. Codes were developed through an examination of the re-occurring themes that the parents and teacher discussed, as suggested by Bogdan and Biklen (2007). Each sentence of the word document was then colour-coded according to theme, allowing conclusions to be drawn across the separate transcriptions. This method of analysis has the advantage of allowing for the continual refinement of themes, which results in a more in-depth analysis (Bogdan & Biklen, 2007; Coffey & Atkinson, 1996). The codes and their definitions are presented below in Table 8.

Table 8.
The qualitative coding system used in this study

Code	Definition
Views on Inclusion	Statements pertaining to the definition, effectiveness, or outcome of inclusive education.
Special Education	Statements referring to mainstreaming or regular schooling and special education were included in this category.
Teacher Training	Statements relating to training or professional development for teachers.
Role of the Teacher	Statements referring to teacher duties in the classroom or playground.
Role of Teacher Aides	Statements referring to teacher aide duties in the classroom or playground.
Friendships/Peers	Statements referring to friendships, potential friendships, or social development in relation to peers.

3. 7. 2 Quantitative data analysis. Analysis of the classroom observational data was completed with 4 hours, 56 minutes and 52 seconds of video recording. Each video was coded according to the five categories provided on the interaction coding sheet, along with whether the focus student was interacting with a male or female peer, a group of peers, a visitor, or their teacher. The type, frequency, and duration of the interactions were recorded in a raw data grid in Microsoft Excel, shown via graphs.

Participants' responses on the ASK-R and the SSIS-T were scored according to the manuals for each individual measure and interpreted according to the norms provided by the authors.

To facilitate the analysis of participants' ASK-R results, scores for each item were entered into Excel and SPSS. Excel was used to generate graphs for visual analysis, while SPSS was used to generate descriptive statistics for the sample.

The same method was followed for SSIS-T scores, with each participants' subscale and total scores entered into both Excel and SPSS. Excel was used to generate graphs for visual analysis, and SPSS was used to generate descriptive statistics for the sample.

3. 8. 3 Inter-observer agreement. To allow for the calculation of inter-observer reliability, a Master's level psychology student was trained on the operational definitions and coding procedures used on the direct observation form. This was achieved through a discussion of the definitions and the coding form, and various examples of behaviour in each category were provided. The practice session recording was then used for the research assistant to practice coding, allowing the research assistant to ask any further questions. They were trained in this manner until 90% accuracy was achieved.

The research assistant then independently coded a subset of the video data. They were provided with four videos which equated to 20% of the video recordings used in this study. The assistant was required to resolve any questions they held regarding category definitions before they began coding. The percentage reliability index was calculated using the following equation:

$$\text{Reliability Index (\%)} = \frac{\text{number of agreements}}{\text{number of agreements} + \text{number of disagreements}} \times 100$$

Table 9 shows the percentage of inter-observer agreement for interaction type, interaction success, and whether the interaction was occurring with the classroom teacher, the whole class, or peers.

Table 9
Percentages of inter-observer agreement obtained during direct classroom observations

Category	Percentage of agreement
Type of interaction	96%
Success of interaction	100%
Recipient of interaction	97%

Chapter Four: Results

4.1 Outline

This chapter presents the study results in two parts. The quantitative results obtained from direct observations, the ASK-R questionnaire, and the SSIS-T measure are presented in Part I. Qualitative results from the parent and teacher interviews are presented in Part II.

Part I

4.2 Classroom Observations

4.2.1 Overall findings. The focus student was observed over 20 sessions, yielding a total of 4 hours and 56 minutes of classroom recordings. The direct observations revealed a total number of 295 interactions with peers and the classroom teacher during literacy activities. The majority of these interactions were conducted with peers ($n = 185$), followed by whole class interactions ($n = 65$), followed by individual instruction from the classroom teacher ($n = 45$).

Figure 3, presented below, shows that the majority of peer interactions were based on academic tasks ($n = 139$) with the remaining interactions being social in nature ($n = 46$). The majority of teacher interactions were classified as whole class instruction with academic instruction occurring most frequently ($n = 34$), followed by behavioural instruction ($n = 24$), and procedural instruction ($n = 7$). Individual interactions with the classroom teacher were the least common type of interaction ($n = 25$) but followed the same pattern with academic instruction followed by behavioural instructions ($n = 12$), and then procedural instructions ($n = 8$). There were no instances of peer interactions being classified as behavioural, functional, or procedural and nor were there any teacher interactions classed as social or functional.

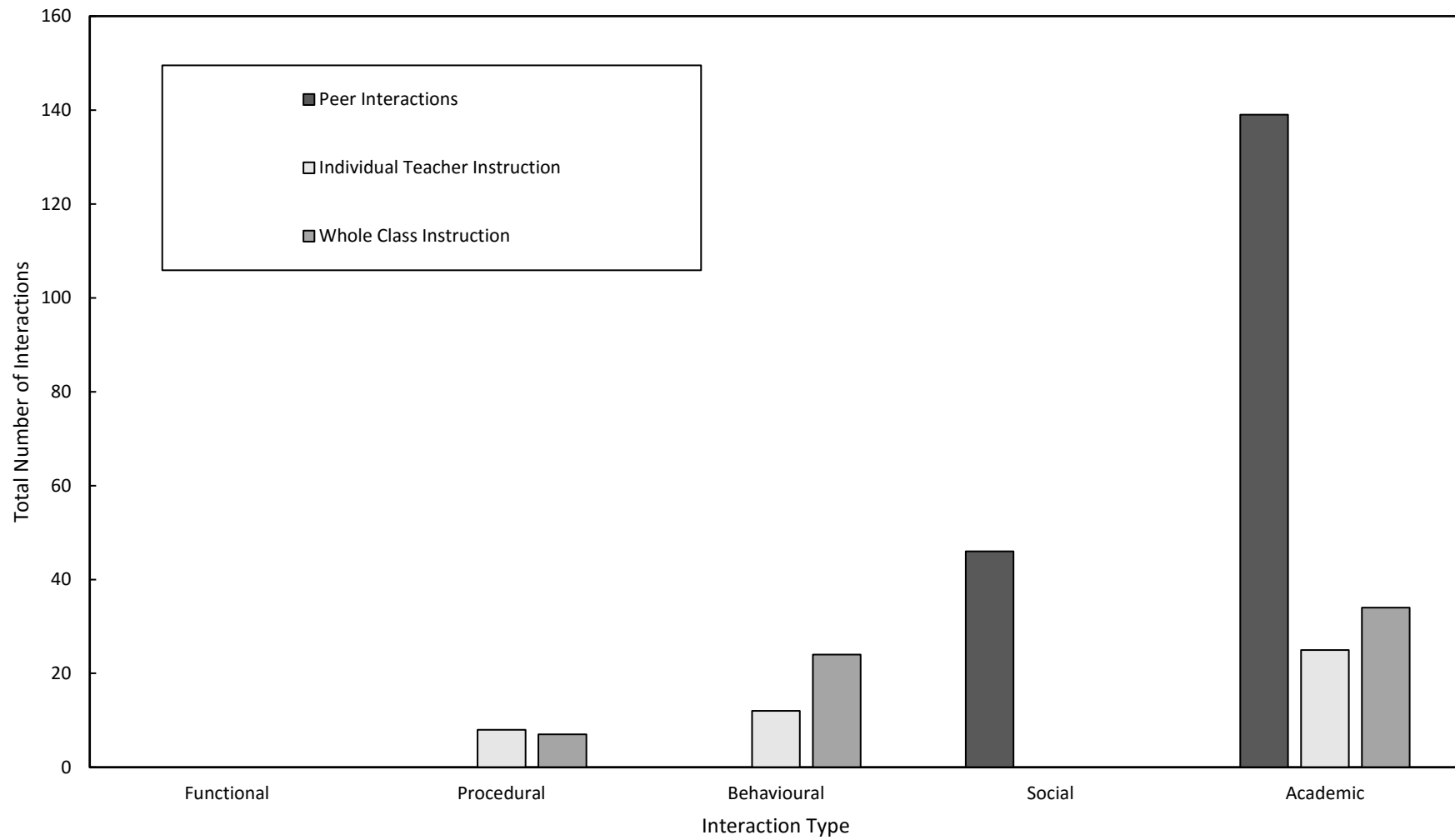


Figure 3. Frequency of the types of interactions the focus student engaged in during the recorded sessions.

The raw scores of frequency counts were converted into percentages in order to indicate how much class time a typical student spent interacting. The focus student spent 20% of time interacting with her peers with a focus on academic work, 12% of time interacting with the teacher about academic work, 4% of time interacting with peers socially, 2% of time receiving behavioural instruction from the teacher, and 0.79% of her time receiving procedural instruction from the teacher. These percentages are presented in Figure 4.

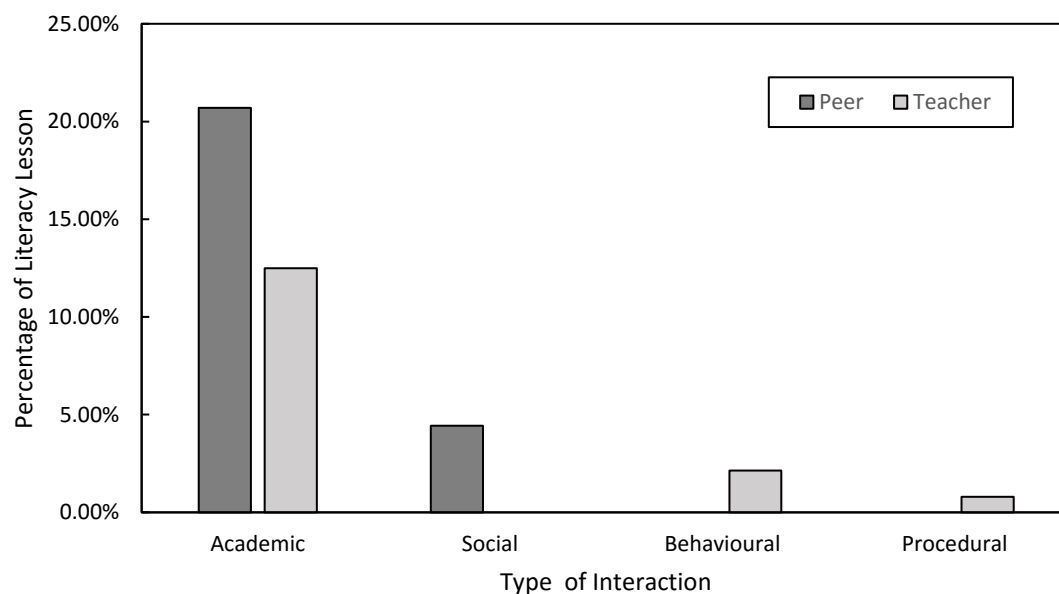


Figure 4. Percentage of time the focus student spent interacting with her peers and teacher during the literacy lessons.

The interactions between the focus student and her peers and teacher remained stable across the twenty observation sessions. The regression line for peer interactions indicates a slight increase in peer interactions over time, with $y = 0.2383x + 6.7474$. The regression lines for whole class interactions ($y = -0.0308x + 3.5737$) and individual-teacher interactions ($y = 0.0925x + 1.2789$) indicate no observable trends in interactions across the twenty sessions. Figure 5 displays the frequency of peer interactions, whole class interactions and individual-teacher interactions with the focus student for each of the twenty literacy lessons.

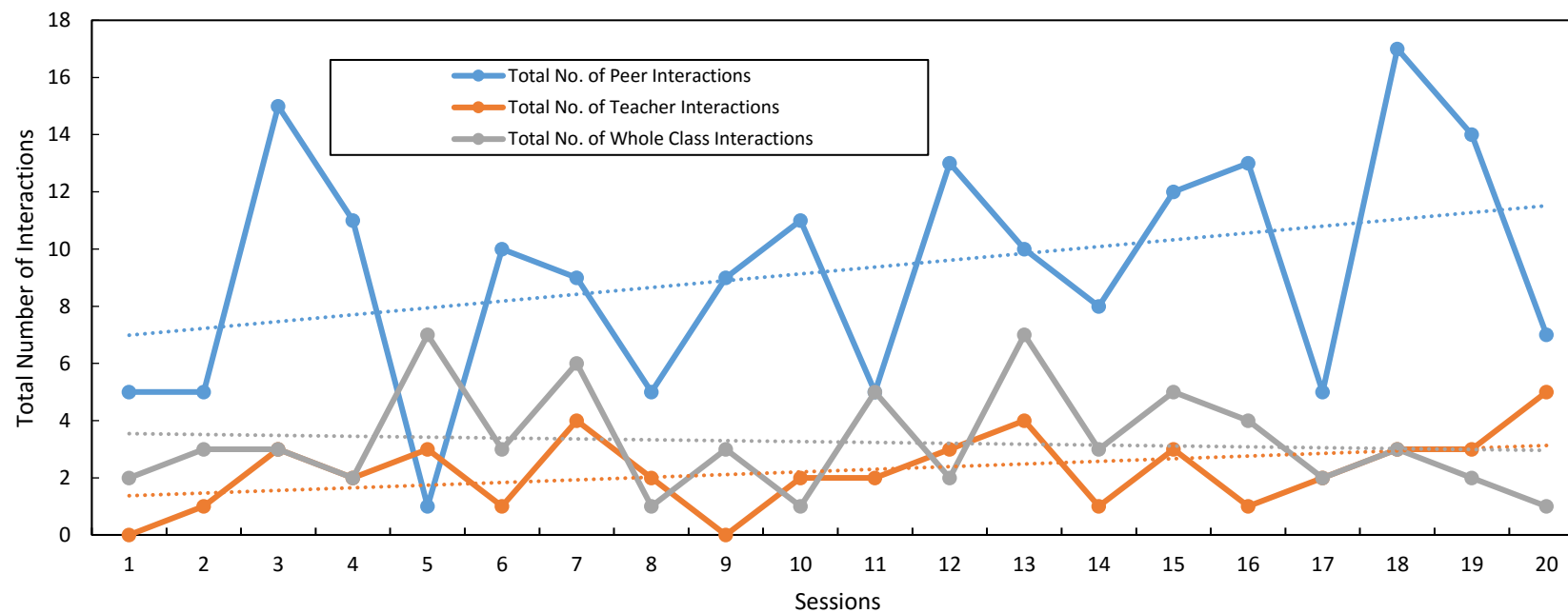


Figure 5. Frequency of the focus student's interactions across the twenty literacy lessons.

4.2.2 Peer interactions. Results revealed that the number of successful interactions between peers was high for both academic and social interactions. In total, there were 132 successful academic interactions (95%) and 7 unsuccessful academic interactions (5%). A similar ratio in relation to success was found for social interactions with 45 successful social interactions (98%) and 1 unsuccessful social interaction (2%). This high rate of successful peer interactions is reported below in Figure 6.

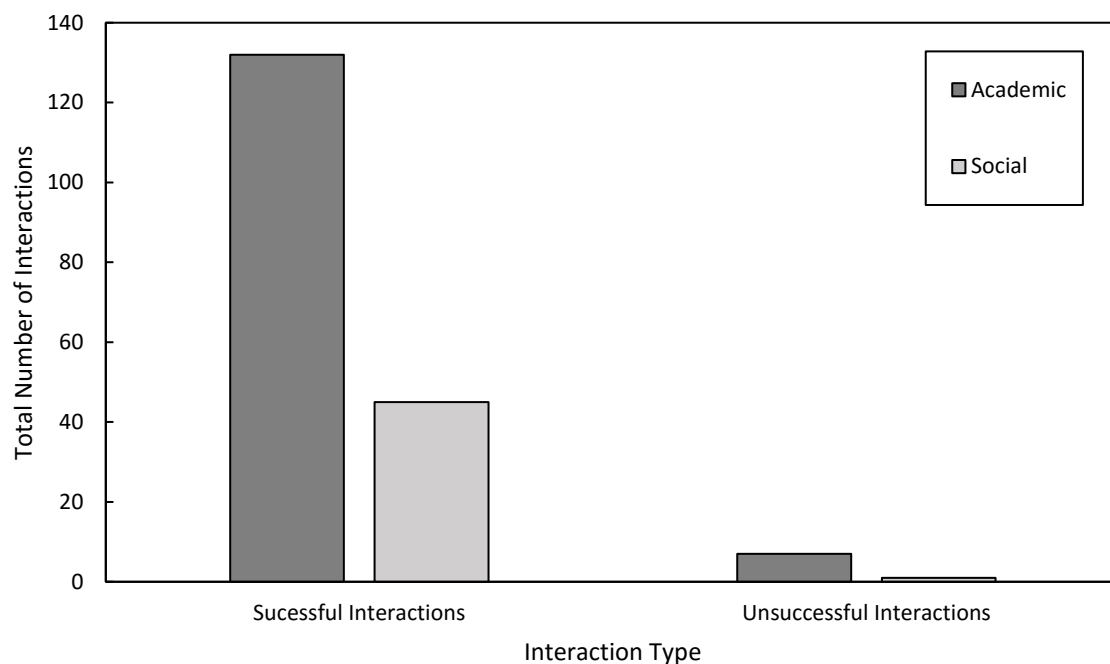


Figure 6. Successful peer interactions vs unsuccessful peer interactions in a Year 2 classroom.

The peer interactions were further examined and the graph below (Figure 7) illustrates that a small number of unsuccessful interactions the focus student had were spread evenly across the twenty sessions and did not appear to coincide with a decrease in successful peer interactions.

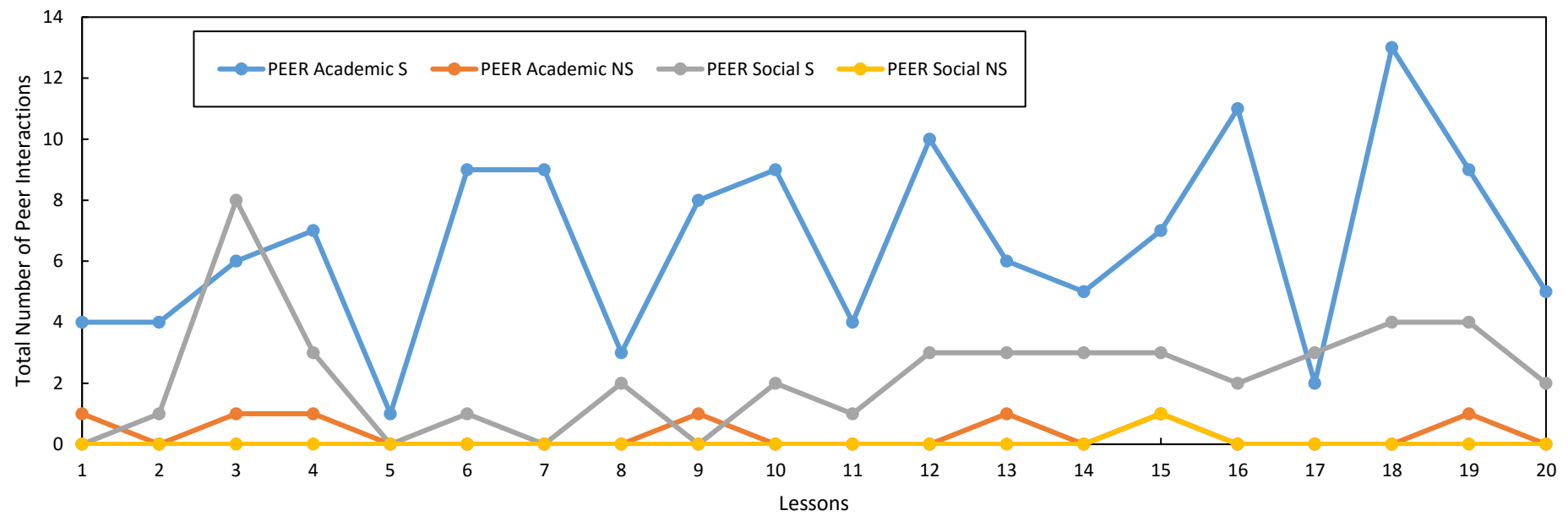


Figure 7. The number of successful and unsuccessful peer interactions over twenty literacy lessons.
Note: S represents successful, NS represents not successful.

Results also showed that the majority of peer interactions occurred between the focus student and a single peer, rather than between the focus student and a group of students.

Figure 8 illustrates that in total, there were 146 interactions between the focus student and an individual peer and 39 interactions between the focus student and a peer group. The majority of interactions with other individuals were with female students ($n = 92$). The majority of group interactions were with male peer groups ($n = 24$). There was a relatively equal number of group interactions with female peer groups ($n = 7$), and groups comprised of both male and female students ($n = 8$).

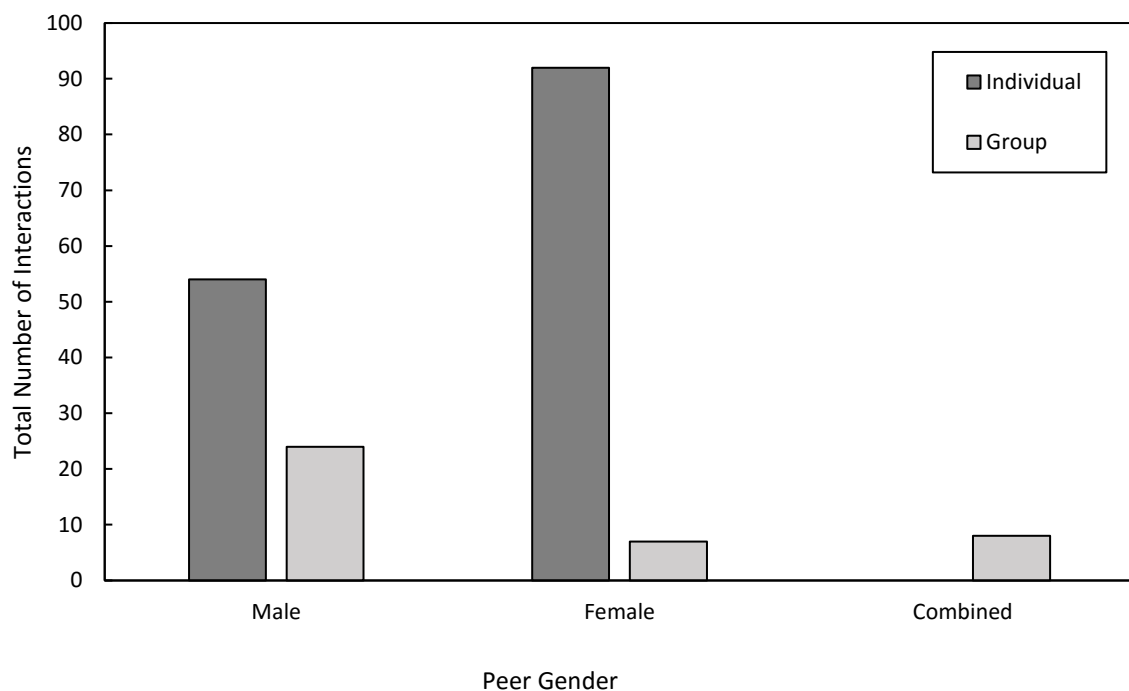


Figure 8. The total frequency of individual and group interactions between the focus student and her peers.

4.3 ASK-R Results

Students' attitudes towards peers with disabilities were assessed using the ASK-R. Descriptive statistics were generated and showed that the students' total scores ranged from 15 to 31, with a mean score of 22.85 and a standard deviation of 4.60. Scores on the ASK-R can range from 0 to 36, with scores from 0-12 indicating a negative attitude, scores from 12 to 24 indicating a neutral attitude, and scores from 24 to 36 indicating a positive attitude. Therefore, the range of students' scores indicate that all participants held neutral or positive attitudes towards peers with disabilities.

As gender has been reported as a variable in student attitudes (Ralli et al., 2011), an independent samples t-test was conducted to determine if any gender differences were apparent in the current study. Results revealed no significant difference between the scores for female students ($M = 24.23$, $SD = 4.17$) and male students ($M = 20.29$, $SD = 4.54$), with $t(18) = 1.96$, $p = .066$. This indicates that male and female students had the same attitudes towards peers with disabilities.

An examination of the individual ASK-R items revealed an association between the use of the word "disability" and negative student responses. Four of the ASK-R items did not contain the word "disability" and were responded to positively by 90-100% of students with a mean response of 1.95, as seen in Table 10. For the 14 items which included the word "disability", only 43% of the students responded positively with a mean response of 1.11. This indicates that the students responded more positively to items which did not mention peer disability.

Table 10

ASK-R items which did not include the term “disability” and student responses

Item	Response	Percentage
4. Do you play with kids if they look different?	<i>yes</i>	95% (n = 19)
11. Do you sometimes call kids names like “dumb”?	<i>no</i>	100% (n = 20)
16. Are you sometimes mean to other kids?	<i>no</i>	100% (n = 20)
18. Do you sometimes pick on kids who are different?	<i>no</i>	90% (n=18)

Note: Items 11, 16, and 18 are reverse scored, so “no” indicates a positive attitude towards disability

4. 4 SSIS-T Results

4. 4. 1 Overall results. The classroom teacher completed the SSIS-T for 10 of the 20 students who completed the ASK-R. An analysis of the *Social Skill Importance Scale* revealed that the classroom teacher rated all items as being *important* (n = 31) or *critical* (n = 14) for success in the classroom, with the exception of 1 item (students joins activities that have already started), which she rated as *not important*.

The SSIS-T has a built in F-index, where selected items are examined to ensure that there is no negative tendency in the teacher ratings. An analysis of the teacher’s responses using the F-index revealed that no student was evaluated in an overly negative manner, with teacher ratings for each student scoring as *acceptable* on the F-index.

Overall scores from the SSIS-T indicated that the teacher’s ratings of students ranged from below average to above average in social skills. Table 11 presents each students’ gender, total standard score, percentile rank for the population and skill level for the 7 social skills examined through the SSIS-T.

Table 11

Participants' gender, total SSIS-T scores, percentile rankings, and teacher ratings on the SSIS-T social skills subscales

Student:	1	2	3	4	5	6	7	8	9	10
Gender	Female	Male	Female	Female	Female	Male	Female	Male	Male	Male
Standard Score	95	88	121	123	121	116	104	123	92	104
Percentile Rank	36	21	92	95	93	85	31	95	29	59
Communication	BA	A	AA	AA	AA	A	A	AA	A	A
Cooperation	A	A	AA	AA	AA	A	A	A	A	A
Assertion	A	A	A	A	A	A	A	AA	A	A
Responsibility	BA	A	AA	AA	AA	A	A	A	A	A
Empathy	AA	BA	AA	AA	AA	AA	A	AA	BA	BA
Engagement	A	BA	A	AA	A	A	A	AA	A	A
Self-Control	A	A	AA	AA	AA	AA	A	AA	AA	AA

Note: BA refers to below average, A refers to average, and AA refers to above average

4. 4. 2 Relation to ASK-R results. The data from these ten students were examined to investigate the relationship between teacher ratings on the SSIS-T and student's scores on the ASK-R. A Pearson product correlation was calculated and the results revealed that the students' SSIS-T scores were positively correlated with their ASK-R scores, $r(9) = .87, p < .01$. This result indicates that students who held positive attitudes towards peers with disabilities were rated by their teacher as having better social skills.

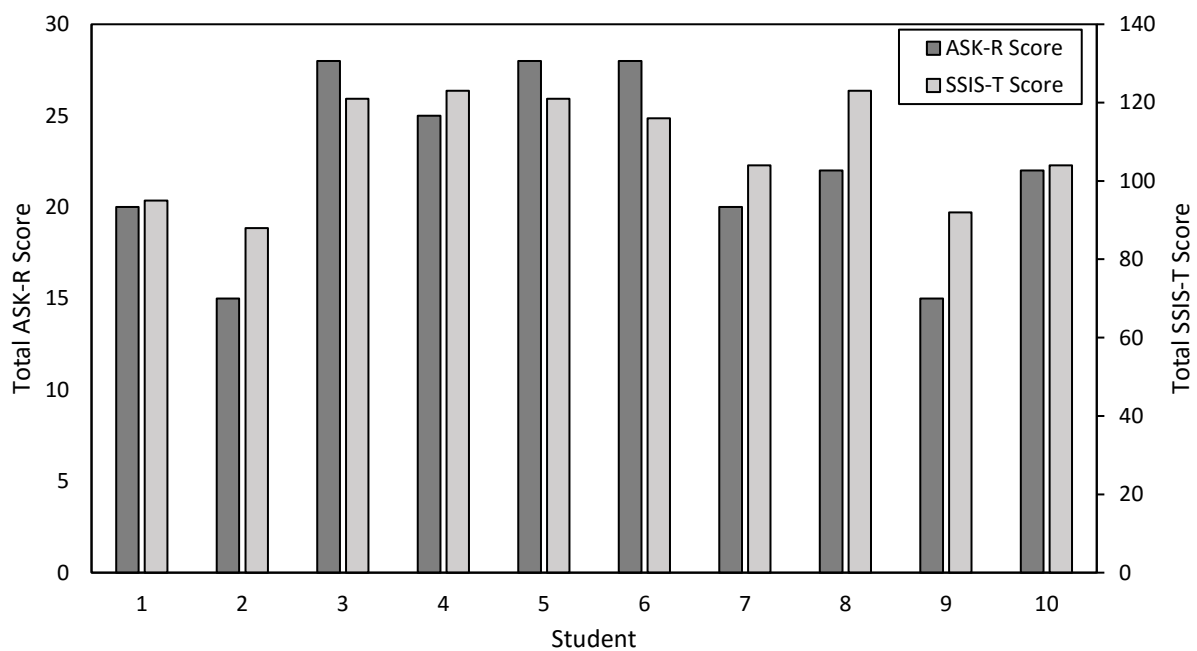


Figure 9. Total ASK-R scores (attitude) and Total SSIS-T scores (social skills) for ten selected Year 2 students.

Teacher ratings for the 10 students on each of the SSIS-T's subscales were also analysed in relation to the students' total ASK-R scores. All social skills except *assertion* were found to be positively related to attitudes towards disability. High scores in *engagement*, *empathy*, and *communication* were strongly correlated with a positive attitude towards disability, while *self-control*, *cooperation* and *responsibility* were moderately correlated with positive attitudes towards disability. The correlations for each subscale are presented in Table 12 below.

Table 12

The correlations between SSIS-T subscale scores, total SSIS-T scores and total ASK-R scores

SSIS-T Subscales	Correlation with total ASK-R score
Communication	.82**
Cooperation	.65*
Assertion	-.05
Responsibility	.65*
Empathy	.81**
Engagement	.81**
Self-Control	.76*
Total SSIS–T Score	.87**

Note: * $p < .05$ (two-tailed), ** $p < .01$ (two-tailed)

Part II

4. 5 Qualitative results from parent and teacher semi-structured interviews

Each of the parent interviews and the teacher interview were transcribed and coded according to re-occurring themes (Bogdan & Biklen, 2007). The six codes that were used were their views on: inclusion, special education, teacher training, the role of teacher aides, the role of teachers, and friendships/peers. An analysis of these codes revealed 3 themes: views on inclusion, the importance of training, and roles and responsibilities of teachers and teacher aides. Results are presented below according to theme.

4. 5. 1 Demographic data

Emma's parents were aged between 31 and 40 years. The couple had three other children, two of whom were younger than Emma. Emma's parents both held professional positions. Her father worked full-time and her mother worked two days per week, and spent the remainder of the week at home with her children. Prior to attending primary school, Emma had attended a regular preschool for 2 days per week without any additional support. She had also received early intervention services outside of school which involved physiotherapy, music therapy, occupational therapy, speech and language therapy, and play therapy.

Connor's mother was aged between 21 and 30 years, and his father was aged between 31 and 40 years. Connor's mother held a professional position, while his father owned a business. Connor had two siblings, one older and one younger than himself. Prior to attending primary school Connor attended the local kindergarten for 20 hours each week where he received support from an Education Support Worker (ESW; the equivalent of a teacher aide for younger students). Connor had also received early intervention services outside of kindergarten which involved physiotherapy, music therapy, occupational therapy, speech and language therapy, and play therapy.

4. 5. 2 Views on inclusion. During the semi-structured interview, the teacher was asked to respond to three questions on inclusive education. The first question asked the teacher for a definition of inclusion. She stated that special education schools, special education units, and mainstreaming were not inclusive practices and that inclusion is “where everyone is together, everyone is doing the same thing on their level, and everyone sees each other as equal.”

The second question addressed the potential benefits of inclusion. The teacher reported that inclusion was socially beneficial for both students with disabilities and typically developing students. She noted that friendships developed at a young age would help students with disabilities in the future. She also emphasised that these friendships would ensure that typically developing children were respectful towards individuals, regardless of their difficulties or differences.

When asked for any additional comments on the concept of inclusion, the teacher responded that she viewed the attitudes of many teachers as a barrier to inclusion. She reported that inclusion required a significant amount of time and effort, and that she felt many teachers were unwilling to invest this time and effort to include students with disabilities in their classrooms.

During the semi-structured parent interviews, the parents of each child gave their views on inclusive education and discussed whether inclusion had been a consideration when selecting their child’s school.

Emma’s mother reported that she and her husband did not consider special education as an option for Emma. Their primary concern was that Emma and her typically developing siblings attended a school which would provide them with a religious education. Therefore, they enrolled Emma at the pre-school attached to their school of choice and moved her up to the primary school along with her peers at 5 years of age.

In contrast, Connor's parents reported that they had considered placing Connor in a special education school. They went on to emphasise that they were pleased with their decision to place Connor in a regular school because "the amount he has learned off his peers has just been phenomenal. They have higher expectations." Connor's parents stated that these high expectations had been crucial for their son's social development. They also mentioned that friendships with typically developing peers were a benefit of inclusive education and had resulted in Connor having two typically developing best friends and in him receiving invites to classmates' birthday parties. Connor's parents believed that Connor would not have had the opportunity to develop these friendships had he attended a special education school.

4. 5. 3 The importance of training. The importance of training and professional development for classroom teachers was a re-occurring theme in both sets of interviews.

In response to a demographic question regarding her training, the teacher discussed how she had not felt qualified to teach a class upon the initial completion of her training (a Bachelor's degree). This led her to complete a year of behavioural management training, and two years of training in working with students with disabilities. The teacher also stated that she would like to complete further training in restorative practices.

When asked to rate how confident she felt about working with students with disabilities, the teacher placed herself at *four* on a scale of one to five. She justified her high rating by saying that she felt her additional training had provided her with the positive attitude and skills required to work with students with additional needs.

The teacher also credited her additional training when she responded to two questions asking her to generate possible strategies for inclusion in the classroom and playground. She stated that for inclusion in the classroom, a potential strategy would be to create a physical space for the child where other students could easily join them in activities. The teacher then stated that classroom systems could be put in place to allow for students with disabilities to

be included in the playground. She suggested that a buddy system with same-age peers could be an effective strategy to use. She mentioned that she had successfully applied this concept with her students to help a child with social skill issues, and felt it was easy enough for a classroom teacher to accomplish.

While teacher training was not raised by the researcher in family interviews, Connor's parents mentioned teacher training in response to an open-ended question about their child's classroom. Broadly, they mentioned that teachers had believed Connor was intentionally breaking rules, and had not considered his diagnosis of ASD in their interpretation of his behaviour. Connor's parents attributed this misinterpretation to a lack of knowledge and stated that they had resolved the issue by educating the teachers themselves.

They also raised concern about the teaching practices and attitude of Connor's current teacher. While the parents did not provide specific details on which of the teacher's practices they did not like, they reported that they had organised for the teacher to attend a pilot programme run by a PhD student. Although the programme was designed to give teachers new skills to implement in the classroom and improve inclusive practices, Connor's parents expressed doubt over the programme's ability to alter the teacher's behaviour. Furthermore, they stated that even if the teacher did revise her behaviour, they did not believe she would change her overall attitude towards students with disabilities. Connor's parents attributed the teacher's current attitude to her "old school" training, citing that a previous, younger teacher had been more informed about Down syndrome and inclusive education, which they believed was because her training was more recent.

4. 5. 4 Roles and responsibilities. The roles and responsibilities of teachers and teacher aides in the playground and classroom were also discussed in each of the teacher and parent interviews.

In response to a question on her experience in working with teacher aides, the teacher reported that she had worked with teacher aides who had provided support to her students during both the previous year and the current year.

When asked about the role of the teacher aide in the playground, the teacher stated that she believed teacher aides often inadvertently created issues for students with disabilities: “See, that’s a problem. If a teacher aide is with a child, [then] that creates more of a barrier, because kids do not want to sit with someone that’s got a teacher with them”. The teacher continued, suggesting that instead of relying on teacher aides to stay physically close to a child to prevent any issues, schools should encourage classroom teachers to set up same-age buddy systems.

Emma’s mother did not have an issue with the behaviour of Emma’s teacher aide in the playground, and was happy to follow the school’s lead in what they considered appropriate responsibilities for staff. She stated that in preschool, Emma had not had an Education Support Worker and would spend free time with her best friend. Now that Emma was attending primary school and had a teacher aide, Emma’s mother reported that the teacher aide sat with Emma for the entirety of the lunch time and that Emma did not engage with other students. Emma’s previous best friend had sought out and attempted to play with Emma, but Emma had not reciprocated and the student had recently developed other friendships. Emma’s mother viewed the teacher aide’s role as a set of pre-decided responsibilities and disclosed that it had not occurred to her that the teacher aide could encourage Emma to interact with her peers during lunch time.

In contrast, Connor's parents reported that they were involved in the management of Connor's teacher aides. They reported that Connor had received support from an ESW while in kindergarten and that he now had four teacher aides who worked with him at his primary school on a rotating schedule. Connor's parents reported that they had worked with each teacher aide to ensure that they did not "hover" over Connor in the playground. Instead, they said that they viewed the teacher aide's presence as a safety measure. Connor's parents emphasised the importance of his peers in the playground, reporting that Connor's two best friends ensured he participated in activities and returned back to his classroom. They did not view these tasks as part of the teacher aide's responsibility

The teacher was also asked about the role of the teacher aides in the classroom. She reported that she had preferred her experiences with past teacher aides who had come into the classroom and helped the student with their work. In contrast, her two current students with teacher aides were removed from the classroom and taken to another building to complete separate work. The teacher stated that it would be better for the teacher aide to stay in the classroom with the students and help them to complete the same work as the other students. She believed that it was her responsibility to set the work for students and it was the teacher aide's responsibility to support the student while they completed their work.

A discussion of the experiences of both sets of parents suggests that some schools or teachers hold a different interpretation of the role of the teacher and the teacher aide, where the primary responsibility for the child falls to the teacher aide. Both parents cited examples where their child was unable to remain at school and they were required to pick up their child if the teacher aide was absent. Emma's mother reported that she had to collect Emma from school at least two days per week because there was no teacher aide available for the remainder of the day. Connor's parents stated that they had the same issue the previous year with Connor having to return home at lunch time every day because of a lack of a teacher

aide. Connor's parents had resolved the issue at the time of the study by "fighting to get full cover for him", and were now able to ensure he had a teacher aide full-time. They emphasised that they were well-versed in advocacy because of previous employment, and that this provided them with an advantage in their negotiations with the school when ensuring Connor could attend school full time.

4. 6 Summary

Quantitative results showed that typically developing students in a regular classroom primarily interacted with their peers. These interactions were most often successful and were centred on academic and social matters. Interactions with the classroom teacher were primarily academic, although behavioural and procedural interactions were also recorded. All students held either neutral or positive attitudes towards peers with disabilities. The subset of students evaluated on their social skills ranged from having below average to above average skills on the various sub-scales. Analysis showed that these social skills scores were positively correlated with attitudes towards disability.

Qualitative results revealed that both children with Down syndrome had peers who they considered friends which is consistent with the quantitative results suggesting that typically developing children are positive towards peers with disabilities. The interviews also revealed that the teacher and parents had worked with teachers who were not positive towards inclusion and they felt that teacher training was a way to combat negative attitudes towards inclusive education. They also reported that the perceived roles of teachers and teacher aides often differed between individuals and could have an impact on the experiences of students with disabilities in the classroom and playground.

Chapter Five: Discussion

5.1 Aim and Summary of Results

The aim of this study was to gather information about the experiences of children with Down syndrome and the experiences of typically developing children in regular New Zealand schools. Parents of two children with Down syndrome were interviewed to provide information on their children's experiences at school and a teacher of a regular class was interviewed about her experiences with inclusion. The attitudes, social skills and peer interactions of typically developing students were then analysed using the ASK-R, the SSIS-T and direct observations to gain an understanding of the environment in a typical New Zealand classroom.

Overall, the results showed that the focus student primarily interacted with her peers. These peer interactions were successful and the majority of interactions were about the academic tasks the students were currently completing. All of the students held either a neutral or positive attitude towards peers with disabilities and students with positive attitudes were also rated by their teacher as having better social skills. The results from the interviews revealed several common themes. Both parents and teacher raised the benefits of inclusion for students, discussed the necessity of teacher training, and raised issues around the roles and responsibilities of teachers and teacher aides. These findings are discussed below.

5. 2 Quantitative Findings

5. 2. 1 The attitudes of typically developing students towards students with disabilities. In this study, the students' attitudes towards peers with disabilities were measured as either neutral or positive. This finding is consistent with research which has shown that younger children, such as the six year olds in the current study, are mostly positive towards their peers with disabilities (de Boer et al., 2014; Dolva et al., 2010; Dyson, 2005). An examination of gender did not reveal the gender bias which has been found in

other studies (Arampatzi et al., 2011; de Boer et al., 2014; Gannon & McGilloway, 2009; Georgiadi et al., 2012; Ralli et al., 2011; Sirlopu et al., 2008; Vignes et al., 2009). This lack of difference is potentially due to the students' age, as the majority of research reporting a gender bias in attitudes uses a sample of older students (de Boer et al., 2014; Gannon & McGilloway, 2009; Georgiadi et al., 2012; Ralli et al., 2011; Sirlopu et al., 2008; Vignes et al., 2009). Alternatively, it is possible that the sample in the current study was too small to reveal any differences and that a larger study may have found a difference between male and female student responses.

An examination of the individual items in the ASK-R measure showed that students responded significantly more positively to items which did not contain the word "disability". These results could be due to a lack of the children's understanding, which is in line with the findings of studies which reported that students have difficulty understanding the concept of disability (Dyson, 2005; Ralli et al., 2011). It is possible that the students in this study were not certain what disability was, thus their neutral responses, whereas they were certain about their answers to the four items which reflected traditional concepts of being "nice" to classmates. This certainty was potentially a product of the children's current curriculum, as they were learning about supporting others and being kind to their peers at the time of the assessment. This has positive implications for inclusion, as young students are very capable of learning that they can respect all peers. Information about respecting peers with disabilities could easily be incorporated into the current curriculum.

5. 2. 2 The social skills of typically developing students. The teacher ratings of social skills for a subset of students revealed a wide range in the students' social skill abilities. This range in student abilities is expected in regular classrooms given the natural disparity in

student abilities (Rimm-Kaufman & Sawyer, 2004) and has two implications for social skill interventions which involve typically developing children.

The first implication is that many typically developing students may be unable to implicitly model social skills to their peers with disabilities. Four of the ten students evaluated in this study were assessed as below average on at least one social skill. Given that implicit modelling requires accurate demonstration of a skill (Gresham, 1981), it is unlikely that these students would be able to incidentally model skills they are not competent in for a peer with a disability. Therefore, studies which use a group of peers in the hope of incidentally modelling skills to students with disabilities should undertake an evaluation of the children's skills before setting up the group. This would ensure that the intervention involved enough students rated as competent in the selected social skills to allow for successful modelling.

The second implication of this range in social skills is that many students in an inclusive classroom may benefit from a social skills intervention, not just the student with a disability. As stated above, four of the students evaluated were rated as below average on at least one social skill, and all ten students were rated as average on at least one social skill. This finding suggests that a class-wide intervention may be beneficial for all of the students in a classroom and may be more suitable to implement before a targeted programme designed to improve the skills of a single student.

5. 2. 3 The relationship between attitude and social skills. Findings also revealed that the students' attitudes towards disability and their social skills were positively related. As this study was descriptive and involved only a single testing phase, it is not possible to infer causation. Therefore, it is not known whether a child's attitude or social skills must first be in place to promote development of the other, or whether attitudes and social skills emerge together. However, the finding that children with good social skills are also likely to be

positive towards peers with disabilities is a new finding which may inform future interventions.

Further investigation into this positive relationship revealed that certain social skills had a higher correlation with a positive attitude. More specifically, communication, empathy, and engagement were more related to a positive attitude than co-operation, responsibility, and self-control. This finding is interesting because the majority of studies which target social skills in young children are aimed at improving skills such as turn-taking (Harper et al., 2008; Kalyva & Avramidis, 2005; Koenig et al., 2010). Turn-taking is more likely to fall under the broader categories of co-operation and self-control which this study found to be less associated with positive attitudes towards peers with disabilities. It is therefore possible that social skill programmes which teach young children how to empathise and communicate appropriately with their peers with disabilities are more likely to increase the social skills of both parties and increase positive attitudes among typically developing students. Several studies designed to increase acts of communication have been successful with older students (Haring & Breen, 1992; Kamps et al., 2002; Shukla et al., 1999) as well as younger students (Kalyva & Avramidis, 2005). It would be interesting for future research to examine whether teaching social skills such as communication has an effect on empathy and students' attitudes towards peers with disabilities, in addition to the increase in social skills commonly reported for the students with disabilities.

Intervention programmes which facilitate empathy and communication for all students would be more inclusive than past interventions which aim to teach a student with a disability how to interact with their peers by improving their social skills (Frederickson & Turner, 2003; Harper et al., 2008; Kalyva & Avramidis, 2005; Koenig et al., 2010; Shukla et al., 1999). This change to focus on altering the behaviour of typically developing students creates

a supportive and facilitative environment for students with disabilities and does not presume that the student with a disability has a social skill deficit which must be rectified.

This study's finding that empathy is strongly related to positive attitudes may also have an impact on interventions which are designed to promote positive peer attitudes towards disability. Currently, the majority of interventions which are designed to promote positive attitudes aim to provide students with information so that they have an increased understanding of disability and understand the potential causes of disability (Campbell et al., 2004; de Boer et al., 2014; Meyer & Ostrosky, 2016). It is possible that the positive results of these interventions could be attributed to increased empathy in the children, but further research would provide insight into the thought processes behind changes in attitudes.

5. 2. 4 Peer and teacher interactions in a regular New Zealand classroom. This study also provided information on the interactions that a typically developing student had with her peers and teacher. It was found that the majority of her interactions were with peers, followed by whole class instruction and then followed by individual teacher instruction. This is in direct contrast to how students with disabilities primarily interacted in the classroom in another New Zealand study (Chadinha, 2014). Chadinha found that for these students with disabilities, interactions occurred the most with their teacher aides, then their classroom teacher and then their peers. Other studies, both qualitative and quantitative, have reported that students with disabilities in regular classrooms primarily interact with their teacher aide instead of their classroom teachers and peers (Cameron et al., 2012; MacArthur et al., 2007; Rubie-Davies et al., 2010). While information from one typically developing student cannot be generalised to all students, the observations provide evidence that the interactional

classroom experiences of typically developing students is very different from the reported experiences of children with disabilities.

In addition to this finding, the majority of peer interactions observed were academic. Given that many studies report that children with disabilities are provided with alternative work (Chadinha, 2014; MacArthur et al., 2007; Patterson, 2006; Rutherford, 2009) this is a cause for concern. Any student completing separate work would have been unable to participate in the majority of peer interactions which occurred during the literacy lessons observed in this study. This demonstrates that separate work for students with disabilities may have unintended social consequences which could be much broader than teachers and parents might initially perceive.

5. 3 Qualitative Findings.

The findings from the semi-structured interviews are discussed below according to the three common themes found, namely: views on inclusion, the importance of training, and roles and responsibilities.

5. 3. 1 Views on inclusion. The predominant view that both parents and the teacher expressed about inclusive education was that it is beneficial for all students. The teacher believed that having students with disabilities included in the classroom benefitted their typically developing peers. Her assessment that typically developing children would develop respect for individuals with disabilities is consistent with the Education Review Office's claims regarding the benefits of inclusive education for typically developing students in New Zealand (Education Review Office, 2010).

The teacher and parents also noted that inclusion can be beneficial to the social development of children with disabilities. This view is consistent with research which suggests that children with disabilities who attend inclusive schools have an increased opportunity for social development, have increased academic achievement and benefit from

the inclusive environment long-term (Brown & Conroy, 2011; Guralnick, 1990; Guralnick et al., 1995; Karin et al., 2012; Madden & Slavin, 1983).

Friendships with peers was also raised as an important outcome of inclusive education. One of the families involved in this study identified that they were pleased that their child had made friends with typically developing peers, which is an outcome commonly raised by parents as an experience they want their child to have (Broer et al., 2005; Egilson & Traustadottir, 2009; Guralnick et al., 1995). Although this study did not interview the children with Down syndrome, research with older children has found that children with disabilities value their friendships and often report that they would like to have friendships with their peers (Rutherford, 2009). For one child in this study, friendships were possible because of his parents' involvement with the school to ensure he was included. However, the other family reported that their child had not developed friendships.

Exploring parent's views on inclusion and special education also raised an important issue around how parents select schools for their children. It is generally assumed that parents would have considered enrolling their child at either a special education school or a regular school. While one family did report that this was the case, the other family's thought process did not reflect this dichotomy. In contrast, they were concerned only that the selected school would provide a religious education for their child. This finding indicates that parents of children with disabilities may select a school based entirely on characteristics like they would for any typically developing child, and may not consider special education in their decision making. The thought process of these parents represents the encouraging philosophy that their child would be included no matter which school she was enrolled in, and is a positive reflection of how these parents view the current education system.

5. 3. 2 The importance of teacher training. The information gained from the parent and teacher interviews also yielded findings related to the importance of teacher training. The

concept that teacher's professional development is important to the success of inclusive education is consistent with previous research which has found a link between teacher education and attitudes towards inclusion (Gilmore et al., 2003; Hsien et al., 2009; Kim et al., 2005).

It is important to note that the significant amount of additional training the teacher undertook was completed through her own motivation in response to an identified need for skills, and in advance of any training requirement for teacher registration or employment. That is, the teacher identified the need for her own professional development and sought out higher education to ensure she felt competent to teach and meet the needs of all her students. It is probable that many teachers do not have this level of motivation to commit their time, effort and money to further training when they are already fully qualified teachers. One option may be to increase the knowledge on inclusion that teachers are provided with in their training degree, as Campbell and colleagues showed that a single-semester course was effective at improving attitudes towards inclusion (Campbell et al., 2003). Alternatively, targeted programmes for teachers who have students with disabilities enrolled have been successful (Kim et al., 2005) and may capitalise on teacher motivation if the teacher can immediately put the knowledge and skills from the course into practice.

5. 3. 3 Roles and responsibilities. The roles and responsibilities of teachers and teacher aides were also discussed by the parents and teacher and their discussions revealed that many parties involved with the education of students with disabilities have different views of the roles and responsibilities of staff.

The teacher interviewed in this study revealed that she had observed other teachers' negative attitudes towards including students with disabilities in their classroom. This is an idea which is consistent with previous qualitative research from New Zealand in which teachers reported that they were unwilling to invest more time to help students with

disabilities (MacArthur et al., 2007). The teacher reported that while she felt it was her responsibility to teach all of her students, she felt that many teachers placed this responsibility on the teacher aide. Again, this view is consistent with other research which has found many teacher aides are expected to take over the teaching of students with disabilities, with the teacher's focus being on the typically developing students (Cameron et al., 2012; Chadinha, 2014).

The duties that teacher aides were expected to perform also differed between parents, between schools, and within schools. One family reported that they did not expect their child's teacher aide to be physically close to their child in the playground and that the teacher aide's role was to support the student in the classroom. The family reported working with the school and each individual teacher aide to ensure that their expectations about the roles and responsibilities of the teacher aide were clear and carried out by the staff. The second family followed the school's suggestion and did not raise any issues with their child's teacher aide being in close physical proximity to the child in both the classroom and playground. Thus, it can be seen that without parental input into teacher aide roles, students with disabilities may not have the same opportunities as other students.

Differing practices within a school was also reported by the teacher. She explained that during a previous year a student who required the support of a teacher aide was kept in the classroom. During the current study the two students in her class who received support were removed from the classroom by the teacher aide. The teacher did not elaborate on why this change had occurred, although she was clear that she had preferred the previous practice of leaving students in class. This new practice of removing students from class is surprising given the teacher's willingness to have the students remain in class, as well as the recent *Teacher's and Teacher Aides Working Together* programme which encourages schools to

keep students in their classroom. However, the teacher did report that she was not aware of the programme, so it is possible that the school had not yet delivered the programme to staff.

It is also important to note that both the teacher and one family reported that they believed the duties of many teacher aides could be detrimental to the social development and friendships of students with disabilities. Both the teacher and the parents stated that they believed the close physical proximity of the teacher aide to students during break times prohibited peer interactions. This observation is supported by evidence where teacher aides and students have reported being ostracised by their peers due to the teacher aide's presence (Rutherford, 2009).

Each family also raised the issue of students with disabilities being sent home from their school when a teacher aide was unavailable. Both families reported that they were required to pick their children up from school, which indicates that school and teachers did not see the students as their responsibility but as the responsibility of the teacher aide. While consistent with other research which suggests that teacher aides often become the primary teacher for students with disabilities (Cameron et al., 2012; Chadinha, 2014; Rutherford, 2009) this practice is in direct contrast to government policy. The Ongoing Resourcing Scheme states that the classroom teacher has the primary responsibility for teaching *all* students in their classroom, regardless of whether the student receives funding or not (Ministry of Education, 2012). Furthermore, the policy states that sending children home when a teacher aide is unavailable is not acceptable, and that schools which do so may be in breach of the 1989 Education Act. One family reported that the solution to keep their child at school was not to have the school or teacher take responsibility, but to secure additional teacher aide support hours. This further exemplifies the different rights for attendance and education which students with disabilities can experience, regardless of national policy promoting teacher responsibility for all students.

5. 4 Implications for Practice and Policy

The results of this study suggest that inclusive policies are failing in implementation and are not put into practice in a small number of New Zealand classrooms, and that this may be due to teacher's and principal's attitudes on the inclusion of all students. There is potential for teacher training to be adjusted in order to promote positive attitudes towards inclusion as well as an increase in applying inclusive strategies and working with parents and support staff in order to bridge the gap between New Zealand policy and the current practice in many classrooms. Additionally, there is an opportunity for a clearer understanding of the roles and responsibilities of the teacher and teacher aide, and for an increased awareness for schools and parents to hold a shared understanding of how their child will be included in the school environment. Furthermore, there is a need for schools to be held accountable for their decisions surrounding the inclusion of students with disabilities.

5. 5 Strengths of the Study

The main strength of this study was the multi-method approach that was utilised. The multi-method approach allowed for data to be gathered from several sources using a range of techniques. This then provided a multi-faceted view point of the findings and allowed data from separate parties to be drawn together and analysed, resulting in a more holistic portrayal of the experiences of individual teachers, families, and children in terms of inclusion.

This study also adds to the literature with new findings on the relationship between attitudes toward peers with disabilities and social skills in Year 2 children and new findings on the environment in a typical New Zealand classroom as viewed by parents of children with Down syndrome and a regular classroom primary teacher.

5. 6 Limitations

The primary limitation of this study was the small sample size. The interactions, attitudes and social skills of students in one New Zealand classroom cannot be generalised to

other regular schools throughout the country. Similarly, the experiences of two families and one classroom teacher cannot be generalised to include the experiences of all families and teachers. Despite this, the study does provide a small body of evidence that Year 2 students have positive attitudes towards peers with disabilities. The experiences of parents and the teacher provide evidence that non-inclusive practices are occurring in schools despite national policies which promote, and indeed require, inclusive practices.

A second limitation of this study is that the perspectives of teachers currently including a student with a disability in their classroom could not be established. This was despite approaching four schools as potential participants in this study. However, the teacher who did consent had taught a student with a disability in the previous year and had two current students receiving teacher aide support so her experience provides a valid perspective and insight into teachers' experiences.

5. 7 Future Research

This study could serve as the basis for several future areas of research. First, the study requires replication with a greater number of students to determine whether similar attitudes and social skills results would be found with students around New Zealand. It would also be beneficial to examine the attitudes, social skills and peer interactions of students with disabilities. Furthermore, a study conducted on a larger scale may allow the gender or age differences found in other research to be identified in New Zealand.

A second area for investigation would be to focus on increasing the positive attitudes and social skills of young students using a class-wide intervention, which was the original aim of this study. The current study has shown that there is a need to develop the neutral student attitudes towards peers with disabilities and that a class-wide intervention may benefit both typically developing students and students with disabilities.

Finally, future research could focus on how the provision of training for classroom teachers could improve the levels of inclusion for students with disabilities in New Zealand schools. This study has demonstrated that while inclusive practices are experienced by some children, the three schools involved in this study engaged in some non-inclusive practices. These practices appear to be related to teacher attitude and a lack of training, rather than to peer attitude or national policy and this is a key area for research to focus on in the future.

5. 8 Summary

The current study examined peer attitudes, parent attitudes and teacher attitudes towards inclusive education. Assessment measures revealed that a sample of Year 2 typically developing students demonstrated neutral and positive attitudes towards peers with disabilities, and students assessed as having good social skills held more positive attitudes. This is an encouraging finding which shows that peer attitudes may not always be a barrier to inclusion, and suggests that interventions designed to alter typically developing students' social skills may have a positive influence on students' attitudes towards peers with disabilities.

An analysis of peer interactions during literacy lessons revealed that typically developing students are primarily successful in their interactions with each other and that they spend the majority of their classroom interactions discussing academic work. This finding shows that academic class time allows for students to develop their social skills by interacting with peers and indicates that providing individual students with separate academic work may have implications for opportunities for social development.

The parents involved in this study reported that they believed inclusion was beneficial for their children and in one case the parents reported that their child was fully included by their typically developing peers. However, both parents reported issues in having their children attend school full-time due to a lack of teacher aides. This illustrates that parents

could benefit from education surrounding the identification and implication of inclusive and non-inclusive practices, and on opportunities they have to support inclusion for their child.

Findings from the parent and teacher interviews revealed a clear need to support New Zealand teachers in their implementation of inclusive practices. The findings from this study indicate that teachers may need more support to feel prepared to include students with disabilities in their classroom and to be confident around their role and the teacher aide's role in the classroom. Furthermore, support should be provided to teachers who are positive towards inclusion to ensure that they are not over-ridden by a school's culture and policy surrounding inclusion. School practices also need to be examined and revised to adhere to the Education Review Office's requirements on inclusion, which would help to provide a clear message to teachers about their roles and responsibilities to teach all students.

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APPENDICES

APPENDIX A: Educational Research Human Ethics Committee Approval



HUMAN ETHICS COMMITTEE

Secretary, Lynda Griffioen
Email: human-ethics@canterbury.ac.nz

Ref: 2015/34/ERHEC

15 October 2015

Meagan Davies
School of Health Sciences
UNIVERSITY OF CANTERBURY

Dear Meagan

Thank you for providing the revised documents in support of your application to the Educational Research Human Ethics Committee. I am very pleased to inform you that your research proposal "The effects of an intervention designed to increase typical peer interactions for children with Down syndrome" has been granted ethical approval.

Please note that this approval is subject to the incorporation of the amendments you have provided in your email of 12 October 2015.

Should circumstances relevant to this current application change you are required to reapply for ethical approval.

If you have any questions regarding this approval, please let me know.

We wish you well for your research.

Yours sincerely

A handwritten signature in black ink, appearing to read 'N Surtees'.

Nicola Surtees
Chair
Educational Research Human Ethics Committee

"Please note that Ethical Approval and/or Clearance relates only to the ethical elements of the relationship between the researcher, research participants and other stakeholders. The granting of approval or clearance by the Ethical Clearance Committee should not be interpreted as comment on the methodology, legality, value or any other matters relating to this research."

F E S

APPENDIX B: Forms for Focus Children

B. 1. Information Sheet for Focus Child

Telephone:

Email:

Date:



The effects of an intervention designed to increase typical peer interactions for children with Down syndrome

Information Sheet for Focus Child (for the parent/caregiver to read to the child)

Meagan is doing a project at the university. She is going to work with you and your teacher to find out how you make friends at school.

Meagan will watch you play at school over a few weeks and she will take some notes about what you do and how you do it. To help her remember what happens she will record what you say using a video camera, and she will give you a special wristband to wear for the videos. She will keep all of this information locked away in a safe cupboard.

Meagan will also talk with your teacher to see what they think about how you and your class make friends. She will also ask some of the other children in your class to answer some questions about who they like to be friends with.

After she has talked to your teacher, Meagan might come to your class to do some fun activities with your whole class. This will help you and your class to learn more about being good friends. At the end, Meagan will ask you how much you liked the activities.

You will be given a secret code-name so that no one will know your real name. We will also give your parents/caregiver, teacher, and class secret names so that no one knows who they are either.

Your parent/caregiver and your teacher have also been asked to help Meagan. If you have any questions you can ask your parent/caregiver. If you change your mind about being in the project, that's fine too. All you have to do is tell your parent/caregiver.

Thank you for reading about my project, let me know if you would like to help!

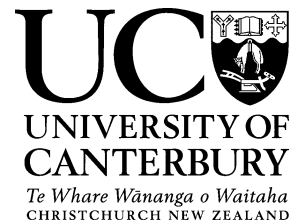
Meagan.

B. 2. Assent Form for Focus Child

Telephone:

Email:

Date:



The effects of an intervention designed to increase typical peer interactions for children with Down syndrome

Child Assent Form

I know that:

- ☐ I have been asked to help out with a research project
- ☐ Meagan will come to my school and watch me talk to my teacher and friends
- ☐ I will be audio and videotaped
- ☐ Meagan will talk to my teacher about how I make friends
- ☐ Meagan will ask some other kids in the class about who they like to be friends with
- ☐ I will get a secret code name so no one will know who I am
- ☐ I can change my mind about helping with the research project, and no one will be angry
- ☐ If I have any questions I can ask my parents or teacher
- ☐ My parents will get a summary of the project when it is finished

I have read (or had read to me) the information sheet that explains the project and I understand it. I agree to help Meagan with her project.

My signature (name or happy face) _____

The date _____

My full name _____

Parent/Guardian _____

The date _____

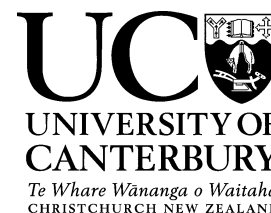
APPENDIX C: Forms for Focus Children's Parent/Caregiver

C. 1. Information Sheet for Focus Children's Parent/Caregiver

Telephone:

Email:

Date:



The effects of an intervention designed to increase typical peer interactions for children with Down syndrome

Information Sheet for Parent/Caregiver

My name is Meagan Davies, and I am currently completing my Master of Arts through the University of Canterbury. My Master's thesis involves a research project investigating the play skills and attitudes of children with disabilities and their peers, and I would like to invite you and your child to participate.

The purpose of this project is to gather information about how children in mainstream classrooms interact with their peers who have Down syndrome. Specifically, we would like to examine children's attitudes towards their peers with Down syndrome, as the evidence suggests that young children are welcoming of children with special education needs. We are aiming to find out how young children include their peers so that we can use this knowledge to help other children with special education needs to be included. We would also like to investigate whether an experimental programme addressing the attitudes and social skills of a mainstream class can potentially facilitate the inclusion of students with special education needs. To do this, we will run the programme in two classrooms, but not a third, and then compare the information we collect about attitude across the three classrooms.

This project aims to involve children with Down syndrome aged between 5 and 7 who attend a mainstream primary school in the Canterbury region. As the majority of the project will be conducted at your child's school, it will be necessary for us to obtain permission from the school for us to run the project.

Participation in this project will involve:

- A brief meeting with me, so that I can get to know your family, ask you some demographic questions, and so you can ask any questions you have about this project.
- Audio and video recording of your child in their classroom and playground pre-, during, and post-intervention.
- Your child's teacher completing a form about your child's social skills.
- Your child's classmates answering some questions about being friends with children who have a disability.
- Your child's class may also be selected to participate in an experimental programme in their normal class time.

The video recording of your child is so that we can examine the interactions between your child and their teacher and/or teacher aide, and their peers. Your child and their peers will be asked to wear a coloured wristband so that we can identify and record only those whose parents have given permission to be recorded. These observations will occur for approximately 15 minutes, up to three times a week in the playground, and up to three times a week in the classroom. These observations will run before the intervention, during the intervention, and after the intervention (six weeks in total). The observations are designed to fit into the classroom's everyday schedule, so it is expected that your child's day will carry on as usual. The video recording will also not impact the children's play on the playground. However, should there be any foreseeable risks on the playground related to a health and safety matter, I will intervene immediately and inform staff straight away. I will also follow school policy at all times while in the classroom and playground.

Your child's teacher will be asked to fill out a form on your child's social skills at the beginning and end of our observations, which will help us to see if there has been any change in your child's social skills. Other children in your child's class will also be asked to complete a questionnaire about children with disabilities at various points during the 6 weeks we are at your child's school. This questionnaire is not targeted at your child, but discusses a range of general disabilities, and should have no adverse effect on behaviour towards your child.

The research project also includes an experimental in-class programme, which will run for 4 of the 6 weeks that observations are taking place. As we are comparing 2 classrooms which receive the experimental programme with one classroom which will run as usual, your child's classroom may be selected to run as normal. However, if your child's class receives the programme it would require 2 half-hour sessions per week, during which time I would come to your child's class and run activities with the students. The sessions are designed for students in Years 1 and 2, and are fun and age-appropriate, involving activities such as reading stories, drawing pictures, and singing interactive songs. They are designed to encourage positive discussion of friendships with individuals with disabilities, and to facilitate friendships between all students in the class. Upon programme completion, we will ask your child's teacher and your child for feedback about their experience in the form of brief questionnaires (a rating form for teachers, and a colour-in response format for children). As stated above, school policy will be followed at all times.

The nature of this research means that it is considered confidential but not anonymous; due to the small Down syndrome community in Christchurch it may be possible for participants to be identified. I will take particular care to ensure the confidentiality of all data gathered for this study, with all data being de-identified and referred to solely by number. Data will be stored in password protected facilities and locked storage at the University of Canterbury. Raw data will be destroyed after 5 years.

Please note that participation in this study is voluntary. If you do participate you have the right to:

- Withdraw from the study at any time. If you withdraw, I will do my best to remove any information relating to you or your child, provided this is practically achievable.
- Ask any questions about the study at any point during participation
- Provide information on the understanding that your name and your child's name will not be used

- Be given a summary of the project's findings once it has concluded
-

All participants will receive a report on the study. The results of this study will be published in a Master's thesis, which will become a public document on the University of Canterbury's library website. The results of this project may be used in a conference presentation and/or published articles. If you have any questions about the study, please contact me or my senior supervisor, Dr. Anne van Bysterveldt.

Complaints about the study may be directed to the Chair, Educational Research Human Ethics Committee, University of Canterbury, Private Bag 4800, Christchurch or email: human-ethics@canterbury.ac.nz.

If you and your child are happy to participate please:

- Sign (name or smiley face!) the attached child consent form.
- Sign the attached parent consent form
- Return both forms to me as per the instructions on the consent form

Thank you for considering participating in this research.

Yours sincerely,

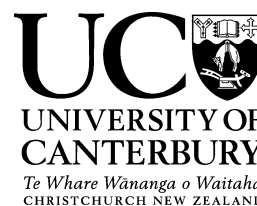
Meagan Davies

C. 2. Parental Consent Form for Focus Children's Parent/Caregiver

Telephone: _____

Email: _____

Date: _____



The effects of an intervention designed to increase typical peer interactions for children with Down syndrome

Declaration of Consent to Participate – Parent

☐ I have read and understood the description of the above named project. On this basis I agree for myself _____ and my child _____ to participate.

☐ I understand that both my own and my child's participation is voluntary and we may withdraw at any time without penalty.

☐ I understand that any information or data we provide will be kept confidential to the researchers and that any published or reported results will not identify me or my child.

☐ I understand that the nature of the research and the small Down syndrome community in Christchurch may mean it is possible for participants to be identified.

☐ I understand that all data collected for this project will be kept in locked and secure facilities at the University of Canterbury and will be destroyed after five years.

☐ I understand that the results of this research will be published in a thesis which will become a public document on the University of Canterbury library website. I understand that results may be used in a conference presentation and/or published articles.

☐ I understand that my child will be audio and videotaped for this research.

☐ I understand that I will receive a report on the findings of this project. I have provided my email details below for this.

☐ I understand that if I require further information I can contact Meagan Davies or her senior supervisor, Anne van Bysterveldt.

By signing below, I agree for my student to participate in this research project.

Name: _____

Date: _____

Signature: _____

Email Address: _____

Please complete this consent form and your child's consent form and return by scanning and emailing to xxxxx or post to Meagan Davies at the following address (xxxxx).

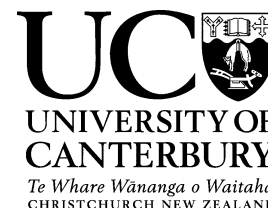
APPENDIX D: Forms for Board of Trustees

D. 1. Control Group Information Sheet for the Board of Trustees

Telephone:

Email:

Date:



The effects of an intervention designed to increase typical peer interactions for children with Down syndrome

Information Sheet for Board of Trustees – Control Group

My name is Meagan Davies, and I am currently completing my Master of Arts through the University of Canterbury. My Master's thesis involves a research project investigating the play skills and attitudes of children with disabilities and their peers, and I would like to invite your school to participate.

The purpose of this project is to gather information about how children in mainstream classrooms interact with their peers who have Down syndrome and vice versa. Specifically, we would like to examine children's attitudes towards their peers with Down syndrome, as the evidence suggests that young children are welcoming of children with special education needs. We are aiming to find out how young children include their peers so that we can use this knowledge to help other children with special education needs to be included. We would also like to investigate whether an experimental programme addressing the attitudes and social skills of a mainstream class can potentially facilitate the inclusion of students with special education needs. To do this, we will run the programme in two classrooms. Children in a third classroom will have the opportunity to contribute to our information about attitudes, to continue with their regular classroom programme and not participate in any intervention. We will then compare the information we collect about attitudes across the three classrooms. We would like to invite your school to participate by providing information about attitudes and to continue with the regular classroom programme.

Participation in this project will involve:

- Audio and video recording of peer and teacher interactions in the playground and classroom during a six week period
- Teachers completing a brief semi-structured interview on inclusion, and a rating form on one child's social skills
- Children completing a form about their attitudes towards children with disabilities
-

The video recording of the class is so that we can examine the interactions between a child with special education needs and their teacher and/or teacher aide, and their peers. The children will be asked to wear a coloured wristband when observations are being undertaken, in order to easily identify those participating in the study. These observations will occur for approximately 15 minutes, up to three times a week in the playground, and up to three times a week in the

classroom. The observations will run for approximately 6 weeks, and are designed to fit into the classroom's everyday schedule, so it is expected that the school day will carry on as usual. The video recording will also not impact the children's play on the playground. However, should there be any foreseeable risks on the playground related to a health and safety matter, I will intervene immediately and inform staff straight away. I will also follow school policy at all times while in the classroom and playground.

With parental permission, we will also ask the children to fill out a questionnaire about being friends with children with disabilities. We would ask them to do this a total of 3 times over 6 weeks, so we can see if they change their minds at any point. This involves us reading some questions aloud and the children colouring in a smiley face to respond, and it will not have a large impact on their class or play time.

We will ask the child's classroom teacher to complete a brief semi-structured interview covering their views on inclusive education at a time which is convenient to them, both at the start and end of the 6 week period we are at your school. We will record the audio from these interviews so that we can transcribe their responses and provide a transcript for them to review. We will also ask them to complete a form rating the focus child's social skills at 3 points during the 6 week period so that we can see any change in the child's skills. Again, this can be completed at a time convenient to them.

The nature of this research means that it is considered confidential but not anonymous; due to the small Down syndrome community in Christchurch it may be possible for participants to be identified. I will take particular care to ensure the confidentiality of all data gathered for this study, with all data being de-identified and referred to solely by number. Data will be stored in password protected facilities and locked storage at the University of Canterbury. Raw data will be destroyed after 5 years.

Please note that participation in this study is voluntary. If you do allow this study to proceed, you have the right to withdraw the school, staff, and students from the study at any time. If you withdraw participants, I will do my best to remove any information relating to the school/staff and students, provided this is practically achievable.

All participants will receive a report on the study. The results of this study will be published in a Master's thesis, which will become a public document on the University of Canterbury's library website. The results of this project may be used in a conference presentation and/or published articles. If you have any questions about the study, please contact me or my senior supervisor, Dr. Anne van Bysterveldt.

Complaints about the study may be directed to the Chair, Educational Research Human Ethics Committee, University of Canterbury, Private Bag 4800, Christchurch or email: human-ethics@canterbury.ac.nz.

If you agree for this study to proceed, please complete the attached consent form and return as per the instructions on the consent form.

Thank you for considering participating in this research.

Yours sincerely,

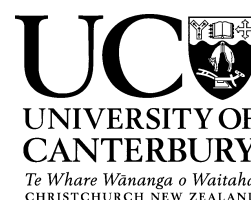
Meagan Davies

D. 2. Intervention Group Information Sheet for Board of Trustees

Telephone:

Email:

Date:



The effects of an intervention designed to increase typical peer interactions for children with Down syndrome

Information Sheet for Board of Trustees – Experimental Groups

My name is Meagan Davies, and I am currently completing my Master of Arts through the University of Canterbury. My Master's thesis involves a research project investigating the play skills and attitudes of children with disabilities and their peers, and I would like to invite your school to participate.

The purpose of this project is to gather information about how children in mainstream classrooms interact with their peers who have Down syndrome. Specifically, we would like to examine children's attitudes towards their peers with Down syndrome, as the evidence suggests that young children are welcoming of children with special education needs. We are aiming to find out how young children include their peers so that we can use this knowledge to help other children with special education needs to be included. We would also like to investigate whether an experimental programme addressing the attitudes and social skills of a mainstream class can potentially facilitate the inclusion of students with special education needs. To do this, we will run the programme in two classrooms. Children in a third classroom will have the opportunity to contribute to our information about attitudes, to continue with their regular classroom programme and not participate in any intervention. We will then compare the information we collect about attitudes across the three classrooms. We would like to invite your school to participate by providing information about attitudes and to receive the experimental programme.

Participation in this project will involve:

- Audio and video recording of peer and teacher interactions in the playground and classroom pre-, during, and post-intervention.
- Teachers completing a brief semi-structured interview on inclusion, and a rating form on one child's social skills
- Children completing a form about their attitudes towards children with disabilities
- Participation in an experimental programme which takes place during normal class time.
-

The video recording of the class is so that we can examine the interactions between a child with special education needs and their teacher and/or teacher aide, and their peers. The children will be asked to wear a coloured wristband when observations are being undertaken, in order to easily identify those participating in the study. These observations will occur for approximately 15 minutes, up to three times a week in the playground, and up to three times a week in the classroom. These observations will run before the intervention, during the intervention, and after the

intervention (six weeks in total). The observations are designed to fit into the classroom's everyday schedule, so it is expected that the school day will carry on as usual. The video recording will also not impact the children's play on the playground. However, should there be any foreseeable risks on the playground related to a health and safety matter, I will intervene immediately and inform staff straight away. I will also follow school policy at all times while in the classroom and playground.

With parental permission, we will also ask the children to fill out a questionnaire about being friends with children with disabilities. We would ask them to do this a total of 3 times over 6 weeks, so we can see if they change their minds at any point. This involves us reading some questions aloud and the children colouring in a smiley face to respond, and it will not have a large impact on their class or play time.

The research project also includes an experimental in-class programme, which will run for 4 of the 6 weeks that observations are taking place. This will require 2 half-hour sessions per week, during which time I would come to the class and run activities with the students. The sessions are designed for students in Years 1 and 2, and are fun and age-appropriate, involving activities such as reading stories, drawing pictures, and singing interactive songs. They are designed to encourage positive discussion of friendships with individuals with disabilities, and to facilitate friendships between all students in the class. Upon programme completion, we will ask the teacher and students for feedback about their experience in the form of brief questionnaires (a rating form for teachers, and a colour-in response format for children). As stated above, school policy will be followed at all times.

We will ask the child's classroom teacher to complete a brief semi-structured interview covering their views on inclusive education at a time which is convenient to them, both at the start and end of the 6 week period we are at your school. We will record the audio from these interviews so that we can transcribe their responses and provide a transcript for them to review. We will also ask them to complete a form rating the focus child's social skills at 3 points during the 6 week period so that we can see any change in the child's skills. Again, this can be completed at a time convenient to them.

The nature of this research means that it is considered confidential but not anonymous; due to the small Down syndrome community in Christchurch it may be possible for participants to be identified. I will take particular care to ensure the confidentiality of all data gathered for this study, with all data being de-identified and referred to solely by number. Data will be stored in password protected facilities and locked storage at the University of Canterbury. Raw data will be destroyed after 5 years.

Please note that participation in this study is voluntary. If you do allow this study to proceed, you have the right to withdraw the school, staff, and students from the study at any time. If you withdraw participants, I will do my best to remove any information relating to the school/staff and students, provided this is practically achievable.

All participants will receive a report on the study. The results of this study will be published in a Master's thesis, which will become a public document on the University of Canterbury's library website. The results of this project may be used in a conference presentation and/or published articles. If you have any questions about the study, please contact me or my senior supervisor, Dr. Anne van Bysterveldt.

Complaints about the study may be directed to the Chair, Educational Research Human Ethics Committee, University of Canterbury, Private Bag 4800, Christchurch or email: human-ethics@canterbury.ac.nz.

If you agree for this study to proceed, please complete the attached consent form and return as per the instructions on the consent form.

Thank you for considering participating in this research.

Yours sincerely,

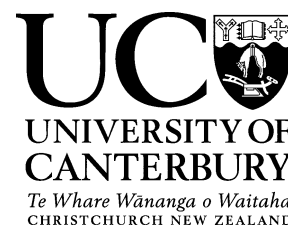
Meagan Davies

D. 3. Board of Trustees Consent Form

Telephone: 0277261242

Email: meagan.davies@pg.canterbury.ac.nz

Date:



The effects of an intervention designed to increase typical peer interactions for children with Down syndrome

Declaration of Consent- Board of Trustees

☐ I have read and understood the description of the above named project. On this basis I agree for the school to participate.

☐ I understand that letting the staff and students participate in this study is voluntary and that they may withdraw at any stage without penalty.

☐ I understand that any information or opinions provided will be kept confidential to the researcher and that any published or reported results will not identify the school, teachers, or students.

☐ I understand that the nature of the research and the small Down syndrome community in Christchurch may mean it is possible for participants to be identified.

☐ I understand that all data collected for this study will be kept in locked and secure facilities at the University of Canterbury, and will be destroyed after five years.

☐ I understand that I will receive a report on the findings of this study. I have provided my email details below for this.

☐ I understand that the results of this research will be published in a thesis which will become a public document on the University of Canterbury library website. I understand that results may be used in a conference presentation and/or published articles.

☐ I understand that if I require further information I can contact the researcher, Meagan Davies, or her senior supervisor, Anne van Bysterveldt

By signing below, I agree for this research project to occur in my school.

Name: _____

Date: _____

Signature: _____

Email Address: _____

Please complete this consent form and return by scanning and emailing to xxxxx or post to Meagan Davies at the following address xxxxx.

APPENDIX E: Forms for School Principals

E. 1. Control Group Information Form for School Principal

Telephone:

Email:

Date:



The effects of an intervention designed to increase typical peer interactions for children with Down syndrome

Information Sheet for Principal – Control Group

My name is Meagan Davies, and I am currently completing my Master of Arts through the University of Canterbury. My Master's thesis involves a research project investigating the play skills and attitudes of children with disabilities and their peers, and I would like to invite your school to participate.

The purpose of this project is to gather information about how children in mainstream classrooms interact with their peers who have Down syndrome. Specifically, we would like to examine children's attitudes towards their peers with Down syndrome, as the evidence suggests that young children are welcoming of children with special education needs. We are aiming to find out how young children include their peers so that we can use this knowledge to help other children with special education needs to be included. We would also like to investigate whether an experimental programme addressing the attitudes and social skills of a mainstream class can potentially facilitate the inclusion of students with special education needs. To do this, we will run the programme in two classrooms. Children in a third classroom will have the opportunity to contribute to our information about attitudes, to continue with their regular classroom programme and not participate in any intervention. We will then compare the information we collect about attitudes across the three classrooms. We would like to invite your school to participate by providing information about attitudes and to continue with the regular classroom programme.

Participation in this project will involve:

- Audio and video recording of peer and teacher interactions in the playground and classroom during a six week period
- Teachers completing a brief semi-structured interview on inclusion, and a rating form on one child's social skills
- Children completing a form about their attitudes towards children with disabilities

The video recording of the class is so that we can examine the interactions between a child with special education needs and their teacher and/or teacher aide, and their peers. The children will be asked to wear a coloured wristband when observations are being undertaken, in order to easily identify those participating in the study. These observations will occur for approximately 15 minutes, up to three times a week in the playground, and up to three times a week in the

classroom. The observations will run for approximately 6 weeks, and are designed to fit into the classroom's everyday schedule, so it is expected that the school day will carry on as usual. The video recording will also not impact the children's play on the playground. However, should there be any foreseeable risks on the playground related to a health and safety matter, I will intervene immediately and inform staff straight away. I will also follow school policy at all times while in the classroom and playground.

With parental permission, we will also ask the children to fill out a questionnaire about being friends with children with disabilities. We would ask them to do this a total of 3 times over 6 weeks, so we can see if they change their minds at any point. This involves us reading some questions aloud and the children colouring in a smiley face to respond, and it will not have a large impact on their class or play time.

We will ask the child's classroom teacher to complete a brief semi-structured interview covering their views on inclusive education at a time which is convenient to them, both at the start and end of the 6 week period we are at your school. We will record the audio from these interviews so that we can transcribe their responses and provide a transcript for them to review. We will also ask them to complete a form rating the focus child's social skills at 3 points during the 6 week period so that we can see any change in the child's skills. Again, this can be completed at a time convenient to them.

The nature of this research means that it is considered confidential but not anonymous; due to the small Down syndrome community in Christchurch it may be possible for participants to be identified. I will take particular care to ensure the confidentiality of all data gathered for this study, with all data being de-identified and referred to solely by number. Data will be stored in password protected facilities and locked storage at the University of Canterbury. Raw data will be destroyed after 5 years.

Please note that participation in this study is voluntary. If you do allow this study to proceed, you have the right to withdraw the school, staff, and students from the study at any time. If you withdraw participants, I will do my best to remove any information relating to the school/staff and students, provided this is practically achievable.

All participants will receive a report on the study. The results of this study will be published in a Master's thesis, which will become a public document on the University of Canterbury's library website. The results of this project may be used in a conference presentation and/or published articles. If you have any questions about the study, please contact me or my senior supervisor, Dr. Anne van Bysterveldt.

Complaints about the study may be directed to the Chair, Educational Research Human Ethics Committee, University of Canterbury, Private Bag 4800, Christchurch or email: human-ethics@canterbury.ac.nz.

If you agree for this study to proceed, please complete the attached consent form and return as per the instructions on the consent form.

Thank you for considering participating in this research.

Yours sincerely,

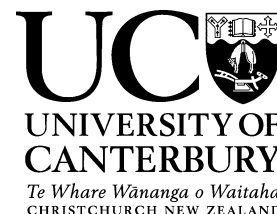
Meagan Davies

E. 2. Intervention Group Information Sheet for Principal

Telephone:

Email:

Date:



The effects of an intervention designed to increase typical peer interactions for children with Down syndrome

Information Sheet for Principal – Experimental Groups

My name is Meagan Davies, and I am currently completing my Master of Arts through the University of Canterbury. My Master's thesis involves a research project investigating the play skills and attitudes of children with disabilities and their peers, and I would like to invite your school to participate.

The purpose of this project is to gather information about how children in mainstream classrooms interact with their peers who have Down syndrome. Specifically, we would like to examine children's attitudes towards their peers with Down syndrome, as the evidence suggests that young children are welcoming of children with special education needs. We are aiming to find out how young children include their peers so that we can use this knowledge to help other children with special education needs to be included. We would also like to investigate whether an experimental programme addressing the attitudes and social skills of a mainstream class can potentially facilitate the inclusion of students with special education needs. To do this, we will run the programme in two classrooms. Children in a third classroom will have the opportunity to contribute to our information about attitudes, to continue with their regular classroom programme and not participate in any intervention. We will then compare the information we collect about attitudes across the three classrooms. We would like to invite your school to participate by providing information about attitudes and to receive the experimental programme.

Participation in this project will involve:

- Audio and video recording of peer and teacher interactions in the playground and classroom pre-, during, and post-intervention
- Teachers completing a brief semi-structured interview on inclusion, and a rating form on one child's social skills
- Children completing a questionnaire about their attitudes towards children with disabilities
- Participation in an experimental programme which takes place during normal class time.

The video recording of the class is so that we can examine the interactions between a child with special education needs and their teacher and/or teacher aide, and their peers. The children will be asked to wear a coloured wristband when observations are being undertaken, in order to easily identify those participating in the study. These observations will occur for approximately 15 minutes, up to three times a week in the playground, and up to three times a week in the classroom. The observations will run for approximately 6 weeks, and are designed to fit into the classroom's everyday schedule, so it is expected that the school day will carry on as usual. The video recording will also not impact the children's play on the playground. However, should there be any foreseeable risks on the playground related to a health and safety matter, I will intervene immediately and inform staff straight away. I will also follow school policy at all times while in the classroom and playground.

With parental permission, we will also ask the children to fill out a questionnaire about being friends with children with disabilities. We would ask them to do this a total of 3 times over 6 weeks, so we can see if they change their minds at any point. This involves us reading some questions aloud and the

children colouring in a smiley face to respond, and it will not have a large impact on their class or play time.

We will ask the child's classroom teacher to complete a brief semi-structured interview covering their views on inclusive education at a time which is convenient to them, both at the start and end of the 6 week period we are at your school. We will record the audio from these interviews so that we can transcribe their responses and provide a transcript for them to review. We will also ask them to complete a form rating the focus child's social skills at 3 points during the 6 week period so that we can see any change in the child's skills. Again, this can be completed at a time convenient to them.

The research project also includes an experimental in-class programme, which will run for 4 of the 6 weeks that observations are taking place. This will require 2 half-hour sessions per week, during which time I would come to the class and run activities with the students. The sessions are designed for students in Years 1 and 2, and are fun and age-appropriate, involving activities such as reading stories, drawing pictures, and singing interactive songs. They are designed to encourage positive discussion of friendships with individuals with disabilities, and to facilitate friendships between all students in the class. Upon programme completion, we will ask the teacher and students for feedback about their experience in the form of brief questionnaires (a rating form for teachers, and a colour-in response format for children). As stated above, school policy will be followed at all times.

The nature of this research means that it is considered confidential but not anonymous; due to the small Down syndrome community in Christchurch it may be possible for participants to be identified. I will take particular care to ensure the confidentiality of all data gathered for this study, with all data being de-identified and referred to solely by number. Data will be stored in password protected facilities and locked storage at the University of Canterbury. Raw data will be destroyed after 5 years.

Please note that participation in this study is voluntary. If you do allow this study to proceed, you have the right to withdraw the school, staff, and students from the study at any time. If you withdraw participants, I will do my best to remove any information relating to the school/staff and students, provided this is practically achievable.

All participants will receive a report on the study. The results of this study will be published in a Master's thesis, which will become a public document on the University of Canterbury's library website. The results of this study will be published in a Master's thesis, which will become a public document on the University of Canterbury's library website. The results of this project may be used in a conference presentation and/or published articles. If you have any questions about the study, please contact me or my senior supervisor, Dr. Anne van Bysterveldt.

Complaints about the study may be directed to the Chair, Educational Research Human Ethics Committee, University of Canterbury, Private Bag 4800, Christchurch or email: human-ethics@canterbury.ac.nz.

If you agree for this study to proceed, please complete the attached consent form and return as per the instructions on the consent form.

Thank you for considering participating in this research.

Yours sincerely,

Meagan Davies

E. 3. Consent Form for School Principal

Telephone:

Email:

Date:



The effects of an intervention designed to increase typical peer interactions for children with Down syndrome

Declaration of Consent- School Principal

☐ I have read and understood the description of the above named project. On this basis I agree for the school to participate.

☐ I understand that letting my staff and students participate in this study is voluntary and that I may withdraw them at any stage without penalty.

☐ I understand that any information or opinions provided will be kept confidential to the researcher and that any published or reported results will not identify the school, teachers, or students.

☐ I understand that the nature of the research and the small Down syndrome community in Christchurch may mean it is possible for participants to be identified.

☐ I understand that all data collected for this study will be kept in locked and secure facilities at the University of Canterbury, and will be destroyed after five years.

☐ I understand that I will receive a report on the findings of this study. I have provided my email details below for this.

☐ I understand that the results of this research will be published in a thesis which will become a public document on the University of Canterbury library website. I understand that results may be used in a conference presentation and/or published articles.

☐ I understand that if I require further information I can contact the researcher, Meagan Davies, or her senior supervisor, Anne van Bysterveldt

By signing below, I agree for this research project to occur in my school.

Name: _____

Date: _____

Signature: _____

Email Address: _____

Please complete this consent form and return by scanning and emailing to xxxxx or post to Meagan Davies at the following address xxxxx.

APPENDIX F: Forms for Classroom Teachers

F. 1. Control Group Information Sheet for Teachers

Telephone:

Email:

Date:



The effects of an intervention designed to increase typical peer interactions for children with Down syndrome

Information Sheet for Teacher – Control Group

My name is Meagan Davies, and I am currently completing my Master of Arts through the University of Canterbury. My Master's thesis involves a research project investigating the play skills and attitudes of children with disabilities and their peers, and I would like to invite your class to participate.

The purpose of this project is to gather information about how children in mainstream classrooms interact with their peers who have Down syndrome. Specifically, we would like to examine children's attitudes towards their peers with Down syndrome, as the evidence suggests that young children are welcoming of children with special education needs. We are aiming to find out how young children include their peers so that we can use this knowledge to help other children with special education needs to be included. We would also like to investigate whether an experimental programme addressing the attitudes and social skills of a mainstream class can potentially facilitate the inclusion of students with special education needs. To do this, we will run the programme in two classrooms. Children in a third classroom will have the opportunity to contribute to our information about attitudes, to continue with their regular classroom programme and not participate in any intervention. We will then compare the information we collect about attitudes across the three classrooms. We would like to invite your classroom to participate by providing information about attitudes and to continue with the regular classroom programme.

Participation in this project will involve:

- Audio and video recording of peer and teacher interactions in the playground and classroom during a six week period
- Teachers completing a brief semi-structured interview on inclusion, and a rating form on one child's social skills
- Children completing a form about their attitudes towards children with disabilities

The video recording of the class is so that we can examine the interactions between a child with special education needs and their teacher and/or teacher aide, and their peers. The children will be asked to wear a coloured wristband when observations are being undertaken, in order to easily identify those participating in the study. These observations will occur for approximately 15 minutes, up to three times a week in the playground, and up to three times a week in the classroom. The observations will run for approximately 6 weeks, and are designed to fit into the classroom's everyday schedule, so it is expected that the school day will carry on as usual.

The video recording will also not impact the children's play on the playground. However, should there be any foreseeable risks on the playground related to a health and safety matter, I will intervene immediately and inform staff straight away. I will also follow school policy at all times while in the classroom and playground.

With parental permission, we will also ask the children to fill out a questionnaire about being friends with children with disabilities. We would ask them to do this a total of 3 times over 6 weeks, so we can see if they change their minds at any point. This involves us reading some questions aloud and your child colouring in a smiley face to respond, and it will not have a large impact on their class or play time.

We will ask you to complete a brief semi-structured interview covering your views on inclusive education at a time which is convenient for you, both at the start and end of the 6 week period we are at your school. We will record the audio from these interviews so that we can transcribe your responses and provide a transcript for you to review your responses and make any changes. We will also ask you to complete a form rating the focus child's social skills at 3 points during the 6 week period so that we can see any change in their skills. Again, this can be completed at a time convenient for you.

The nature of this research means that it is considered confidential but not anonymous; due to the small Down syndrome community in Christchurch it may be possible for participants to be identified. I will take particular care to ensure the confidentiality of all data gathered for this study, with all data being de-identified and referred to solely by number. Data will be stored in password protected facilities and locked storage at the University of Canterbury. Raw data will be destroyed after 5 years.

Please note that participation in this study is voluntary. If you do participate, you have the right to withdraw from the study at any time. If you withdraw, I will do my best to remove any information relating to you, provided this is practically achievable.

All participants will receive a report on the study. The results of this project may be used in a conference presentation and/or published articles. If you have any questions about the study, please contact me or my senior supervisor, Dr. Anne van Bysterveldt.

Complaints about the study may be directed to the Chair, Educational Research Human Ethics Committee, University of Canterbury, Private Bag 4800, Christchurch or email: human-ethics@canterbury.ac.nz.

If you agree to participate, please complete the attached consent form and return as per the instructions on the consent form.

Thank you for considering participating in this research.

Yours sincerely,

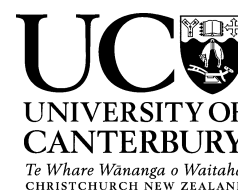
Meagan Davies

F. 2. Intervention Group Information Sheet for Teacher

Telephone:

Email:

Date:



The effects of an intervention designed to increase typical peer interactions for children with Down syndrome

Information Sheet for Teacher – Experimental Groups

My name is Meagan Davies, and I am currently completing my Master of Arts through the University of Canterbury. My Master's thesis involves a research project investigating the play skills and attitudes of children with disabilities and their peers, and I would like to invite your class to participate.

The purpose of this project is to gather information about how children in mainstream classrooms interact with their peers who have Down syndrome. Specifically, we would like to examine children's attitudes towards their peers with Down syndrome, as the evidence suggests that young children are welcoming of children with special education needs. We are aiming to find out how young children include their peers so that we can use this knowledge to help other children with special education needs to be included. We would also like to investigate whether an experimental programme addressing the attitudes and social skills of a mainstream class can potentially facilitate the inclusion of students with special education needs. To do this, we will run the programme in two classrooms. Children in a third classroom will have the opportunity to contribute to our information about attitudes, to continue with their regular classroom programme and not participate in any intervention. We will then compare the information we collect about attitudes across the three classrooms. We would like to invite your school to participate by providing information about attitudes and to receive the experimental programme.

Participation in this project will involve:

- Audio and video recording of peer and teacher interactions in the playground and classroom pre-, during, and post-intervention
- You completing a brief semi-structured interview on inclusion, and a rating form on one child's social skills
- Children completing a form about their attitudes towards children with disabilities
- Participation in an experimental programme which takes place during normal class time.

The video recording of the class is so that we can examine the interactions between a child with special education needs and their teacher and/or teacher aide, and their peers. The children will be asked to wear a coloured wristband when observations are being undertaken, in order to easily identify those participating in the study. These observations will occur for approximately 15 minutes, up to three times a week in the playground, and up to three times a week in the classroom. The observations will run for approximately 6 weeks, and are designed to fit into the classroom's everyday schedule, so it is expected that the school day will carry on as usual. The video recording will also not impact the children's play on the playground. However, should there be any foreseeable risks on the playground related to a health and safety matter, I will intervene immediately and inform staff straight away. I will also follow school policy at all times while in the classroom and playground.

With parental permission, we will also ask the children to fill out a questionnaire about being friends with children with disabilities. We would ask them to do this a total of 3 times over 6 weeks, so we can see if they change their minds at any point. This involves us reading some questions aloud and the

children colouring in a smiley face to respond, and it will not have a large impact on their class or play time.

We will ask you to complete a brief semi-structured interview covering your views on inclusive education at a time which is convenient for you, both at the start and end of the 6 week period we are at your school. We will record the audio from these interviews so that we can transcribe your responses and provide a transcript for you to review your responses and make any changes. We will also ask you to complete a form rating the focus child's social skills at 3 points during the 6 week period so that we can see any change in their skills. Again, this can be completed at a time convenient for you.

The research project also includes an experimental in-class programme, which will run for 4 of the 6 weeks that observations are taking place. This will require 2 half-hour sessions per week, during which time I would come to the class and run activities with the students. The sessions are designed for students in Years 1 and 2, and are fun and age-appropriate, involving activities such as reading stories, drawing pictures, and singing interactive songs. They are designed to encourage positive discussion of friendships with individuals with disabilities, and to facilitate friendships between all students in the class. Upon programme completion, we will ask you and your students for feedback about your experience in the form of brief questionnaires (a rating form for you, and a colour-in response format for the students). As stated above, school policy will be followed at all times.

The nature of this research means that it is considered confidential but not anonymous; due to the small Down syndrome community in Christchurch it may be possible for participants to be identified. I will take particular care to ensure the confidentiality of all data gathered for this study, with all data being de-identified and referred to solely by number. Data will be stored in password protected facilities and locked storage at the University of Canterbury. Raw data will be destroyed after 5 years.

Please note that participation in this study is voluntary. If you do participate, you have the right to withdraw from the study at any time. If you do withdraw, I will do my best to remove any information relating to you, provided this is practically achievable.

All participants will receive a report on the study. The results of this study will be published in a Master's thesis, which will become a public document on the University of Canterbury's library website. The results of this project may be used in a conference presentation and/or published articles. If you have any questions about the study, please contact me or my senior supervisor, Dr. Anne van Bysterveldt.

Complaints about the study may be directed to the Chair, Educational Research Human Ethics Committee, University of Canterbury, Private Bag 4800, Christchurch or email: human-ethics@canterbury.ac.nz.

If you agree for this study to proceed, please complete the attached consent form and return as per the instructions on the consent form.

Thank you for considering participating in this research.

Yours sincerely,

Meagan Davies

F. 3. Consent Form for Teacher

Telephone:

Email:

Date:



The effects of an intervention designed to increase typical peer interactions for children with Down syndrome

Declaration of Consent to Participate – Teacher

☐ I have read and understood the description of the above named project. On this basis I agree to participate.

☐ I understand that my participation is voluntary and that I may withdraw from the project at any stage without penalty.

☐ I understand that any information or opinions I provide will be kept confidential to the researcher and that any published or reported results will not identify me, the school, or my students.

☐ I understand that the nature of the research and the small Down syndrome community in Christchurch may mean it is possible for students to be identified.

☐ I understand that all data collected for this study will be kept in locked and secure facilities at the University of Canterbury, and will be destroyed after five years.

☐ I understand that students in my class and I will be audio and videotaped for this project.

☐ I understand that I will receive a report on the findings of this study. I have provided my email details below for this.

☐ I understand that the results of this research will be published in a thesis which will become a public document on the University of Canterbury library website. I understand that results may be used in a conference presentation and/or published articles.

☐ I understand that if I require further information I can contact the researcher, Meagan Davies, or her senior supervisor, Anne van Bysterveldt.

By signing below, I agree to participate in this research project

Name: _____

Date: _____

Signature: _____

Email Address: _____

Please complete this consent form and return by scanning and emailing to xxxxx or post to Meagan Davies at the following address xxxxx.

APPENDIX G: Forms for Peers of Focus Children

G. 1. Control Group Information Sheet for Peers

Telephone:

Email:

Date:



The effects of an intervention designed to increase typical peer interactions for children with Down syndrome

Information Sheet for Peer in Control Group (for the parent/caregiver to read to the child)

Meagan is doing a project at the university. She is going to work with you and your teacher to find out how your class makes friends at school.

Meagan is going to watch your class play at school over a few weeks, and she will take some notes about what you do and how you do it. To help her remember what happens she will record what you all say with a video camera. This means you might end up on video! While she is recording, Meagan will ask you to wear a coloured wristband so that she can check who is being videoed. Meagan will keep all of this information locked away in a safe cupboard where no one else can see it.

Meagan will also talk with your teacher to see what they think about how your class makes friends. If you and your parent/caregiver agree, Meagan will ask you some questions about who you like to be friends with. She will also ask some of the other children in your class to answer some questions about who they like to be friends with.

You will be given a secret code-name so that no one will know your real name. We will also give your teacher and class secret names so that no one knows who they are either.

Your teacher has also been asked to help Meagan. If you have any questions you can ask your parent/caregiver or your teacher. If you change your mind about being in the project, that's fine too. All you have to do is tell your parent/caregiver.

Thank you for reading about my project, let me know if you would like to help!

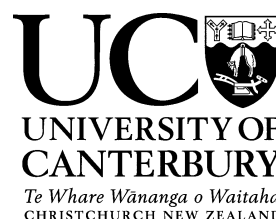
Meagan.

G. 2. Intervention Group Information Sheet for Peers of Focus Children

Telephone:

Email:

Date:



The effects of an intervention designed to increase typical peer interactions for children with Down syndrome

Information Sheet for Peer in the Experimental Group (for the parent/caregiver to read to the child)

Meagan is doing a project at the university. She is going to work with you and your teacher to find out how your class makes friends at school.

Meagan is going to watch your class play at school over a few weeks, and she will take some notes about what you do and how you do it. To help her remember what happens she will record what you all say with a video camera. This means you might end up on video! While she is recording, Meagan will ask you to wear a coloured wristband so she can check who is being videoed. Meagan will keep all of this information locked away in a safe cupboard where no one else can see it.

Meagan will also talk with your teacher to see what they think about how your class makes friends. If you and your parent/caregiver agree, Meagan will ask you some questions about who you like to be friends with. She will also ask some of the other children in your class to answer some questions about who they like to be friends with.

After she has talked to your teacher, Meagan will come to your class to do some fun activities with your whole class. This will help you and your class to learn more about being good friends. At the end, Meagan will ask you how much you liked the activities.

You will be given a secret code-name so that no one will know your real name. We will also give your teacher and class secret names so that no one knows who they are either.

Your teacher has also been asked to help Meagan. If you have any questions you can ask your parent/caregiver or your teacher. If you change your mind about being in the project, that's fine too. All you have to do is tell your parent/caregiver.

Thank you for reading about my project, let me know if you would like to help!

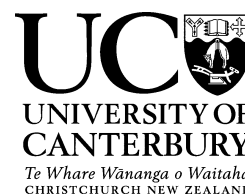
Meagan.

G. 3. Assent Form for Peers

Telephone:

Email:

Date:



The effects of an intervention designed to increase typical peer interactions for children with Down syndrome

Child's Assent Form

I know that:

- ☐ I have been asked to help out with a research project
- ☐ Meagan will come to my school and watch how my classmates talk to each other
- ☐ I may be audio and videotaped
- ☐ Meagan will ask me to answer some questions about who I like to be friends with
- ☐ I will get a secret code name so no one will know who I am
- ☐ I can change my mind about helping with the research project, and no one will be angry
- ☐ If I have any questions I can ask my parents or teacher
- ☐ My parents will get a summary of the project when it is finished

I have read (or had read to me) the information sheet that explains the project and I understand it. I agree to help Meagan with her project.

My signature (name or happy face) _____

The date _____

My full name _____

Parent/Guardian _____

The date _____

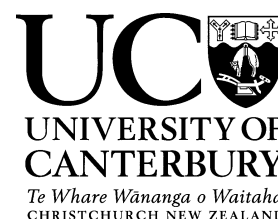
APPENDIX H: Forms for Peers' Parent/Caregiver

H. 1. Control Group Information Form for Peers' Parent/Caregiver

Telephone:

Email:

Date:



The effects of an intervention designed to increase typical peer interactions for children with Down syndrome

Information Sheet for Parent/Caregiver – Control Group

My name is Meagan Davies, and I am currently completing my Master of Arts through the University of Canterbury. My Master's thesis involves a research project investigating the play skills and attitudes of children with disabilities and their peers, and I would like to invite your child to participate.

The purpose of this project is to gather information about how children in mainstream classrooms interact with their peers who have Down syndrome. Specifically, we would like to examine children's attitudes towards their peers with Down syndrome, as the evidence suggests that young children are welcoming of children with special education needs. We are aiming to find out how young children include their peers so that we can use this knowledge to help other children with special education needs to be included. We would also like to investigate whether an experimental programme addressing the attitudes and social skills of a mainstream class can potentially facilitate the inclusion of students with special education needs. To do this, we will run the programme in two classrooms. Children in a third classroom will have the opportunity to contribute to our information about attitudes, to continue with their regular classroom programme and not participate in any intervention. We will then compare the information we collect about attitudes across the three classrooms. We have invited your child's class to participate by providing information about attitudes and to continue with the regular classroom programme.

Participation in this project will involve:

- Audio and video recording of your child in their classroom and playground during a six week period
- Your child completing a questionnaire about being friends with children who have a disability

The video recording in this project will not be focused on your child – the recording is so that we can examine the interactions between a child with special education needs and their peers. As such, there is the potential for your child (as a peer) to be included in the recordings, particularly if they are friends with the focus child. If you do not give permission for your child to be recorded then we will provide them with a different coloured wristband than their peers so that we can ensure they are not included in any recordings. These observations will occur

for approximately 15 minutes, up to three times a week in the playground, and up to three times a week in the classroom. The observations will run for approximately 6 weeks, and are designed to fit into the classroom's everyday schedule, so it is expected that your child's day will carry on as usual. The video recording will also not impact the children's play on the playground. However, should there be any foreseeable risks on the playground related to a health and safety matter, I will intervene immediately and inform staff straight away. I will also follow school policy at all times while in the classroom and playground.

With your permission, we will also ask your child to fill out a questionnaire about being friends with children with disabilities. We would ask them to do this a total of 3 times over 6 weeks, so we can see if they change their minds at any point. This involves us reading some questions aloud and your child colouring in a smiley face to respond, and it will not have a large impact on their class or play time.

The nature of this research means that it is considered confidential but not anonymous; due to the small Down syndrome community in Christchurch it may be possible for participants to be identified. I will take particular care to ensure the confidentiality of all data gathered for this study, with all data being de-identified and referred to solely by number. Data will be stored in password protected facilities and locked storage at the University of Canterbury. Raw data will be destroyed after 5 years.

Please note that participation in this study is voluntary. If you do participate you have the right to:

- Withdraw from the study at any time. If you withdraw your child, I will do my best to remove any information relating to your child, provided this is practically achievable.
- Ask any questions about the study at any point during participation
- Provide information on the understanding that your child's name will not be used
- Be given a summary of the project's findings once it has concluded
-

All participants will receive a report on the study. The results of this study will be published in a Master's thesis, which will become a public document on the University of Canterbury's library website. The results of this project may be used in a conference presentation and/or published articles. If you have any questions about the study, please contact me or my senior supervisor, Dr. Anne van Bysterveldt.

Complaints about the study may be directed to the Chair, Educational Research Human Ethics Committee, University of Canterbury, Private Bag 4800, Christchurch or email: human-ethics@canterbury.ac.nz.

If you and your child are happy to participate please:

- Sign (name or smiley face!) the attached child consent form.
- Sign the attached parental consent form
- Return both forms to me as per the instructions on the consent form

Thank you for considering participating in this research.

Yours sincerely,

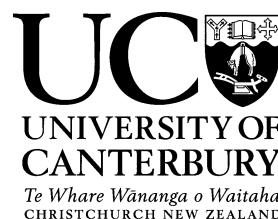
Meagan Davies

H. 2. Intervention Group Information Sheet for Peers' Parent/Caregiver

Telephone:

Email:

Date:



The effects of an intervention designed to increase typical peer interactions for children with Down syndrome

Information Sheet for Parent/Caregiver – Experimental Group

My name is Meagan Davies, and I am currently completing my Master of Arts through the University of Canterbury. My Master's thesis involves a research project investigating the play skills and attitudes of children with disabilities and their peers, and I would like to invite your child to participate.

The purpose of this project is to gather information about how children in mainstream classrooms interact with their peers who have Down syndrome. Specifically, we would like to examine children's attitudes towards their peers with Down syndrome, as the evidence suggests that young children are welcoming of children with special education needs. We are aiming to find out how young children include their peers so that we can use this knowledge to help other children with special education needs to be included. We would also like to investigate whether an experimental programme addressing the attitudes and social skills of a mainstream class can potentially facilitate the inclusion of students with special education needs. To do this, we will run the programme in two classrooms. Children in a third classroom will have the opportunity to contribute to our information about attitudes, to continue with their regular classroom programme and not participate in any intervention. We will then compare the information we collect about attitudes across the three classrooms. We would like to invite your school to participate by providing information about attitudes and to receive the experimental programme.

Participation in this project will involve:

- Audio and video recording of your child in their classroom and playground pre-, during, and post-intervention
- Your child completing a questionnaire about being friends with children who have a disability
- Your child's class participating in an experimental programme in their normal class time.

The video recording in this project will not be focused on your child – the recording is so that we can examine the interactions between a child with special education needs and their peers. As such, there is the potential for your child (as a peer) to be included in the recordings, particularly if they are friends with the focus child. If you do not give permission for your child to be recorded then we will provide them with a different coloured wristband than their peers so we can ensure they are not included in any recordings. These observations will occur for approximately 15 minutes, up to three times a week in the playground, and up to three times a week in the classroom. The observations will run for approximately 6 weeks, and are designed to fit into the classroom's everyday schedule, so it is expected that your child's day will carry on as usual. The video recording will also not impact the children's play on the playground. However, should there be any foreseeable risks on the playground related to a health and safety matter, I will intervene immediately and inform staff straight away. I will also follow school policy at all times while in the classroom and playground.

With your permission, we will also ask your child to fill out a questionnaire about being friends with children with disabilities. We would ask them to do this a total of 3 times over 6 weeks, so we can see if they change their minds at any point. This involves us reading some questions aloud and your child colouring in a smiley face to respond, and it will not have a large impact on their class or play time.

The research project also includes an experimental in-class programme, which will run for 4 of the 6 weeks that observations are taking place. The programme will require 2 half-hour sessions per week, during which time I would come to your child's class and run activities with the students. The sessions are designed for students in Years 1 and 2, and are fun and age-appropriate, involving activities such as reading stories, drawing pictures, and singing interactive songs. They are designed to encourage positive discussion of friendships with individuals with disabilities, and to facilitate friendships between all students in the class. Upon programme completion, we will ask your child's teacher and your child for feedback about their experience in the form of brief questionnaires (a rating form for teachers, and a colour-in response format for children). As stated above, school policy will be followed at all times.

The nature of this research means that it is considered confidential but not anonymous; due to the small Down syndrome community in Christchurch it may be possible for participants to be identified. I will take particular care to ensure the confidentiality of all data gathered for this study, with all data being de-identified and referred to solely by number. Data will be stored in password protected facilities and locked storage at the University of Canterbury. Raw data will be destroyed after 5 years.

Please note that participation in this study is voluntary. If you do participate you have the right to:

- Withdraw from the study at any time. If you withdraw your child, I will do my best to remove any information relating to your child, provided this is practically achievable.
- Ask any questions about the study at any point during participation
- Provide information on the understanding that your child's name will not be used
- Be given a summary of the project's findings once it has concluded
-

All participants will receive a report on the study. The results of this study will be published in a Master's thesis, which will become a public document on the University of Canterbury's library website. The results of this project may be used in a conference presentation and/or published articles. If you have any questions about the study, please contact me or my senior supervisor, Dr. Anne van Bysterveldt.

Complaints about the study may be directed to the Chair, Educational Research Human Ethics Committee, University of Canterbury, Private Bag 4800, Christchurch or human-ethics@canterbury.ac.nz.

If you and your child are happy to participate please:

- Sign (name or smiley face!) the attached child consent form
- Sign the attached parental consent form
- Return both forms to me as per the instructions on the consent form

Thank you for considering participating in this research.

Yours sincerely,

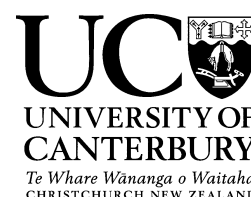
Meagan Davies

H. 3. Consent Form for Peers' Parent/Caregiver

Telephone: _____

Email: _____

Date: _____



The effects of an intervention designed to increase typical peer interactions for children with Down syndrome

Declaration of Consent to Participate - Parent

☐ I have read and understood the description of the above named project. On this basis I agree for _____ (insert child's name) to participate.

☐ I understand that my child's participation is voluntary and that they may withdraw at any time without penalty.

☐ I understand that any information or data my child provides will be kept confidential to the researchers and that any published or reported results will not identify my child.

☐ I understand that all data collected for this project will be kept in locked and secure facilities at the University of Canterbury and will be destroyed after five years.

☐ I understand that the results of this research will be published in a thesis which will become a public document on the University of Canterbury library website. I understand that results may be used in a conference presentation and/or published articles.

☐ I understand that my child may be audio and videotaped for this research.

☐ I understand that my child will be asked to answer some questions about potential friendships with children with disabilities.

☐ I understand that I will receive a report on the findings of this project. I have provided my email details below for this.

☐ I understand that if I require further information I can contact Meagan Davies or her senior supervisor, Anne van Bysterveldt.

By signing below, I agree for my student to participate in this research project.

Name: _____

Date: _____

Signature: _____

Email Address: _____

Please complete this consent form and return it with your child's consent form to their classroom teacher, or scan and email to xxxxx.

APPENDIX I: Forms for the Research Assistant

I. 1. Information Form for Research Assistant

Telephone:

Email:

Date:



The effects of an intervention designed to increase typical peer interactions for children with Down syndrome

Information Sheet – Postgraduate Research Assistant

My name is Meagan Davies, and I am currently completing my Master of Arts through the University of Canterbury. My Master's thesis involves a research project investigating the play skills and attitudes of children with disabilities and their peers.

The purpose of this project is to gather information about how children in mainstream classrooms interact with their peers who have Down syndrome. Specifically, we are examining children's attitudes towards their peers with Down syndrome, as the evidence suggests that young children are welcoming of children with special education needs. We are aiming to find out how young children include their peers so that we can use this knowledge to help other children with special education needs to be included. We are also investigating whether an experimental programme addressing the attitudes and social skills of a mainstream class can potentially facilitate the inclusion of students with special education needs. To do this, we will run the programme in two classrooms. Children in a third classroom will have the opportunity to contribute to our information about attitudes, to continue with their regular classroom programme and not participate in any intervention. We will then compare the information we collect about attitudes across the three classrooms.

I would like to invite you to help me with this project. This would involve the following:

- a) The coding of children's behaviour from video footage. The videos will be of the children working in their classroom and playing in their school playground. A behaviour rating scale will be used to code the child's interactions with their teacher and peers. All children will be wearing wristbands. One colour will be allocated to those children who have parental consent to be recorded. Children wearing a different coloured wristband do not have parental permission to be recorded, so you will not code any video segments where we have directed the camera away from these children. You will be trained to use the behaviour rating scale and will be able to record these interactions.
- b) As your coding will be used to calculate inter-rater reliability, you will only be required to code 20% of the videos. This will be approximately four 15 minute videos per week, for six weeks (i.e. approximately an hour of video to code each week).
- c) You will need to keep all information from this project confidential.

Participation in this study is voluntary and you can withdraw at any point with no consequences. All information will be kept in a locked file cabinet or in a password protected

document. All data will be destroyed five years after the study. You will not be identified in the project, unless you give permission.

You will receive a report on the study. The results of this study will be published in my Master's thesis, which will become a public document on the University of Canterbury's library website. The results of this project may be used in a conference presentation and/or published articles.

If you have any questions, please contact my supervisor, Anne van Bysterveldt, or myself. Complaints may be addressed to The Chair, Educational Research Human Ethics Committee, University of Canterbury, Private Bag 4800, Christchurch, or human-ethics@canterbury.ac.nz.

Thank you,
Meagan Davies

I. 2. Consent Form for Research Assistant

Telephone: _____

Email: _____

Date: _____



The effects of an intervention designed to increase typical peer interactions for children with Down syndrome

Research Assistant – Consent Form

☐ I have been given a full explanation of this project and have been given an opportunity to ask questions

☐ I understand what will be required of me if I agree to take part in this project

☐ I understand that I will be provided with training to undertake this position

☐ I understand that all information from the study needs to be kept confidential

☐ I understand that participating in this study is voluntary and that I may withdraw at any stage without penalty.

☐ I understand that any published or reported results will not identify me unless I give permission.

☐ I understand that all data collected for this study will be kept in locked and secure facilities at the University of Canterbury, and will be destroyed after five years.

☐ I understand that I will receive a report on the findings of this study. I have provided my email details below for this. The results of this research may be used in a conference presentation and/or published articles.

☐ I understand that if I require further information I can contact the researcher, Meagan Davies, or her senior supervisor, Anne van Bysterveldt.

☐ I understand that if I have any complaint, I can contact the Chair of the University of Canterbury Educational Research Human Ethics Committee.

By signing below, I agree to the above

Name: _____

Date: _____

Signature: _____

Email Address: _____

Please complete this consent form and return by scanning and emailing to xxxxx.

I. 3. Confidentiality Agreement Form for Research Assistant

Telephone:

Email:

Date:



The effects of an intervention designed to increase typical peer interactions for children with Down syndrome

Research Assistant – Confidentiality Agreement

This project is being undertaken for a Masters of Arts thesis. My supervisors are Anne van Bysterveldt and Gaye Tyler-Merrick. The purpose of this project is to gather information about how children in mainstream classrooms interact with their peers who have Down syndrome.

Your role will be to code video of the students interacting in both their classroom and their playground.

- ☐ I understand that all the material I will be asked to view and record is confidential.
- ☐ I understand that the contents of any forms, video files, audio files or interview notes can only be discussed with Meagan Davies or with her supervisors, Anne van Bysterveldt or Gaye Tyler-Merrick.
- ☐ I will store all relevant material securely while it is in my possession.
- ☐ I will delete all audio and video files off my computer after coding and/or transcription.
- ☐ I will not keep any copy of the information, nor allow third parties to access them.
- ☐ I understand that if I require further information I can contact Meagan Davies, or her senior supervisor Anne van Bysterveldt. If I have any complaints, I can contact the Chair of the UC Human Ethics Committee, University of Canterbury, Private Bag 4800, Christchurch or email: human-ethics@canterbury.ac.nz.

By signing below, I agree to the above conditions

Name: _____

Date: _____

Signature: _____

Please complete this consent form and return by scanning and emailing to xxxxx.

APPENDIX J: Recruitment Notice

Research Opportunity!

**Is your child:
Aged 5-7?
Attending a mainstream Canterbury school?**

In 2016 we will be running a study to see what we can learn about the friendships between children with Down syndrome and their peers.

This will include us observing how children in your child's class talk to each other, and may include an experimental programme we have designed to help children learn about making friends. It contains activities like reading, talking, drawing and singing and is for your child's whole class.

If you are interested in participating or would like more information please contact Meagan at:
XXXXXXXXXXXXXXXXXXXXXXX

This study has been approved by the University of Canterbury Human Ethics Committee and is part of a Master's thesis project



APPENDIX K: Acceptance Scale for Kindergarteners - Revised

K. 1. Acceptance Scale for Kindergarteners Questions

1. Would you like to be good friends with a kid who can't talk yet?
2. Would you like to be good friends with a kid who can't see?
3. Would you like to push a kid with a disability in a wheelchair?
4. Do you play with kids if they look different?
5. Would you play with a kid, if he couldn't walk?
6. Would you play with a kid, if he had a disability?
7. Have you helped someone who has a disability?
8. Would you still talk to a kid if they had a disability?
9. Would you like to play with a kid with a disability?
10. Do you have a friend with a disability?
11. Do you sometimes call kids names like "dumb"?
12. Do you play with someone who has a disability?
13. Have you ever talked to a kid with a disability?
14. Would you move to another chair if a kid with a disability sat next to you?
15. Would you like to be good friends with a kid who has a disability?
16. Are you sometimes mean to other kids?
17. Would you like to spend your morning tea with a kid who has a disability?
18. Do you sometimes pick on kids who are different?

K. 2. Acceptance Scale for Kindergarten Response Scale

Figure 1. ASK Response Form



APPENDIX L: Social Skills Improvement System – Teacher Rating Scale

Instructions: Please read each item and think about this student's behaviour during the past two months. Then, decide how often the child displays the behaviour.

If the student **never** displays the behaviour, select the **N**

If the student **seldom** displays the behaviour, select the **S**

If the student **often** displays the behaviour, select the **O**

If the student **almost always** displays the behaviour, select the **A**

Please also rate how important you think the behaviour is for success in your classroom

If you think the behaviour is **not important**, select the **N**

If you think the behaviour is **important**, select the **I**

If you think the behaviour is **critical**, select the **C**

Please mark every item. In some cases, you may not have observed this student perform a particular behaviour. If you are uncertain as your response to an item, give your best estimate. There are no right or wrong answers.

No.	Social Skills	How Often?				How Important?		
		N	S	O	A	N	I	C
1	Asks for help from adults	N	S	O	A	N	I	C
2	Follows your directions	N	S	O	A	N	I	C
3	Tries to comfort others	N	S	O	A	N	I	C
4	Says "please"	N	S	O	A	N	I	C
5	Questions rules that may be unfair	N	S	O	A	N	I	C
6	Is well-behaved when unsupervised	N	S	O	A	N	I	C
7	Completes tasks without bothering others	N	S	O	A	N	I	C
8	Forgives others	N	S	O	A	N	I	C
9	Makes friends easily	N	S	O	A	N	I	C
10	Responds well when others start a conversation or activity	N	S	O	A	N	I	C
11	Stands up for himself/herself when treated unfairly	N	S	O	A	N	I	C
12	Participates appropriately in class	N	S	O	A	N	I	C
13	Feels bad when others are sad	N	S	O	A	N	I	C
14	Speaks in appropriate tone of voice	N	S	O	A	N	I	C
15	Says when there is a problem	N	S	O	A	N	I	C
16	Takes responsibility for his/her own actions	N	S	O	A	N	I	C
17	Pays attention to your instructions	N	S	O	A	N	I	C

18	Shows kindness to others when they are upset	N	S	O	A	N	I	C
19	Interacts well with other children	N	S	O	A	N	I	C
20	Takes turns in conversations	N	S	O	A	N	I	C
21	Stays calm when teased	N	S	O	A	N	I	C
22	Acts responsibly when with others	N	S	O	A	N	I	C
23	Joins activities that have already started	N	S	O	A	N	I	C
24	Says “thank you”	N	S	O	A	N	I	C
25	Expresses feelings when wronged	N	S	O	A	N	I	C
26	Takes care when using other people’s things	N	S	O	A	N	I	C
27	Ignores classmates when they are distracting	N	S	O	A	N	I	C
28	Is nice to others when they are feeling bad	N	S	O	A	N	I	C
29	Invites others to join in activities	N	S	O	A	N	I	C
30	Makes eye contact when talking	N	S	O	A	N	I	C
31	Takes criticism without getting upset	N	S	O	A	N	I	C
32	Respects the property of others	N	S	O	A	N	I	C
33	Participates in games or group activities	N	S	O	A	N	I	C
34	Uses appropriate language when upset	N	S	O	A	N	I	C
35	Stands up for others who are treated unfairly	N	S	O	A	N	I	C
36	Resolves disagreements with you calmly	N	S	O	A	N	I	C
37	Follows classroom rules	N	S	O	A	N	I	C
38	Shows concern for others	N	S	O	A	N	I	C
39	Starts conversations with peers	N	S	O	A	N	I	C
40	Uses gestures or body appropriately with others	N	S	O	A	N	I	C
41	Responds appropriately when pushed or hit	N	S	O	A	N	I	C
42	Takes responsibility for part of group activity	N	S	O	A	N	I	C
43	Introduces himself/herself to others	N	S	O	A	N	I	C
44	Makes a compromise during a conflict	N	S	O	A	N	I	C
45	Says nice things about himself/herself without bragging	N	S	O	A	N	I	C
46	Stays calm when disagreeing with others	N	S	O	A	N	I	C

APPENDIX M: Classroom Observation Coding System

M. 1. Classroom Interaction Coding Sheet

Classroom Behavioural Coding System

During a set classroom time, the focus student's interactions with their teacher, teacher aide, and peers will be observed. Each interaction will be recorded on the classroom behavioural coding sheet below.

A new classroom observation form will be used for each session with the focus student. The date, time, and session number will be recorded at the top of the form, along with the student identifier, before observations begin.

Each student will be observed for 15 minutes, with the researcher keeping a distance of at least 2 metres from the focus student and their peers. This will ensure that the researcher does not intervene in normal classroom behaviours or interactions, and that academic work continues as usual.

Interaction Form:

- Interactions can be initiated by either the Focus Student (FS), Classroom Teacher (CT), a Peer (P), or Other (O) (classroom visitor, principal etc.).
- Interactions initiated by the Classroom Teacher or Visitor can be directed at either the Focus Student (FS) or the Whole Class (WC).
- The Focus Student may initiate interactions with either their Classroom Teacher, Peers (individual: Pi or a group: Pg), or a Visitor.

Academic Interaction: An interaction which pertains directly to the lesson content being covered in class, such as mathematics instructions, a discussion of a science topic, or reading aloud. Academic interactions can be instructional (e.g. Who can tell me what this shape is?) or non-instructional (e.g. You got 10 out of 10 on this maths test, awesome!).

Functional Interaction: An interaction which pertains to independent or community living, self-care, recreation, or personal safety. Interactions which may be academic and functional (e.g counting money) are coded as functional. Functional interactions can be instructional (e.g. First wash your hands, and then eat) or non-instructional (e.g. Do you need help tying your shoelaces?).

Behavioural Interaction: An interaction which refers to a student's behaviour. These are coded as *instructional* when the interaction emphasises teaching appropriate behavioural skills through explaining, describing, or questioning (e.g. It is important not to run with scissors because you might hurt somebody). The interaction is coded as *non-instructional* when the student's behaviour is modified through praise, reprimands, or redirections (e.g. I like the way you are sitting quietly at your desk today).

Social Interactions: An interaction which is either about, or encourages, socialising. These are deemed *instructional* when the student is given direct instruction on social or communication skills or when they are encouraged to socialise with another student (e.g. Why don't you go and say hello to Sarah?). Interactions which are general socialising are considered

non-instructional (e.g. Are you feeling happy today? Or I really love your t-shirt!). Social interaction may also include behaviours such as smiling, waving, or hand holding.

Procedural Interactions: An interaction which is related to routine activities or everyday classroom management, and which is not related to a student's individual behaviour (e.g. Please get out your writing books and a pencil).

Column 1: Identify who the initiator is – Focus Student, Peer, Classroom Teacher or Other.

Column 2: Identify who the initiator is attempting to interact with – The Focus Student can interact with their Classroom Teacher (CT), Peer (P) or Other (O). The Classroom Teacher can interact with the Focus Student (FS) or the Whole Class (WC). Peers and Visitors interact only with the Focus Student.

Column 3: If one or more peers are involved in the interaction, indicate whether they are Female (F), Male (M) or a Mixed Group (B).

Column 4: Circle the type of initiation from the focus student, classroom teacher, peer, or other. The type of initiation will be either academic (A), functional (F), behavioural (B), social (S), or procedural (P), as defined above.

Column 5: Circle the response back to the initiator from the focus student, classroom teacher, teacher aide, peer, or other. The response will be coded as either:

- **Appropriate Response (AR)** - the responder greets, questions, or otherwise interacts with the initiator.
- **Inappropriate Response (IR)** – the responder has a negative reaction to the initiator. This includes inappropriate communication such as swearing, name calling, or refusing to comply with a reasonable classroom request. It also includes physical aggression such as pushing, kicking, hitting, spitting, or throwing objects. This is also included if another student initiated the inappropriate interaction.
- **Redirect (R)** - the responder redirects the initiator to go and do something else. This can be observed as a verbal command e.g. “go away”, or “sit down”. It can also be observed through physical gestures, such as a finger pointing in another direction.
- **Ignore (I)** – The responder ignores the initiator and either looks or walks away.

Column 6: Circle the initiator's response back to the focus student, classroom teacher, teacher aide, peer, or other. The response will be coded as either:

- **Appropriate Response (AR)** - the individual positively interacts with the responder via verbal communication or physical gestures.
- **Inappropriate Response (IR)** – the individual has a negative reaction to the responder. This includes inappropriate communication such as swearing, name calling, or refusing to comply with a reasonable classroom request. It also includes physical aggression such as pushing, kicking, hitting, spitting, or throwing objects. This is also included if another student initiated the inappropriate interaction.
- **Redirect (R)** - the individual redirects the responder to go and do something else. This can be observed as a verbal command e.g. “go away”, or “sit down”. It can also be observed through physical gestures, such as a finger pointing in another direction.
- **Ignore (I)** – The individual ignores the responder and either looks or walks away.

Classroom Observation Sheet – Interactions

Date:

Start/end time:

Session Number:

Initiator	Initiate With	Gender	Initiation	Response	Response of Initiator
Focus Student	CT TA Pi Pg O	F M B	A F B S P	AR IR R I	AR IR R I
	CT TA Pi Pg O	F M B	A F B S P	AR IR R I	AR IR R I
	CT TA Pi Pg O	F M B	A F B S P	AR IR R I	AR IR R I
	CT TA Pi Pg O	F M B	A F B S P	AR IR R I	AR IR R I
	CT TA Pi Pg O	F M B	A F B S P	AR IR R I	AR IR R I
	CT TA Pi Pg O	F M B	A F B S P	AR IR R I	AR IR R I
	CT TA Pi Pg O	F M B	A F B S P	AR IR R I	AR IR R I
	CT TA Pi Pg O	F M B	A F B S P	AR IR R I	AR IR R I
Peer	FS	F M B	A F B S P	AR IR R I	AR IR R I
	FS	F M B	A F B S P	AR IR R I	AR IR R I
	FS	F M B	A F B S P	AR IR R I	AR IR R I
	FS	F M B	A F B S P	AR IR R I	AR IR R I
	FS	F M B	A F B S P	AR IR R I	AR IR R I
	FS	F M B	A F B S P	AR IR R I	AR IR R I
	FS	F M B	A F B S P	AR IR R I	AR IR R I
	FS	F M B	A F B S P	AR IR R I	AR IR R I
Classroom Teacher	FS WC		A F B S P	AR IR R I	AR IR R I
	FS WC		A F B S P	AR IR R I	AR IR R I
	FS WC		A F B S P	AR IR R I	AR IR R I
	FS WC		A F B S P	AR IR R I	AR IR R I
	FS WC		A F B S P	AR IR R I	AR IR R I
	FS WC		A F B S P	AR IR R I	AR IR R I
	FS WC		A F B S P	AR IR R I	AR IR R I
	FS WC		A F B S P	AR IR R I	AR IR R I
Other	FS		A F B S P	AR IR R I	AR IR R I
	FS		A F B S P	AR IR R I	AR IR R I
	FS		A F B S P	AR IR R I	AR IR R I
	FS		A F B S P	AR IR R I	AR IR R I
	FS		A F B S P	AR IR R I	AR IR R I
	FS		A F B S P	AR IR R I	AR IR R I

M. 2. Classroom Interaction Duration Recording Sheet

Classroom Duration Recording Form

This form is designed to record how long the focus student engages in each category of interaction during the classroom recording sessions.

Definitions:

Academic Interaction: An interaction which pertains directly to the lesson content being covered in class, such as mathematics instructions, a discussion of a science topic, or reading aloud. Academic interactions can be instructional (e.g. Who can tell me what this shape is?) or non-instructional (e.g. You got 10 out of 10 on this maths test, awesome!).

Functional Interaction: An interaction which pertains to independent or community living, self-care, recreation, or personal safety. Interactions which may be academic and functional (e.g counting money) are coded as functional. Functional interactions can be instructional (e.g. First wash your hands, and then eat) or non-instructional (e.g. Do you need help tying your shoelaces?).

Behavioural Interaction: An interaction which refers to a student's behaviour. These are coded as *instructional* when the interaction emphasises teaching appropriate behavioural skills through explaining, describing, or questioning (e.g. It is important not to run with scissors because you might hurt somebody). The interaction is coded as *non-instructional* when the student's behaviour is modified through praise, reprimands, or redirections (e.g. I like the way you are sitting quietly at your desk today).

Social Interactions: An interaction which is either about, or encourages, socialising. These are deemed *instructional* when the student is given direct instruction on social or communication skills or when they are encouraged to socialise with another student (e.g. Why don't you go and say hello to Sarah?). Interactions which are general socialising are considered *non-instructional* (e.g. Are you feeling happy today? Or I really love your t-shirt!). Social interaction may also include behaviours such as smiling, waving, or hand holding.

Procedural Interactions: An interaction which is related to routine activities or everyday classroom management, and which is not related to a student's individual behaviour (e.g. Please get out your writing books and a pencil).

Instructions:

Record how long each interaction lasts in the columns to the right of the definitions. For example, 30 seconds or 2 minutes and 5 seconds.

Playground Observation Sheet – Duration Recording

Date:

Start/end time:

Session number:

Student Interactions (Focus Student and their Peers)										
Academic										
Functional										
Behavioural										
Social										
Procedural										
Adult Interactions (Focus Student and Classroom Teacher)										
Academic										
Functional										
Behavioural										
Social										
Procedural										

APPENDIX N: Semi-Structured Teacher Interview

I would like to ask you some demographic questions, and questions about your teaching. If you don't want to answer any of them then that's okay, just let me know and we can move on.

Name:

School:

Gender: Female ☐ Male ☐

Could you tell me which of these age brackets you are in?

Age: 20-30 ☐ 31-40 ☐ 41-50 ☐ 51-60 ☐ 61-70 ☐ 71+ ☐

And could you tell me which ethnicity or ethnicities you primarily identify with?

1. How long have you been teaching?

2. Could you tell me a bit about why you chose to work as a teacher?

3a. Could you tell me what initial training you completed to be a teacher?

b) Is there any further professional development or training you have undertaken?

c) Can you think of any particular professional development you would like to take to further your skills?

4. What age groups have your students been?

5. Have you ever taught or included students with special education needs?

If yes:

a) What age were the special education needs students?

b) Could you tell me about the different types of special education needs children you have worked with? (A particular disorder, a wide range of disorders, learning difficulties)

6. Have you ever worked alongside a teacher aide?

a) If yes, what was your experience of that like? What did you view their role as being?

b) If not, would you be willing to work alongside a teacher aide? What would you view their role as being? (e.g. working with just one child, interacting with all students, helping form lesson plans etc.)

7. How confident do you (or would you) feel about working with students who have special education needs, on a scale of 1-5? With 1- not confident, and 5- very confident.

a) Could you tell me a bit more about why you feel like this? (all students or just one “type”, training, past students)

8. Could you tell me what the word inclusion means to you?

9. Can you tell me a about whether you think inclusion (or mainstreaming) can be successful? (How well does it work, is it beneficial for the students?)

10. If you were to have a student with special needs in your classroom, what are some strategies you can think of to help them be included with the other students?

11. Can you think of any strategies which might be helpful for including children with special education needs in the playground during morning tea/lunch time?

12. Are you aware of any children in the school (not in your class) who have a disability?

13. How do you think your current students would feel if a new student with disabilities joined your class? Do you think they would be welcoming?

14. Is there anything else you want to share with me about your views on inclusion?

APPENDIX O: Semi-Structured Parent Interview

Parent Questions

I'm just going to start by asking you some questions about yourselves, you don't have to answer if you don't want to, just let me know.

1. So, [Insert mother's name] would you mind telling me which of these age brackets you fall into?

>21 ☐ 21-30 ☐ 31-40 ☐ 41-50 ☐ 51-60 ☐ 61-70 ☐

2. Could you tell me what your occupation is?

3. And when did you leave school? Any training since then?

- ☐ Below 5th form
- ☐ 5th form (Year 11)
- ☐ 6th form (Year 12)
- ☐ 7th form (Year 13)
- ☐ Technical training
- ☐ Some university
- ☐ Bachelor's degree
- ☐ Postgraduate degree
- ☐ Other – *Please describe:*

4. Your turn [Insert father's name]. Could you tell me which of these age brackets you fall into?

>21 ☐ 21-30 ☐ 31-40 ☐ 41-50 ☐ 51-60 ☐ 61-70 ☐

5. And what is your occupation?

6. Could you tell me when you left school? Any training since then?

- ☐ Below 5th form
- ☐ 5th form (Year 11)
- ☐ 6th form (Year 12)
- ☐ 7th form (Year 13)
- ☐ Technical training
- ☐ Some university
- ☐ Bachelor's degree
- ☐ Postgraduate degree
- ☐ Other – *Please describe:*

Child Questions

Now we are going to move on to talking about [insert child's name]. Again, if you don't feel comfortable answering something then just let me know and we can move on.

Child's Name:

1. What is [child's name] date of birth?
2. Did [child's name] attend childcare, preschool, or kindergarten before school?

b) Can you tell me at what age they attended?

c) And how many hours do you think they probably spent there each week?

Age	Childcare/Preschool	Kindergarten
1 yr		
2 yrs		
3 yrs		
4 yrs		

3. Did [child's name] receive any specialist services through their childcare/preschool/kindergarten?

a) Can you tell me a bit more about the service? (When it was, how long it ran for, who was involved etc.?)

4. Has your child received any other early specialist services?

a) Can you tell me a bit more about this too? (When it was, is it ongoing, who was involved?)

5. So could you tell me about who [child's name] socialises with outside of their school? Do you go to church, or organise play dates or anything like that?

a) How often would you say this happens?

6. Could you tell me about [child's name] closest friend or friends? Either someone at their school or a child you know from elsewhere. (age, gender, favourite activities they do together)

7. So what drew you to the school you have chosen for [child's name] to attend?

a) Did you consider any other schools?

8. Does [child's name] have a diagnosis of any medical or psychological condition that it is important for us to know about? (e.g. epilepsy, autism, ADHD etc.)

9. Finally, can you think of anything else about [child's name] that might be useful for us to know?