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Faculty of Education

**The Attitudes of Students Towards People with Disabilities in
Integrated Environments in Singapore**

Abi Tan Guat Lan

**"This thesis is presented as part of the requirements for the
award of the Degree of Doctor of Philosophy of the
University of Wollongong"**

July 2009

ABSTRACT

This thesis examined the attitudes of regular students in Singapore towards peers with physical and sensory disabilities who were integrated into the mainstream classroom. The concept of integration impacting on the attitudinal development in this study is based on the socio-cultural perspectives of child development (Bronfenbrenner, 1989; Vygotsky, 1993) and the discourse of contact experience (Allport, 1954; Zajonc, 2001). Child development theorists advocate that children's learning requires support structures such as informed adults to guide learning and that development is intricately intertwined with the socio-cultural contexts. Alternatively, contact theory suggests that the contact experience has an inherent positive impact on attitudes and behaviour.

The 397 participants were grade 4 and grade 5 students from integrated and regular classes in integrated and regular schools in Singapore. Qualitative and quantitative methodologies were used to assess the attitudes of regular students in both integrated and regular classes towards people with disabilities. The participants completed a researcher-designed questionnaire, took part in focus group interviews and were observed in class. The integrated class teachers were also interviewed.

This study supported the conclusion that an integrated learning environment had a significant impact on regular students' attitudes towards people with disabilities. In the quantitative study, regular students in integrated classrooms were found to have negative attitudes towards peers who had a disability. On the other hand, students in regular classes were found to be generally more able to appreciate the strengths of people with disabilities. The findings challenged the 'contact model' that states that contacts with people with disabilities influence children's attitudes in a positive way.

The qualitative study highlighted the importance of the socio-cultural context and the quality of the contact experience in students' attitudes towards people with disabilities. It was found that contact which was supported by specific school and classroom programs at school and class level was associated with positive attitudes of regular students towards peers with disabilities. Such support programs promoted inclusive ideals, positive differentiation and provided opportunities for meaningful experiences. The study affirmed the significant role of the teacher in facilitating the positive contact experience. The integrated class with the teacher, who modelled positive communication that promoted acceptance and positive perception, was found to have more positive attitudes. The teachers in the integrated classes, where students' attitudes towards people with disabilities were found to be negative, were lacking in knowledge of special education and needed guidelines to intervene with their special needs students. This suggests that appropriately informed teaching practice that encourages social interaction among students could help reduce misunderstanding and stereotyping of people with disabilities.

The social-cultural contexts at a broader level were also examined in this research. It was found that societal aspirations for academic excellence had an impact on students. The students in this study displayed signs of being anxious over their academic performance being affected by the presence of peers with disabilities. Regular students perceived integration as acceptable only if it was not at the expense of their academic performance.

The findings of this study have significant implications for the future of integration in Singaporean schools and understanding the impact of integration on regular students. The study affirmed that positive integrated learning experiences articulated through supportive school cultures, effective classroom practice and enlightened teachers could affect regular students' attitudes towards people with disabilities in a positive way. However, an achievement-focused culture can impact on students' acceptance of people with disabilities. Achievement pressure experienced by regular students is entwined with societal values and this can challenge the potential outcomes of integration programs in the Singaporean context.

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Most of all, I thank God for His immense Grace and Love.

STATEMENT OF AUTHENTICATION

I, Abi Tan Guat Lan, declare that this thesis, submitted in fulfilment of the requirements for the award of degree of Doctor of Philosophy, in the Faculty of Education, University of Wollongong, is wholly my own work unless otherwise referenced or acknowledged. The document has not been submitted for qualification at any other academic institution.

Signed

Abi Tan Guat Lan

Date: 28 July 2009

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ABBREVIATIONS

ASD	Autism Spectrum Disorders
ADHD	Attention Deficit Hyperactive Disorder
PWD	People with a disability
SPED schools	Special education schools
VWO	Voluntary Welfare Organization

DEFINITIONS

General terms

Inclusion	Inclusion is a philosophical approach where schools make the commitment to include the students with disabilities and they adjust the school environment to meet the students' needs.
Integration	Integration refers the students with disabilities attending a regular school where the school feels that the students can participate in their curriculum, and expects them to fit into their existing system.

Terms used in the research

Integrated school	A school that had official record of students with a physical or sensory disability.
Regular school	A school that did not have official record of students with a physical or sensory disability.
Integrated class	A class in an integrated school that had at least one student who has a physical or sensory disability.
Regular class	A class that did not have any official records of having a student who had a physical or sensory disability. A regular class could be found in a regular school or an integrated school.
Group 1 participants	Students in integrated classes who had experienced at least four months of integrated classroom learning with a peer who has a physical or sensory disability. They were in designated schools that provided an integration program for students with a disability.
Group 2 participants	Students in integrated schools who were in classes that did not have students with a physical or sensory disability. They were in the same grade as Group 1 participants from the respective schools.
Group 3 participants	Students in regular schools who had no experience of integrated classroom or school experience of learning with students with a physical or sensory disability.

CHAPTER ONE

INTRODUCTION TO THE STUDY

1.1 Background

The approach to special education is intricately intertwined with the ideological and socio-cultural values of the society where it is situated (Katsiyannis, Yell & Bradley, 2001; Martin, Martin & Terman, 1996; Pfeiffer, 1993). In Singapore, the education for children with disabilities has always been perceived as distinct from mainstream education. Special education schools are run privately or by voluntary welfare organizations funded by the state (Ministry of Education Singapore, 2009a). In recent years children with disabilities in Singapore are being increasingly placed in mainstream primary schools as policy makers are encouraging an 'inclusion' model (Ministry of Education Singapore, 2007) to meet the needs of children with physical disabilities, sensory impairments and children with mild intellectual disabilities in regular schools.

In this thesis the term integration is used instead of inclusion to describe the current effort to place students in mainstream settings in Singapore. This is because although the Singapore school system provides institutional support that enables the inclusion of children with disabilities into the regular classroom, such as facilities for wheelchair access, the attempt to introduce the policy of inclusion is challenged by a mainstream curriculum that focuses on merit and achievement (Wong, Goh, Gopinathan & D'Rozario, 1998). A typical primary school class has a large number of students and the standard curriculum is demanding. Students are assessed regularly and they are also streamed into classes according to their academic ability,

which is highly dependent on their grades. All children, with or without disabilities, have to sit for a national examination at grade six to progress to secondary level. A student included into the regular school system has to meet the expectations of the system or the individual school. Thus, while the framework of inclusion of children with disabilities in schools in Singapore is articulated by clear goals and expectations and pragmatic policy changes, the inclusion model in Singapore is nevertheless closer to the integration model (Heng & Tam, 2006; Lim & Sang, 2000). Therefore in this study the term integration is used instead of inclusion.

Research indicated that integrated schooling for students with disabilities has the potential to enrich children's social experience and boost their cognitive and affective development (Pettigrew & Tropp, 2006, 2008). The integrated school environment also provides an experience which aids the development of positive attitudes among regular students. Contact theory suggests (Allport, 1954, 1979; Zajonc, 2001) that students in integrated classes have more opportunities to interact with peers with disabilities, which can lead to a better understanding, lessen prejudice and increase social acceptance of people with disabilities.

One of the most important factors for a successful integration program is the regular students' acceptance of, and attitudes, towards students with disabilities (Angelides & Aravi, 2006; Bricker, 1995; Ward, Center & Bochner, 1994). However, contemporary research shows that in some settings the placement of children with disabilities in regular classes does not guarantee their acceptance (Dixon, 2005; Idol, 2006). Researchers (Bronfenbrenner, 2004, Gindis, 2004, Vygotsky, 1993) elaborated that the social environment is a powerful selective force in child development and human relations and therefore plays an important role in attitudinal development.

Previous studies on children's attitudes towards peers with physical disabilities are inconclusive and somewhat controversial. Some research indicate that children's attitudes towards peers with physical disabilities tend to be negative (Abrams,

Jackson & St Claire, 1990; Nowiciki, 2007). However, other research provides evidence that regular children enrolled in an integrated schooling environment are accepting, and generally more aware of and responsive towards their peers with special needs (Diamond, 2001; Dyson, 2005; Favazza, Phillipsen & Kumar, 2000). Thus, the current research literature does not provide a clear answer as to whether placing children with disabilities in integrated settings achieves positive or negative outcomes for the regular students

In Singapore, the social ideology of meritocracy drives the education system (Bellows, 2009). Schools are concerned about raising standards, accountability and are preoccupied with the culture of performance. This preoccupation influences the placement of all students in the mainstream classrooms and challenges the conceptual model of integration. Therefore the Singapore integration experience presents an interesting case study of a society running a meritocratic approach towards regular education whilst at the same time aspiring towards an integrated approach to include students with disabilities.

This study begins with the premise that an inclusive social policy should consider the viewpoints of the regular students. The integrity of education should not be examined solely from the needs and outcomes of the children with disabilities. A fuller profile of the impact of integration that engages and considers the regular students' viewpoints would bring about a more robust and inclusive discussion process. It is the aim of this study to investigate how the attitudes of regular students in primary schools in a merit-based system such as Singapore are affected by the integration of peers with physical and sensory disabilities in their classrooms.

1.2 Statement of the Problem

Given the gap in the inclusion debate outlined in the previous section, the purpose of this current study was to investigate the impact of integration on regular students' attitudes towards students with physical and sensory disabilities.

The study aimed to identify the attitudes of regular students in integrated classes towards students with disabilities and to examine the factors that might have contributed to the development of such attitudes. In particular, it explored the differences between the attitudes of regular students from integrated classrooms and non-integrated classrooms and between the students from integrated schools and non-integrated schools. The model developed for the current research attempts to capture the multi-faceted nature of students' attitudes within a specific educational framework in the socio-cultural context of Singaporean schools. Drawing on a mixed-methods design, quantitative and qualitative methodologies drove the data collection and analysis of the findings.

1.3 The Aim of the Study and Research Questions

This study examined the attitudes of regular students in integrated environments towards people with disabilities and how these attitudes can be understood in relation to the dynamics of the socio-cultural context of the learning environment. The mixed methods approach was used to answer the two major research questions related to quantitative and qualitative study.

The main research questions were as follows:

- Are there differences among the attitudes of regular students towards people with disabilities in integrated and regular learning environments?

- How do the attitudes of regular students towards people with disabilities relate to the socio-cultural contexts of the learning environments?

A number of research questions relevant to quantitative and qualitative parts of the study were further drawn from these two main questions and are presented in Chapter Four and Chapter Five.

1.4 Significance of the Study

This research is significant in that it is a critical evaluation of integration and its effect on regular students in a meritocratic society. There has been no robust independent research study of the implementation of the integration model in Singapore (Heng & Tam, 2006, Lim & Sang, 2000). The study also adds to the literature on the inclusion debate as it addresses the impact of integration from the regular students' viewpoint.

1.5 Position of the Researcher

The 'insider' position of the researcher, who has worked as a teacher and administrator in Singaporean schools for more than 13 years, not only situates the findings of the study in relation to the context of participating schools, but also allows for generalisation to the larger social and cultural context of the Singaporean educational system. The findings derived from the viewpoints of regular children and teachers from integrated classes document the reality and the challenges of implementing integration in Singaporean primary schools. The insider's position of the researcher had major methodological implications for the study. The resolution of these implications contributed to the literature on insider's researcher methodology for the reflective practitioner.

1. 6 Approach and Theoretical Framework

The research is informed by Vygotsky's socio-cultural theory (Vygotsky, 1993) and Bronfenbrenner's ecological perspectives (1979) on child development. Their theories provided the socio-cultural framework to conceptualise the approach to the study and examine the attitudes of regular children towards people with disabilities. Both of these theories were used to illustrate the complexity of the interconnectedness of the environmental and the cultural elements embedded in the social experiences of every individual child.

This study is based on Vygotsky's view that the development of a person with disability largely depends on "the attitudes towards that person among the people around him[her]" (Yaroshevsky, 1989, p.107). Vygotsky suggested that special educators have to be at the forefront of the change of attitudes towards students with disabilities. Bronfenbrenner's ecological system (1979) was used to examine the dynamics between the child, the impact of the environment and the community and their influence on cognitive and affective development.

The study also draws theories on attitudes and intergroup contact theory to inform the impact of integration on regular students' attitudes and social acceptance of peers with disabilities (Allport, 1954, Pettigrew & Tropp, 2006, 2008; Wright, 1983, 1988; Zajonc, 2001). Wright's theory of spread indicated that misinformation may lead to distorted views and stereotyping of an 'outgroup'. Allport's contact hypothesis on the other hand, proposed that each contact dynamic facilitates learning and increases knowledge of the outgroup and thus lessens prejudice and increases social acceptance. Researchers also noted that well structured contact experience that reduces anxiety among the different groups is a significant factor that can facilitate positive contact outcomes (Pettigrew & Tropp, 2006, 2008).

The emphasis of the study was on the ‘real’ world of the school. The approach to researching the attitudes of regular children towards children with disabilities is based on the belief that the modality and quality of such attitudes are largely dependent on the social and cultural context in which the contact between regular children and children with disabilities is situated. The assumption was that the school provides the structure from which children learn about differences and diversity. Every classroom is a platform from which the formal and informal curriculum of civil rights can be acquired and internalised. Hence, the research had the potential to benefit other schools and systems embarking on integration programs.

1. 7 Brief Overview of the Method

The research participants comprised three groups of grade 4 and grade 5 students and their class teachers. One group of the students had peers with sensory and physical disabilities in their classes (labelled Group 1 in the study). The other two groups of students were taken from regular classes, one from integrated schools (Group 2) and the other from regular schools (Group 3). To address the aims of the investigation, the study was conducted in five schools, 10 classes and 397 students from regular and integrated schools. The structure of the data collection consisted of four interconnected parts: 1) scenario-based questionnaire; 2) focus group interview; 3) classroom observation and 4) teachers’ interview.

This study applied the sequential transformative mixed-methods approach (Creswell, 2009), which involved the quantitative phase first, being conducted to inform the subsequent qualitative phase. The initial quantitative component of the study utilized the examination of a large sample of integrated students and non-integrated students from integrated and regular schools. The sample size was designed so that reliable statistical and analytical generalisations could be made. This enhanced the validity of the findings (Collins, Onwuegbuzie & Jiao, 2007).

The quantitative instrument was a researcher-developed scenario-based questionnaire centred on local contexts and written in appropriate language for the intended participants. The objective of the self-completed questionnaire was to procure a source of data about participants' attitudes. The statistical evaluation of quantitative data analysis was supported by subsequent qualitative narrative inquiry.

The qualitative phase of the study utilised the quantitative sample to select participants for the focus group interviews. In addition, the qualitative study included integrated classroom observations and interviews with integrated class teachers. Together, the findings from both the quantitative and qualitative components answered the multilayered research questions (Creswell, 2009).

1.8 An Outline of the Thesis

Following this introductory chapter, Chapter Two reviews the literature related to the history of inclusion movement, the types of inclusion programs, the review of the Singapore special education program in mainstream settings and the literature relating to the study of attitudes (Wright, 1988) and contact theory (Allport, 1954, 1979; Zajonc, 2001). The review also includes an examination of Vygotsky (1993) and Bronfenbrenner's (1979, 1989) theories which provide an analytical lens to view the impact of integration based on socio-cultural approaches to understanding children's attitudes. The chapter also provides a closer examination of empirical research associated with integration and regular students' attitudes towards people with disabilities.

Chapter Three outlines a summary of the mixed-methods research design. It states the rationale for the mixed-methods approach, the theories and the conceptual model around which the instruments were constructed. It also describes the selection of the sample for both the pilot and main study. Further details of the research approach,

results and data analysis of the quantitative and qualitative components are presented in Chapter Four and Chapter Five.

Chapter Four provides a detailed description of the methodology of the quantitative study and the design of the quantitative instrument, the scenario-based questionnaire used. It reports on the findings of the quantitative study and the statistical tools and program used to validate, analyse and establish reliability measures of the data.

Chapter Five reports on the methodology and the findings of the qualitative study; covering the data from focus group interviews with student participants, classroom observations and interviews with teachers. It presents the qualitative data and describes its analysis.

The final chapter, Chapter Six, brings together the findings of the quantitative and qualitative studies. It provides a discussion of the implications of the study, integrating the diverse contexts that emerged in a discussion that challenges both the hypothesis and previous research findings. It highlights the critical reflection that identifies the strengths and boundaries of the study. The findings and their implications for educational practice and recommendation for extended research are addressed in this chapter, along with a summation of the research.

CHAPTER TWO

LITERATURE REVIEW

2.1 Introduction

The 20th century witnessed the growth of strong advocacy for the inclusion of children with disabilities in regular educational settings. Changes in legislation and policy have led to children with disabilities being placed in regular educational settings (Daniels & Garner, 1999; Foreman, 2007; Halpin, 1998; UNESCO, 1994b). Most educational systems in developed countries recognise the rights of children with disabilities to a quality education in inclusive settings, providing parents with the right to choose the educational placement for their children (Elkins, Van Kraayenoord, & Jobling, 2003; Fuchs & Fuchs, 1998; Head & Pirrie, 2007). However, not all countries embraced the inclusion paradigm consistently. Some countries provide a choice of settings that range from segregation to partial inclusion (Frolin, 2007; Kivirauma, Kiemela, & Rinne, 2006; Marchesi, 1986; Poon-McBrayer, 2004).

In Singapore, inclusion of children with disabilities into regular settings is not mandatory (Lim & Sang, 2000). Only students with mild special learning needs and/or physical disabilities and who are able to meet the academic standards of a regular class, are accepted into the regular system. The approach is an integration model whereby a child with a disability placed in a regular class is expected to complete the regular curriculum and undergo the same standard assessments as the regular students (Ministry of Education Singapore, 2009c). Although the number of placements has increased over the years, there are few studies and public reviews of

the effectiveness and outcomes of this integration model (Heng & Tam, 2006; Ministry of Education Singapore, 2005).

This chapter presents a justification for the need to examine the integration approach practised in primary schools in Singapore. It begins with the review of literature related to the historical perspectives of the inclusion paradigm, from segregation models to integration and full inclusion. It situates the Singapore approach towards education of children with disabilities, as an integration approach in regular schools. This is followed by an overview of the Singapore's national ideology of meritocracy and philosophy towards education. It explains the educational practice and the strategies applied to circumvent policy to accommodate demands for special education services. The factors that challenge the model adopted in Singapore are identified. Following this is an outline of the research perspectives which have informed this study, that is, Vygotsky's socio-cultural approach (1993) and Bronfenbrenner's ecological systems (1989). Various perspectives on attitudes and the social mechanisms that affect attitude formation are examined. The directions of the study are outlined based on the identified gap in literature.

2.2 The Development of Inclusive Movement

Throughout the nineteenth century, special education provision in developed countries was largely driven by private interest with some participation from communities and religious institutions (Martin, Martin, & Terman, 1996). The involvement of authorities in public special education provision was minimal and ad hoc. Care and services for people with disabilities were primarily based on the medical model, which saw the person as indistinguishable from the disorder. In most countries children with disabilities were either refused enrollment or inadequately served by regular schools (Winzer, 1993).

Traditionally, children with special educational needs and regular children were segregated. Children identified as having disabilities were placed in special schools or institutions, depending on the contemporary medical diagnosis of the type and/or degree of impairment. Segregated placement was supported by the principle of exclusivity, that is, they were different and thus were kept separated from typically developing children so that each could be served separately (Ofsted, 2004; Truscott, Cohen, Sams, Sanborn, & Frank, 2005).

The first signs of a major reorientation in education policy worldwide appeared in the immediate aftermath of the Second World War. In 1948, the United Nation's Universal Declaration of Human Rights enshrined that education was a basic human right and all children, including children with disabilities, had a right to education. From 1960s to 1970s, the Principle of Normalization (Wolfensberger, 1972), developed in Scandinavia, helped to raise awareness of Vygotsky's socio-cultural perspectives on education of the students with disabilities and the secondary cultural impairment that comes from being 'different' (Nirje, 1994).

The paradigm shift, brought about by Normalisation Principles, recognised that people with special needs had the right to lead 'normal' lives, including being part of a family, attending a local school, and holding a job in the community (Nirje, 1994). Wolfensberger (1972) applied the theory of Normalisation in Human Services in 1970s in Canada through the National Institute for Mental Retardation. Special educators began to envision a different approach to special education and were vocal about the discriminatory placement practice in regular education. Dunn (1968) was one of the early critics who challenged the objectives of segregation and disputed the impact of negative labels on children with intellectual disability. He called special educators to a collective sense of mission, and mainstream regular educators to recognise individual differences and argued for education of children with disabilities to be part of the regular education service. Together with the rise of the civil rights movement, reforms to educational services for children with disabilities

began to gain momentum throughout the UK, Europe, North America, Australia and other parts of the world (Ericsson, 1985).

In 1971, the United States of America led the trend with the drafting of a landmark congressional bill, Public Law 94-142 legislating public education provision for all children with disabilities (Martin et al., 1996; Winzer, 1993; Yell, 2004). The strong civil rights movement in the country at that time led to federal laws such as the Rehabilitation Act (Amendments of 1973) which outlawed discriminatory practices in public service. It was followed by a series of reinforcing mandates such as the Education for All Handicapped Children Act (EAHCA, 1975). The Act further required all public schools in USA to provide adequate services to every child diagnosed with a learning disability. By 1990, the EAHCA was re-named as the Individuals with Disabilities Education Act (1990) or IDEA. The reference to ‘handicapped children’ was removed to recognize that a disability condition should not lessen a person’s rights to equal opportunity. IDEA also focused on the removal of barriers and introduced the concept of Least Restrictive Environment (Martin et al., 1996). It became legally binding for schools to consider accessibility to equipment, personnel and a range of services as key factors of best practice of inclusion (Katsiyannis, Yell, & Bradley, 2001).

In 1989, a hundred and seventy-seven countries came together to ratify the UN Convention on the Rights of the Child which, among other things, stressed the child’s right to education (UNICEF, 2000). It was a milestone that committed all present to a shared belief on children’s rights on the basis of equal opportunity. UNICEF (2000) reported that most primary education systems worldwide have encoded into their national policy a commitment to develop children’s personality, talents and abilities to their fullest potential.

A report from the World Bank (UNESCO, 1994a) described the children with disabilities as ‘the forgotten children’, whose needs and rights have been overlooked in some societies. By 1993, the UN Standard Rules on Equalization of Opportunities

for Persons with Disabilities was drafted to address the rights of disabled people. The 1994 UNESCO's Salamanca Statement (UNESCO, 1994a, 1994b) was a milestone for the inclusion movement. National governments and international organizations concerned with education signed an agreement to a common set of principles, policy and practice in Special Needs Education. It promoted inclusion as the most efficient and cost-effective means of combating discriminatory attitudes, building inclusive society and achieving education for all (Daniels & Garner, 1999). The right of children with special needs to be included in mainstream education was hailed as a progressive social enterprise and many developed countries have since committed much effort and expenses to it (Forbes, 2006; Graham & Slee, 2008; Idol, 2006; Jill, 2003).

The supporters of inclusive education, championed its democratic principles as the best model to address the marginalization of children with disabilities. Inclusion lays emphasis on the need for the environment to accommodate to the students' needs. The discussion moved from the 'medical' label and functional characteristics of a person with a disability to a 'social' concept of disability. Inclusion in a supportive environment was also seen as a philosophical argument about societal values and respect for each other (Dixon, 2005). The contention is that the society creates discriminatory arrangements that do not adequately accommodate the needs of those with special needs (Low, 2006).

Inclusion is based on the philosophy that children with disabilities have the right to be meaningfully engaged in the mainstream community, together with the opportunities and responsibilities that it entails. Inclusion, unlike integration, is more than location. The inclusion principle calls for a Least Restrictive Environment (LRE) with accessibility to a range of services to facilitate and equip the child with a disability to work and learn with peers in the mainstream classrooms (Martin et al., 1996). The LRE concept focuses on meeting the challenges of typical class constraints such as class size, teachers' expertise and varieties of needs within the regular community. It calls for providing the child with a disability with the greatest

possible benefits from being part of the regular classroom. According to Fuchs and Fuchs (1998) an inclusive program enables the child with a disability to work on a standard curriculum but with significant adjustments made, so that he or she can learn and develop fully.

These UN declarations and state laws in North America had an impact on the special education approach in developed countries such as Australia. For example, in 1986, the Commonwealth Government passed the Disability Services Act (DSA) to set the standards for education provision for students with disabilities within all states and territories in Australia (Lindsay, 2008). It covered the provision of services, set standards for their delivery and provided for action against services that did not meet those standards. The Act advocated for the inclusion of people with disabilities into the community as an agreed upon policy. Another piece of important national legislation, the Disability Discrimination Act (DDA), was passed in 1992 to eliminate discrimination, promote recognition and acceptance of people with disability within the community. The DDA (1992) provided a framework to develop the Australian Disability Standards for Education (2005). It addressed enrolment, curriculum, and services issues with regard to education of children with a disability. The various states and territories also shared common goals for learning outcomes for children with disabilities. The Adelaide Declaration on National Goals for Schooling in the Twenty-First Century (2006), was a national statement that reinforced the national commitment to ensure that schooling would be socially just without discriminating against people with special needs.

However, some countries, such as Singapore do not have legislations such as DSA and DDA like in Australia. Singapore mainstream school system provides institutional support to include children with disabilities in the regular classroom, such as facilities for wheelchair access through an integration program. However, unlike the inclusion program in Australia, children with disabilities accepted into the regular system are expected to achieve the same learning outcomes as the regular students (Wong, Goh, Gopinathan, & D'Rozario, 1998).

The model of integration, which was proposed as a replacement for the segregated system has been controversial. Significant concerns relating to children's developmental and social outcomes being compromised by integration. Critics have argued that integration model is defective and flawed because traditional education practices are grafted onto integration program and all pupils are expected to accommodate the school's conditions (Rafferty, Boettcher, & Griffin, 2001; Ring & Travers, 2005; Scruggs & Mastropieri, 1996; Woolnough, 2004). As a result of these concerns and criticisms, integration came to be seen as a perfunctory means of addressing the educational needs of children with disabilities (Daniels, 2006; Head & Pirrie, 2007; Hunter & O'Connor, 2006).

2.2.1 Inclusion debate and practice in schools

The importance of the inclusion ideology as the key concept in special education was no longer in question because it was embedded in democratic discourse (Barrow, 2001; Daniels & Garner, 1999; Halpin, 1998; Hunter & O'Connor, 2006). However, researchers have highlighted that the existence of an inclusion discourse or even inclusion policies does not mean that inclusion functions in practice (Hegarty, 2001; Slee, 1997).

There are recurring dilemmas when it comes to the inclusion debate. Some researchers suggested that segregated settings for students with special needs were relevant and productive. They showed that special schools or classes had better support structures to meet the students' cognitive and psychological needs. (Head & Pirrie, 2007; Peetsma, Vergeer, Roeleveld, & Karsten, 2001). However, several major studies provided evidence that inclusion bring about cognitive as well as social benefits for pupils with disabilities (Baker, Wang, & Walberg, 1995; West, Houghton, Taylor, & Phua, 2004). Students with special needs in inclusive classes were found to perform better psychosocially as well as in cognitive tasks compared to students in segregated settings.

Although the ideology of inclusion as a basic right is grounded on sound ethical and moral principles, the provision of inclusive education for children with disabilities is one of the most challenging goals of our time (Cole, 1999; Forbes, 2006; Low, 2006; Woolnough, 2004). Educators and researchers are constantly re-examining, re-designing to improve the effectiveness of approaches towards educating children with disabilities. Critics have argued that there is a need to analyse special education in relation to the changing theories and issues of categorisation of schools for children with disabilities (Barrow, 2001; Daniels, 2006; Florian, 2005; Kenworthy & Whittaker, 2000). Opponents of each type of provision have repeatedly pointed to findings and ideological factors to support that each is not without its weaknesses while not disputing the strengths.

The rights-based ideology of inclusion inevitably encompasses political and social beliefs towards choice. Researchers have commented on the growing trend towards parents demanding more freedom to choose separate education settings and curricular content for their children (Forlin, 2007; Knight, 1999; Lim, Tan, & Quah, 2000; Pfeiffer, 1993). Studies conducted with parents, teachers and school administrators in countries such as Australia and Finland showed that parents opposed the eradication of special schools because they believed that segregation must remain an alternative for children with special needs (Kivirauma et al., 2006; Woolnough, 2004). In a study on Singaporean parents with children with disabilities, parents indicated that they believed that special school setting provided an enhanced and safer environment for children (Lim & Sang, 2000; Lim et al., 2000).

Some researchers commented on the lack of consensus among educators and their attitudes towards inclusive education (Heng & Tam, 2006; Knight, 1999; Oliveira, 2003; Ward et al., 1994). A review conducted in 1990s on the inclusion of children with disabilities into regular education in Australia (Gow, 1998) described the major organizational, legislative and technical difficulties. The findings suggested that implementation of inclusion depends on individual characteristics, early educational experiences, and the provision of support services in the schools. Other studies have

shown that currently, not all schools in Australia's states and territories take a strong position on full inclusion (Foreman, 2007). A policy of segregated settings for individuals with high support is still maintained because of demands from parents and the community.

A later study by Ward et al. (1994) found that there was very little support for the total inclusion of children with disabilities into regular classes by educators. Provision of resources was identified as one of the keys factors affecting teachers' attitudes towards inclusion. A study on teachers' attitudes in the United Arab Emirates also indicated that teachers were apprehensive about their roles in inclusive setting and their skills to meet the needs of students with disabilities (Bradshaw, Tennant, & Lydiatt, 2004). The researchers recommended that to bring about a successful special education program in the mainstream system, policy makers had to address the attitudes of teachers and their anxieties about inclusion.

Educational policies and systems, in the global context, are driven by the consensus of shared values and beliefs regarding education, the concepts of equity and the prevalent theories of disability. Special education policy must therefore be understood within socio-historical conditions because the dynamics of stakeholders with their vested interests must not be overlooked (Yell, 2004). For example, Gumpel and Awartani's (2003) analysis of comparative studies on the Israeli and Palestinian special education policies revealed that although both underwent reform and restructuring at the same time, yet the directions taken were very dissimilar. One was examining inclusive settings while the other was experimenting with different models of inclusive practices. Teachers of both countries also indicated that their social and professional roles were reflective of their geopolitical views and personal philosophies. One country's teachers perceived their professional role in the light of nation building and held strong altruistic belief to respond to the prevailing community treatment of people with disabilities. The other country's teachers were more concerned more about the ideology of equity and believed in the professional mandate to teach all children, with or without a disability. Therefore, it is important

that a study of any integration program must be understood within the social and cultural context of the society in which it is undertaken.

2.2.2 Summary and implications

The vision of equal educational opportunities for children with special needs emerged from the civil rights movement. It was driven by historic collective intergovernmental commitment and has led to changes in educational policy and legislation in many developed countries. These changes in education policy during the last decades had very significant consequences in the field of special education. .

Inclusion is the universal guiding philosophy in the development of policy and practice for educating students with disabilities. However, there are still problems in the implementation of inclusive practice. The initial optimism about inclusion has been followed with certain misgivings about transferring the concept to practice. Countries such as Singapore have also chosen to take a more conservative approach to inclusion.

The provision of inclusive education requires a paradigm shift. Every culture generates attitudes and beliefs about the value of inclusion and the importance of developing inclusive practices. The reforms and policy changes that have led to the merging of special education with the regular system have to be understood from the perspective of social movements in individual societies.

2.3 The Singapore Context

Singapore shares the UN's agreement to provide all children with a holistic education so as to develop their potential to the fullest. Singapore has a strong public education system, one that is recognized for producing high levels of achievement

(Ministry of Education Singapore, 2000). However, educating children with disabilities and special needs is conceived as distinct from regular education (Ministry of Education Singapore, 2009c). The general education system is perceived as an instrument to equip the people with skills in the pursuit of economic development, social stability and national identity. The social ideology is that education determines national growth and success (Tan, 1998). The official rhetoric is that manpower is the only resource available to the nation to propel economic development. Thus educational policies are dominated by pragmatism, appraised by accountability, performance and market relevance, in the context of globalization and the knowledge-based economy (Kong, 2004). Although there is a general commitment to promote equity, diversity and choice within the Singapore system, definition of these objectives and expectations are subject to interpretation (Lee, 2004; Lim & Sang, 2000; Loh, 2005; Ministry of Education Singapore, 2005, 2007).

2.3.1 Meritocracy ideology

Historically, the multicultural population of Singapore has compelled the government to adopt meritocracy as the national ideology that guides nation building (Moore, 2000). The education system has become the primary engine driving Singapore's meritocratic sorting process. It is responsible for identifying and rewarding talent, skills and know-how (Lim & Tan, 1999). The education system thus is an agent of social policy that has been designed to level the playing field and determine merit objectively (Ministry of Education, 2000). Standard national examinations are seen as a tool to determine opportunity for every child to succeed in school and in life. Starting in lower primary school, students are subjected to regular tests and examinations. Academic results have always been the yardstick used to measure performance and students are then subjected to a process of early streaming (Wong et al., 1998). Students in primary schools also sit for a national examination at the end of grade 6 (age 12) to gain promotion to secondary schools. Admission to prestigious secondary schools is largely based on academic results in reading and language expression, science and mathematics.

The learning culture is competitive and academic attainment is highly prized (Koh & Galloway, 2006). At the primary level, high academic achievement is the benchmark of success. Students in Singapore are also subjected to strong societal conditioning (Stiles, 2005). This has a strong impact on their attitudes towards work, family values and interpersonal relationships. The competitive attitudes towards academic performance in schools thus reflect the socio-cultural values of academic achievement.

The socio-cultural landscape in Singapore society is rapidly changing. Since the mid-nineties, globalisation and the effects of rapid urbanization have led to the growth in individualism. According to sociologists, socialisation in a urban society is characterized by relationships based on mutual choice (Duignan, 2005). People who are ‘different’ such as those who have disabilities are less likely to be ‘chosen’ by regular people to establish and develop relationships with (Daniels & Garner, 1999). This emerging social division could challenge any inclusion effort (Sharpe & Gopinathan, 2002).

The recent reforms in education have highlighted the move from the ‘efficiency-driven’ to ‘ability-driven’ education policy (Bokhorst-Heng, 2007; Gopinathan, Wong, & Tang, 2008; Ministry of Education Singapore, 2009a). Although the focus remains on managing high-ability groups, broad-based educational outcomes, technological skill formation and retaining high academic standards, there is recognition of the importance to support inclusion in the regular system.

2.3.2 Special education services in Singapore

In Singapore, the state system is not the main provider of education, training, consultative assistance, support and residential care for those with special needs and disabilities (Figure 2.1). Traditionally, special education was distinct from regular education. At present, Singapore does not have legislation relating to special educational needs or equal opportunities for children with disabilities within regular

school environments. The Compulsory Education Act (Ministry of Education Singapore, 2000) provides concessions for children with disabilities to be exempted from formal education. Children with severe needs have the option of being exempted from school to accommodate the ‘difficult circumstances’ they face in attending school on a daily basis.

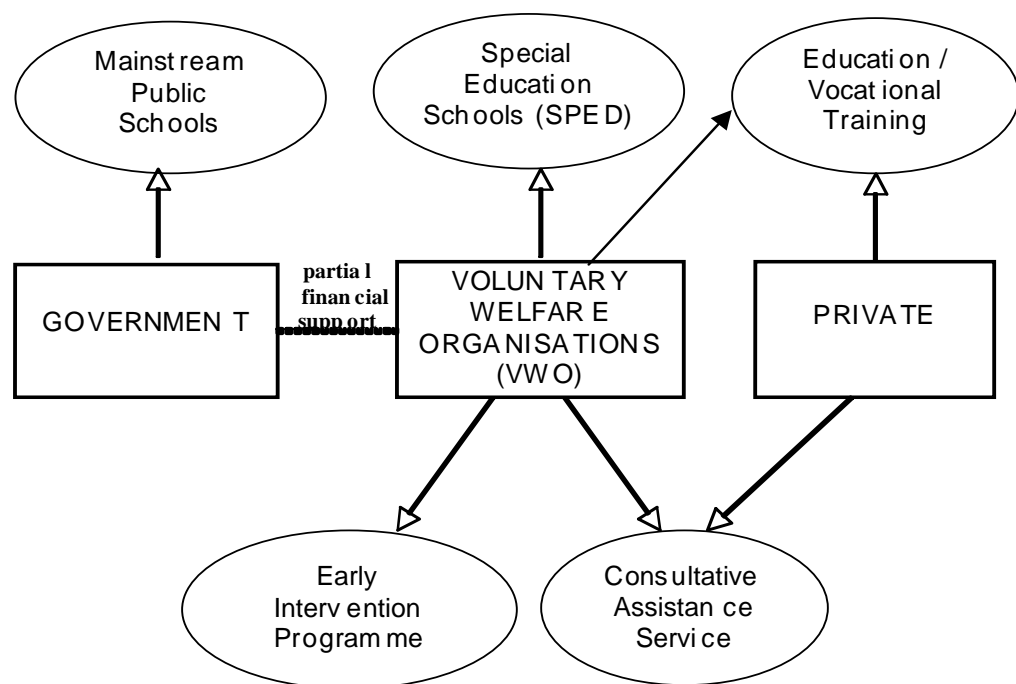


Figure 2.1 The types of education service providers for children with disabilities in Singapore

There is no official register in Singapore to monitor the welfare of children with special needs. It was estimated that there were approximately 4,800 children with severe disabilities in twenty-one special schools and about 4,000 children with mild to moderate disabilities in mainstream schools (Ministry of Education Singapore, 2007). The educational needs of these children are generally the responsibility of parents and families. Students with disabilities who receive education are likely to be

educated in segregated settings. This is driven by the belief that these students are much more able to develop to their full potential if they are supported by teachers who are trained to teach children with special needs¹, in an alternative and more protected system, where they can learn at their own pace (Lim & Sang, 2000).

Support services for people with special needs such as occupational and physical therapy and intervention programs are offered at hospitals and medical centres. Children with physical disabilities, sensory impairment or genetic disorders, who are diagnosed at an early age, are referred to designated hospitals for early intervention programs. Such arrangements not only make services less accessible to the students and families, but it also perpetuates the notion of biomedical defects and the perception of seeking treatment for a medical condition. Although private service providers and special education centres managed by various voluntary welfare organizations (VWO) also provide consultative services, they are costly and have long waiting lists.

Formal education of children with special needs is provided in special schools (SPED) run by VWOs or private service providers. The VWOs and special schools are partly funded by the government. There is a strong belief that VWOs are better suited to meet the needs of students with special needs rather than public schools as they have a strong sense of mission to provide for these children (Lim & Sang, 2000). The cost of special education is higher than regular education and the meeting the costs is the responsibility of the parents. Unlike public schools, these schools are located away from popular housing estates thus making them less accessible. There are also limited places in these special schools.

Special education schools may recommend that students transfer to a regular school when these students have been assessed as being able to cope academically in the mainstream system. 'Accidental' integration may also happen when parents enrol

¹ Teachers in special schools undergo different training from regular schools' teachers at the National Institute of Education.

their children with special needs into regular schools without reporting their special needs, either due to lack of knowledge or apprehension about labelling (Lim & Sang, 2000). In recent years, increased demand from parents has resulted in more children with mild intellectual disabilities, sensory impairments and genetic disorders being enrolled into mainstream public schools (Lim & Sang, 2000).

It is widely acknowledged that more can be done in the regular schools to accommodate students with special educational needs. At a Singapore conference on inclusion, academics pointed out that the education system is “10 years behind as far as inclusive education is concerned” (Loh, 2005, p. 1). The approach to integration of children with disabilities and special needs in the mainstream system in Singapore is more akin to a placement program with the students expected to adapt to the requirements of the regular curriculum.

Changes in legislation have also broadened the scope and move towards integration for a more inclusive and caring society (Lee, 2004). In 2006, a ministerial special task force was set up to improve the quality of education for children with special needs in special schools and regular schools (Ministry of Education Singapore, 2007). With increasing awareness, allocation of resources and funding for special schools has increased. At the same time, more regular schools have been designated as integrated schools, fitted with facilities such as lifts, ramps and toilets designed for students with physical disabilities. However, there are inherent factors within the social, physical and organizational structure of regular schools that challenge the integration model (Heng & Tam, 2006; Lim & Tan, 1999; Wong et al., 1998).

2.3.3 Factors that challenge the integration effort in Singapore

A study of Singaporean parents' perspectives on curriculum choice for their children with disabilities indicated that most parents lack awareness of their children's disability level and their needs (Lim et al., 2000). Parents were found to have a 'static' view of their children's learning needs and considered them as not being

capable of independent functioning. The researchers suggested that the phenomenon reflected the broader social perspectives, general understanding and attitudes towards people with disabilities. The researchers observed that people in the community do not have ongoing close personal contact with people with disabilities; as such there is weak public engagement in regard to the issues of equitable education for children with special needs and support for their families.

Overall, people with disabilities do not seem to have a strong representation in the community (Loh, 2005; Ow & Chua, 2005). The effort to include children with disabilities into regular schools is also sporadic and ad hoc (Loi, 2007). One of the challenges to integration in regular schools is the physical layout of schools in Singapore. Most primary schools are high-rise buildings of about five storeys with large enrolments, ranging from 2000-2500 students, with class sizes averaging 40. As such, the physical space within the school and classroom is limited. Also school hours and subjects are standardised. Schools follow a centralised rigorous curriculum with clearly defined learning outcomes. All children with or without disabilities in regular schools have to attain learning outcomes at a similar time (Wong et al., 1998). Student's achievements are evaluated and benchmarked by regular school-based assessments and national examinations (Lim & Tan, 1999; Ministry of Education Singapore, 2009b). The needs and challenges of educating all children, including those with disabilities, are seen as the responsibility of the class teachers, who are unlikely to be trained in special education.

In one survey of teacher education, it was found that both in-service and trainee teachers perceived special education as low on a teacher's hierarchy of professional importance. Teachers generally lacked the "basic knowledge of learners with special needs" (Heng & Tam, 2006, p.153). The study on behaviour management issues reported that teachers in integrated classrooms did not have an in-depth knowledge on how to identify and provide for a range of learning and behavioural needs. They were not able to exercise appropriate classroom management and intervention skills to guide learners with disabilities (Chen & Tan, 2006). Teachers described their

students with behavioural problems as unmotivated learners who suffered from a poor self-concept. In their appraisal of their personal classroom management strategies, they believed that the common ‘bad behaviour’ among their students was brought about by an inappropriate level of work, lack of clarity in instructions and inappropriate length of tasks that resulted in a loss of concentration.

Teachers were inclined to apply a one-size-fits-all model when it comes to planning, delivery and management in their classes. The researchers also noted that there was a “slavish adherence” (Heng & Tam, 2006, p. 152) to contemporary views of a progressive education approach among the teachers. For example, teachers in the study reported that they were preoccupied with the trends of creative teaching and incorporating ‘thinking skills’ into their lessons (Tan, 2006). They were found to be unable to apply sound pedagogy and practice to facilitate learning of students with special needs and disabilities.

2.3.4 Summary and implications

The evolution of special education from segregated settings to integration to full inclusion and the advocacy for rights to be able to choose placement has guided the changes in special education in developed countries. These policies are also having an impact on the current strategies to integrate children with disabilities in the Singaporean mainstream system.

As described in the previous sections, the integration approach in Singapore is challenged by several constraints. There is a gap in the discourse about the provision of educational programs for children with diverse needs in regular classrooms. The teachers in integrated classes have no extra personnel to support them. Previous research has found that teachers have limited understanding of their roles in special education (Heng & Tam, 2006; Chen & Tan, 2006). Their pedagogical knowledge was weak and they were not able to exercise appropriate classroom management and intervention skills to guide learners with disabilities. Therefore there is a need for a

critical analysis of the Singaporean schools, to review and evaluate the integration program and to understand the disparity between practice and ideology.

2.4 Theoretical Perspectives

The following section describes the various theories on child development, social referencing and attitudes theories which provided the theoretical framework to analyse the practice and the impact of the environment and the community in this study. The theoretical perspectives discussed are Vygotsky (1993) and Bronfenbrenner's child development theories (1989) and Allport's contact hypothesis (1954) and social theories of attitudes and attitudinal development (Dagnan et al, 1999; Will, 1981; Wright, 1983).

2.4.1 Vygotsky's socio-cultural theory and the inclusive environment

The development of a child, according to Vygotsky (1993), was both a natural and cultural process set within certain socio-cultural perspectives. Vygotsky's theory explained that children relate to the world through culturally and historically developed tools (Kozulin, 2004). Vygotsky's theoretical arguments were that the practice of institutional activities and cultural factors influence children's cognitive development and have an impact on a child's concept formation. These theoretical arguments provided a dynamic framework to examine the impact of integration on regular children's attitudes in the contexts of a regular school.

Vygotsky (1993) advocated that human development was a complex, socio-genetically driven process but that the common laws of child development apply to children with special needs. In his study of 'defectology' (Vygotsky, 1993) which refers to the study of children with special needs and their education in Russia during the early 1900s, he proposed that the notion of disability should be understood from socio-cultural developmental perspectives. According to Vygotsky, disability is a

social construct. He introduced the concepts of primary disability and secondary disability (Viktorija & Gediminas, 2004). Broadly, primary disability refers to the contemporary understanding of organic impairment that prevents one from mastering social skills and acquiring knowledge at the same rate as those without disabilities and in a form that is acceptable by society. The primary disability affects a child's interaction with people and thus alters the child's relationship with the world. A primary disability "leads to a restructuring of social relationships and to a displacement of all the systems of behaviour" (Vygotsky, 1993, p. 63). Primary disability is perceived as an abnormality only when and if it is brought into the social context.

By introducing the term secondary disability, Vygotsky's theory countered the consequences of the functional limitation of primary disability (Vygotsky, 1993). Secondary disability describes the distortion of higher psychological functions that arose when the primary impairment interacted within socio-cultural contexts. This conceptualisation showed that disability was not simply a medical issue.

The purpose of special education, therefore, was to compensate for the primary 'defects' through facilitating and strengthening intact psychological functions. It was essential that special educators help to prevent, correct, and rehabilitate secondary defects by psychological and pedagogical means. Vygotsky (1993) concluded that the impact of impairment on each individual thus varied in different cultural and social environments. The social milieu, values and the culture were barriers that prevented a child with a disability from accessing socio-cultural knowledge, experiences and the opportunity to establish successful social relationships.

From the socio-cultural perspective, the emphasis was on the social implications of the secondary disability more than the primary disability. It was the social implications of the organic impairment that resulted in distortions of the higher psychological functions (Daniels & Garner, 1999). Vygotsky suggested that divergence in cultural and natural development lead to social deprivation as society's

response to a child's organic impairment (Kozulin & Gindis, 2007). This in turn, adversely affected the whole developmental process and led to the emergence of delays and deficiencies in children's cognitive and socio-emotional development and academic achievements.

The essence of Vygotsky's findings was that the development of the child, with or without disabilities, was a series of qualitative transformations of internalizing culture through 'psychological tools' such as language and mediated support from adults which can be gained in an educational setting. Children's relationship with the people around them had a distinct impact on their development and their worldview. Therefore the development of a person with a disability largely depends on "the attitudes towards that person among the people around him[her]" (Yaroshevsky, 1989) and social mediation enables children to acquire ways of thinking and behaviour that make up a community's culture (Kozulin, Gindis, Ageyev, & Miller, 2004). Vygotsky emphasised the importance of creating an environment that encouraged socialisation of a child with his peers. In Vygotsky's theory, the 'collective' of an organized peer group was a powerful mediating factor that empowered children's learning. The focus of an inclusive paradigm is thus to increase the quantity and improve the quality of communication, and the social relationships with peers.

Vygotsky's theories on the quantitative and qualitative difference in child development also emphasised the importance of positive differentiation. A child with a disability had to be identified from a point of strength, not weakness, that is, to view overall independence and needs rather than levels of negative characteristics. The portrait of a child whose development was impeded by a disability, according to Vygotsky, had to be one that has developed differently, not less, than peers without a disability. The difference is quantitative and the development had major qualitative differences only in the internalisation of cultures (Vygotsky, 1993).

For Vygotsky, special educators have to be at the forefront of the change of attitudes towards students with disabilities (Kozulin & Gindis, 2007). A teacher has to take into account not just the bio-medical condition of the disability, but also mediate the conflict of expectations for the child with a disability and his peers without disabilities and the impact of integration in the school environment. Therefore, special educators have to focus on identifying the positive capacities and qualitative characteristics, and strengths of children with disabilities. Vygotsky (1993) argued that positive differentiation empowers children with disabilities and give them access to all the good things in regular education. He saw inclusion as a compensatory move that changed negative societal attitudes toward individuals with disabilities (Gindis, 2004).

Thus, Vygotsky's theories on the quantitative and qualitative difference of development provided an equitable structure for an inclusive environment for education of children with special needs. He identified that with proper assistance from adults using appropriate tools, children with special needs are capable of far more competent performance than traditionally expected. Teachers of children with special needs play a crucial role as adult mediators. They have to be suitably trained to facilitate learning to the next proximal level. Instruction in special education should follow the same principle as in general education, sharing the vision that education leads to learning and development for all.

Vygotsky's theoretical perspective towards educating children with a disability, challenged policy makers to create an inclusive environment, facilitated by an able adult mediator. The focus on positive differentiation helped to inform practice and policy to advocate change in attitudes towards interacting and connecting with students with disabilities (Dixon & Verenikina, 2007).

2.4.2 Bronfenbrenner's ecological systems and inclusive environment

While Vygotsky's theory of child development provided a framework to investigate

the social and cultural influences on integration, Bronfenbrenner's (1979) ecological systems theory presents a structure to examine the multi-level systems of child's interactions. The model demonstrates the relationships between the individual and the environment, and the synergy among events, environment and people as they impact upon each other.

For Bronfenbrenner, relationships and interactions between individuals and their environments are transactional and multidimensional (Bronfenbrenner, 1989). These transactions impact each interaction in a reciprocal and co-evolutionary way. Within each system there are a myriad of elements that influences the learning outcomes of a child, such as the child's personality traits and temperament and the beliefs and practices of the society he or she is in. The key elements of Bronfenbrenner's perspective provide insights into the understanding of the impact of the environment on the child's in an integrated classroom.

Bronfenbrenner (1979) examined multi-level systems by studying the various aspects of the environment beyond the immediate single social setting. The model challenged those concerned with the education of children with disabilities to look beyond the tensions of inclusion versus exclusion, special curriculum versus adapted curriculum, parent aspirations versus bureaucratic goals, or special education versus regular education. Based on the ecological systems model, there were four main systems of interactions that impact child development and the attitudes of regular children towards persons with disabilities. These are the microsystem, mesosystem, exosystem and macrosystem.

The theory states that opportunities to access each of these systems lead to more social knowledge for individuals (Bronfenbrenner, 2004). A child's actions, reactions, and interactions with others in the microsystem are determined by beliefs and social practices. The school setting is clearly the child's early microsystem for learning about the world. In school, a child learns to develop and practice trust and respect towards significant others.

A mesosystem interaction takes place when two or more interact. The quality of relationship between child and teachers and peers helps to develop positive personality and cultural mores. Based on the model, assumptions, beliefs and practices of the people who interact with the child in the micro- or mesosystem are influenced by factors in the exosystem. The disability discourse held by the people in the exosystem influences the integration paradigm. The macrosystem refers to the sphere of influence of the cultural values, the economy or the government of the society on the individuals. The impact of these elements in the ecological systems, such as policies, social norms and values affect a child either positively or negatively and influence the formation of attitudes.

The key elements of Bronfenbrenner's systems offer insights into the impact of integration policy on children within the socio-cultural contexts. It enhances the understanding that transactions and interactions occurring at all levels of the ecological systems are transformational. Beliefs of policy makers, for example, determine the education and welfare policies regarding children with a disability. When policy dictates integration practices, interaction between regular students and students with a disability, increases within the micro and macro systems. This in turn affects practice and transforms culture.

The model guides analysis of the impact of transactional interactions between the child and others. It explains the integrated school/classroom settings within which the participants develop as ever changing, affected by relations and transactions between the settings. The unique nature and circumstances of each participant's situation are reflected, as needs, abilities, and barriers to learning differ from child to child. It also provides concepts to use in crafting empowering relations within an integrated school environment to empower schools through understanding their strengths and needs.

Bronfenbrenner (1979) cautioned that the socio-cultural aspects such as beliefs and practices of the people within the community are active and dynamic and could

either reinforce each other or act against one another. Each child is perceived as an active part of the community, and therefore successful interactions are milestones of change at the microsystem level, which in time would have a macro societal effect. Positive outcomes could thus be attainable for all children, with or without disabilities, in an integrated environment.

Bronfenbrenner (1986) also addressed the impact of relationships on young people's connectedness with the community. In his analysis of the alienation of young people in urbanised society, he drew attention to the interrelated forces that influence the well being of young people and their environment. He pointed out that weak transactions between a young person and the community have a negative impact on the development of relationships. When faced with the need to avert the potential social crisis, he suggested that schools encourage students to build healthy connections and meaningful relationships with each other to help strengthen the young person's connections within the immediate microsystem.

According to Bronfenbrenner, to engage young people with their immediate environment and community, schools need to introduce a 'curriculum of caring' (Bronfenbrenner, 1986, p. 435) that goes beyond 'learning' to care and encourage meaningful interactions as a desirable social value. He advocated that young people learn the concept of 'citizenship' and have the opportunity to be responsible to another person, and be willing to make time for such a commitment. For Bronfenbrenner, the school environment is a key factor that affects a child's development. School experience must go beyond the academic aspects of learning and effect positive attitudes in their students as they relate to others in the community.

2.4.3 Attitudes and the contact theory

Researchers and scholars agree that positive attitudes towards others who have disabilities are crucial to successful integration programs (Bricker, 1995; Elkins et

al., 2003; Head & Pirrie, 2007; Ward et al., 1994). Acceptance of students with disabilities is unlikely to happen when individuals have negative attitudes (Antonak & Livneh, 2000). Thus it is important to investigate the underlying dimensions of attitudes so as to evaluate the impact of the present integration program in Singapore.

Attitudes are defined as a person's belief or opinion that includes a positive or negative evaluation of some targets such as an object, a person, or an event which then predispose the individual to act in a particular way toward the target (Plotnik, 2005). Attitudes are learned knowledge structures acquired through subtle interpersonal influence processes, and are susceptible to change (Rillotta & Nettelbeck, 2007).

Some theorists suggest that negative attitudes towards a person can be changed through a regular contact with them (Allport, 1954; Zajonc, 2001). Allport's (1954) *intergroup contact hypothesis* pointed out that contact facilitates interactions. Acknowledging that contact could also aggravate tensions, he listed several optimal conditions of positive contact settings that bring about positive changes in attitudes (Allport, 1979). These include a positively valued context, a sharing of equal status, cooperative pursuit of common goals, opportunity to form friendships and being supported by institutional legal and policy decisions. According to Allport (1954) the combination of these conditions results in positive contact experience, which can reduce prejudice and increase social acceptance. The hypothesis that attitudes can be shaped by contact is expounded by Zajonc (2001). Zajonc's theory of *Mere-Exposure Effect*, states that being in the presence of peers with disabilities could lead to a positive change in behaviour and attitudes towards people with disabilities.

Attitudes are described as evaluative predispositions determined by salient beliefs. They are dormant inferred psychosocial process that become active when evoked by specific referents (Antonak & Livneh, 2000). In an experiment to test the communication styles of college students towards an adult in a wheelchair (Liesenner & Mills, 1999), it was found that an adult seen in a wheelchair is likely to be spoken

to as a child. In this study the perception of a person with a disability was evaluated based on physical appearance, rationalised by a pre-existing schema of characterisation and stereotypes of people with disabilities and associated with a state of helplessness. Thus the person in a wheelchair was judged beyond the mobility challenge but on the overall perception of weakness. Their study highlighted the *concept of spread* (Wright, 1983) on perception of traits and characteristics of others.

According to Wright (1983), the *concept of spread* is based on the perception that the condition of disability has ‘spread’ to the other physical, mental, social and emotional characteristics of the person. The person is assumed to be ‘disabled’ in all aspects of his or her life. Wright (1988) explained that when a regular person comes into contact with a person with a disability, the fundamental negative aspects of disability looms larger in the minds of the perceiver than the positive information of the person with a disability. Therefore, the perception of the state of disability could extend to inferred weaknesses such as inability to learn or to make intelligent decisions (Wright, 1988).

As a way of controlling this bias, Wright (1988) suggested that the foci of contact with persons with disabilities should not be on the salience of disability characteristics as people tend to rate relationships with a stranger more negatively than with someone they know. Therefore research on attitudes should account for factors that form attitudes such as the status of the relationship, physical appearance, education and socio-economic status.

Social comparison theorists have argued that negative attitudes could be the results of social comparison process under threatening or stressful situations (Dagnan & Sandhu, 1999; Will, 1981). Young children who are subjected to constant academic assessment, may thus engage in downward comparison with others who are thought to be weaker to enhance their own self-image. Individuals may demonstrate negative attitudes in their interaction with those whom they perceive as inferior to themselves. They may also take on a more hostile attitude and make derogatory remarks to

belittle the ‘target’ with or without that target’s knowledge. Derogation may also involve dissociation with the devalued group by creating a distance so as to maintain self-esteem (Bunnk & Gibbons, 2007; Bunnk, Zurriaga, Gonzalez-Roma, & Subirats, 2003).

2.4.4 Summary and implications

Both Vygotsky’s and Bronfenbrenner’s theories of socio-cultural development provide an understanding that the attitudes and behaviour of children must be examined in social and cultural contexts. In this study, the school environment is a key structure that influences the regular children’s attitudinal development. The theories set a framework to investigate the contexts of the classroom environment, the instructional program, teachers’ skills and how they interact and connect within the larger social system of the school and the impact these have on regular students’ attitudes towards people with disabilities.

Vygotsky’ socio-cultural theories promote the concept that disability is a social construct rather than an all-defining characteristic. Bronfenbrenner’s ecological systems representation (1979) illustrated that socio-cultural contexts are dynamic and encompass an expanded appreciation of how various aspects of society affect attitudes and in turn, is affected by the individuals. His concept of the curriculum of caring through social responsibility in the classroom provided a framework to understand the importance of supporting integration in schools in urban societies like Singapore.

Some theorists advocated that contact helps to reduce negative attitudes and prejudice formation between two groups of people (Allport, 1954, 1979; Zajonc, 2001). They suggested that ‘contact experience’ such as the integration program would increase awareness and enhances better understanding, thus reducing prejudice.

The concept of spread suggested that regular students could perceive that disabilities ‘spread’ to all characteristics of a person and may exaggerate the condition of disability. This affects the regular students’ social interactions and acceptance of people with disabilities.

Social comparison theorists have argued that the socio-cultural contexts of the environment have an impact on the attitudinal development (Dagnan & Sandhu, 1999; Will, 1981). Dagnan et al. (1999) advocated that threatening and stressful social conditions have a detrimental impact on students’ attitudes towards those they perceived as weaker or inferior to them. Children might engage in downward comparison reaction in their behaviour towards their peers with disabilities in class to enhance one’s self image (Will, 1981).

The reviewed theories helped to inform the study that attitudes towards persons with disabilities are complex and multi-faceted and are affected by multiple layers of socio-cultural context. This suggests that in an integrated classroom environment in Singapore, it is important to note the prevalent learning culture and its impact on the attitudes of regular students towards people who are perceived as weaker, such as people with disabilities. Bronfenbrenner’s observation on alienation of young people in urban society also provides a guideline to study the potential of an integrated program to promote social responsibility amongst the regular students.

2. 5 The Impact of Integration on Children with Disabilities

The research studies on the impact of inclusion practices for children with disabilities are extensive (Baker et al., 1995; Peetsma et al., 2001). An earlier report of three meta-analyses, undertaken on the effects of inclusive versus non-inclusive settings from 1980 – 1992, found that most studies reported “a small to moderate beneficial effect” of inclusion on academic and social outcomes (Baker et al., 1995). Their

meta-analysis found that students with disabilities educated in integrated classes do better academically and socially compared to students in regular settings.

In 2001, in a mixed-methods large scale longitudinal study in the Netherlands, researchers found that students with special needs in an inclusive education setting made more academic progress than those in a special education setting (Peetsma et al., 2001). The match-paired study of 216 primary school students was conducted over a period of two to four years. Participants were surveyed, interviewed and tested on their cognitive functioning using standardized tests and psychosocial functioning based on teachers' assessments.

Notably, the study identified that individual learning plans and the provision of specialists who assisted the class teacher in special education settings had a mixed impact on the psychosocial and cognitive development of children with special needs. The study found more positive psychosocial development in children with special needs in special education settings than in inclusive settings. The researchers however, cautioned that some aspects of special care extended to at-risk children in special education settings that focused on differentiation of instruction led to poorer achievement in Mathematics, school motivation as well as self-confidence. The findings concurred with international studies that children with special needs in inclusive settings performed better cognitively than their counterparts in special education settings. However, the findings also suggest that various aspects of the school settings were complex and studies on inclusion or special education need to further define the factors that impacted the outcomes.

A qualitative study on recreation environments provided an ecological perspective to understand how inclusive programs and environments help to challenge stereotypes about the limitations of those with disabilities (Wilhite, Devine, & Goldenberg, 1999). Wilhite et al. (1999) interviewed 22 youths, 12 with physical or visual disabilities and 10 without, to investigate if inclusive structures promoted successful interactions between youths with and without disabilities and thus improved

perceptions. The study was based on purposeful sampling, the participants were middle and high school students participating in a Paralympic Day in the schools.

The study identified four conceptual themes about factors that moderated the effect of contact. It was found that inclusive leisure activities were characterized by preparation for contact, frequent contacts, equal status relationships, cooperative efforts and accommodations. The study showed that a well-structured inclusive environment was empowering for students with disabilities and regular students. The study offered an ecological perspective to the body of inclusion studies as the leisure event provided an interesting observation of social interactions among students with and without disabilities. It suggested that self-determined effort to participate in inclusive leisure activities was indicative of individuals' aptitude to engage with peers who were different. The findings also showed that participants were drawn to successfully structured environments that affirmed their self-image.

In a study on the attitudes of typical students toward peers with disabilities studying in special education and inclusive settings in Canada, Bunch and Valeo (2004) attributed the structures of the inclusive model to more positive social relationships between the typical students and students with disabilities. Citing social referencing theory, the researchers worked on the premise that positive education structures nurtured positive attitudes because students model a trusted or familiar person's behaviour and reaction to others. They investigated the differences in behaviour of 52 primary and secondary students without disabilities in different social settings and recorded the students' behaviour and attitudes to peers with disabilities. Their subjects were either from regular class with integrated placement of students with disabilities or were from regular school with segregated special education class placement. They interviewed their participants about friendship, abusive behaviour, advocacy and their opinions about special education and inclusion. The study showed that there were lower degrees of abusive behaviour and a higher rate of social acceptance in inclusive schools compared to schools with segregated special education settings. The researchers noted positive teachers' attitudes towards

inclusion and positive model of communication in inclusive settings. Students from inclusive schools were found to have friends with disabilities, whereas students from schools with segregated special education structures indicated that they did not have friends from the special education program. Students in inclusive settings also expressed that they helped their peers with disabilities to do well academically whereas the students from full or part-time segregation program were more likely to believe that segregating on the basis of achievement brought about best learning outcomes for the segregated students.

The results supported the contention that students from inclusive settings had more positive attitudes, particularly in the area of social acceptance, of peers with disabilities. Students with disabilities in inclusive settings benefited from the positive attitudes of their typically developing peers as the latter were more likely to intervene on their behalf when they were bullied. Although the study demonstrated the positive outcomes of integration, the researchers did not elaborate on the system structures of the inclusive settings and segregated school structures that could account for the difference in the outcomes. An examination of the response based on the different contexts would expand the dynamics of this study.

A Singapore qualitative study in 2003 on the transition of a group of secondary school students with visual impairments who had moved from a segregated setting to a regular setting also found that integration into a regular setting produced significant positive social outcomes for students with visual impairments (West et al., 2004). The study showed that there was a significant advantage, both academically and socially, for special needs students being educated in regular classrooms. The nine participants were transferred to regular schools after earlier years in segregated special education schools. During the interviews, the students with disabilities were able to reflect that they benefited from receiving support and assistance from their peers. Although there were reports of difficulty and obstacles faced by the students, such as rebuffs from their classmates during initial contact and increased class size, the study highlighted increased opportunities for social interactions and enhanced

social acceptance for the visually impaired. However, the study also reported that the students cited the increased workload and academic pressure as the most stressful changes they were obliged to make on entering mainstream secondary education. They also reported that “the more time they spent studying, the less time they had available to spend socializing with peers” (West et al., 2004, p. 24). The students with vision impairments believed that they were more likely to succeed if mainstream schools made specific adjustments to accommodate their inclusion. The researchers concluded that students with disabilities needed support structures and assistance to help them adjust to the mainstream system.

This was a small study that focused on integrated students with visual impairment. It had limited analysis of the variables related to the positive feelings of students with visual impairment’s acceptance by their peers. Although the participants had described their main concern with mainstream academic demands, the study did not examine if the positive social outcomes expressed by the participants were relative to participants’ ability to perform academically. This suggests that the pressure of academic demands of the mainstream education system in Singapore was a significant factor that affected the social outcomes of the students with disabilities. The study appeared to have overlooked previous research that highlighted the structures that affect integration such as teachers’ beliefs, parents’ support for inclusion and community values that affect overall students’ perceptions of integration (Dagnan & Sandhu, 1999; Gumpel & Awartani, 2003; Wilhite et al., 1999).

2.5.1 Summary and implications

A conclusion that can be drawn from the literature reviewed was that inclusion led to positive (if small) academic, behavioural and social outcomes for students with disabilities when compared to segregated programs for students with disabilities (Baker et al., 1995; Peetsma et al., 2001). Studies conducted in schools found that integration and inclusion programs nurtured positive social relationships between the

typical students and students with disabilities (Wilhite et al., 1999). The structures of the inclusive learning environment offered more opportunities for social interaction. Positive teachers' attitudes towards inclusion also provided a strong model of communication for students in inclusive settings to be able to learn to engage with the students with disabilities and with their peers (Bunch & Valeo, 2004). A study in Singapore found that students with visual impairment who moved from segregated to integrated schools reported increased opportunities for social interactions and enhanced social acceptance from their peers (West et al., 2004). On the other hand, it also highlighted the need for studies of integration programs to examine the inherent barriers within the integrated environment that might negate the opportunities for social interactions.

The next section looks at research studies on regular students' attitudes, beliefs and perspectives about integration of students with disabilities in a mainstream system. It begins with a discussion of studies based on contact theory (Allport, 1954). It discusses the recent studies conducted with different age groups of children in integrated environments. The review outlines the regular students' attitudes towards disabilities and people with disabilities, the relationships and social acceptance of the people with disabilities by their peers.

2. 6 Research Perspectives on Attitudes

Contemporary research based on Allport's (1954) contact hypothesis has indicated that contact experience had an impact on students' attitudes. A recent extensive analysis of studies on intergroup contact theory pointed out that the research literature supported the perspective that contact reduces feelings of threat and anxiety which helps to reduce prejudice (Pettigrew & Tropp, 2006, 2008). In their meta-analysis of 515 studies from 1940 to 2000, Pettigrew & Tropp (2006) showed that contact typically reduced prejudice as it 'involves the tendency for familiarity to

breed liking' (p. 766). They highlighted the significance of a structured contact experience, which led to better positive contact outcomes. They also cautioned that support needed to be mediated effectively as,

Institutional support for contact under conditions of competition or unequal status can often enhance animosity between groups thereby diminishing the potential for achieving positive outcomes (Pettigrew & Tropp, 2006, p. 766).

Pettigrew and Tropp (2008) further identified 3 key effects brought about by the experience of contact that had the potential to reduce prejudice and improve positive attitudes. First, they examined Allport's theory on the notion that knowledge reduced prejudice. They agreed that contact experience facilitated learning about each other which increased awareness and led to understanding and acceptance. They also stated that there was strong evidence that showed that contact reduced intergroup threat and anxiety. The third most effective mediating effect of contact was that it enhanced one's ability to take on another's perspective and the ability to empathise with the weaker group (Pettigrew & Tropp, 2008).

Studies of regular students' contact experience with peers with disabilities, however, pointed out that intergroup experience in an inclusive setting is complex and the integration of children with disabilities into regular schools does not always yield the expected positive outcomes. (Graham & Slee, 2005; Head & Pirrie, 2007; Nowiciki, 2006). Studies showed that integration and close personal contact does not always lead to better understanding or acceptance and regular students who were not sufficiently informed of disabilities and lacking in social skills were more likely to display inappropriate behaviour and attitudes towards students with disabilities in inclusive settings (Abrams, Jackson, & St Claire, 1990; Shelvin, 2003; Whitaker, 1994). Contrary to the contact theory, integration did not increase the level of awareness of the regular students about their peers with disabilities, instead, the studies found that the lack of awareness was found to have resulted in these students holding negative views and stereotyping their peers with disabilities.

In a review of the inclusion process in the United States of America, Guralnick (2000) proposed that early childhood inclusion had to address factors that influence inclusion such as programs that facilitated the positive developmental and social outcomes of all of the children involved. Guralnick (2000) noted that children with disabilities are stigmatised by typically developing children ‘especially during unstructured activities ...despite the best efforts to minimise these patterns’ (Guralnick, 2000, p. 220). Thus, the study of the impacts of inclusion needs to examine the dynamics of social interactions in the classroom.

2.6.1 Attitudes of regular students towards people with disabilities

As previously discussed, students without disabilities are an integral component to the success or failure of any integration program. The attitudes of regular students to the integration of students with disabilities in their classrooms could be a significant factor in defining the life experiences and opportunities available to persons with disabilities and involving them in the mainstream society (Lipsky, 2005; Lipsky & Gartner, 1996b; Maras & Brown, 2000). To present a fuller profile of the impact of integration, this section examines the impact of integration on regular students’ attitudes towards their peers with disabilities.

As previously discussed, research studies have suggested that opportunities to form relationships using contact experiences enhanced understanding and nurtured empathetic qualities of regular students (Biklen, Corrigan, & Quick, 1989; Diamond, Hestenes, Carpener, & Innes, 1997; Dyson, 2005; Peck, Donaldson, & Pezzoli, 1990).

Diamond et al. (1997) examined the experience of preschool children without disabilities enrolled in regular and inclusive programs. The subjects (3 to 6 years old) were interviewed and assessed using dolls. The focus was on the ways that the two groups thought about disabilities and how their ideas had an effect on their social acceptance ratings of peers with disabilities as friends. The researchers found that

inclusion helped to inform children's social and cognitive development about disabilities. The study indicated that children were generally more inclined to accept peers without disabilities. However, young children in inclusive programs were more likely than their counterparts in regular programs to accept their peers with disabilities socially.

The young participants in the inclusion programs were also able to articulate a relatively sophisticated level of understanding about impairments. For example, they were able to rate the challenge faced by a blind classmate in terms of both vision and motor skills. The analysis also showed that the subjects in inclusive programs were more likely than those in regular programs to associate disability as a long-term impairment that persists into adulthood. The researchers also pointed out that there was no planned curriculum on social cognition in the inclusive classroom to explain the difference in outcomes. They concluded that it is likely that in an inclusive classroom there were more opportunities for a hidden curriculum that promotes acceptance of peers with disabilities to evolve. The findings of this study suggested that the inclusive setting that included peers with disabilities was a richer environment that facilitated higher order thinking skills. The researchers also pointed out that there could be a correlation between parents who enrolled their children in inclusive early childhood settings, their values and the influence over the child's inclination to socialise with peers with disabilities. On the other hand, the study did not account for the teachers' values on inclusion and their impact on the inclusive environment. As such, further investigation of the individual characteristics and the social factors, might uncover more information about family and teachers' impact on young children's capacity to socialise with those with disabilities.

Dyson's comprehensive study (2005) in Canada concurred with these findings. The study investigated 77 kindergarten students' understanding and attitudes toward people with disabilities. The subjects were from four different classes; each class had a child with a diagnosed disability. The data collected from surveys and interviews

showed that young children in inclusive classrooms were able to demonstrate positive attitudes toward their peers with disabilities.

About half of the children reported being able to accept peers with a disability. When asked if they were ever afraid of people with disabilities, 91% of the participants indicated that they had no fear of people with disabilities and were able to identify people with disabilities as 'nice people' and 'they won't hurt me' (Dyson, 2005, p. 101). The majority of the participants liked their peers with a disability just as much as their regular peers because of their appreciation of their good character and competency. They were able to express altruistic and empathetic reasons for being friendly with people with disabilities. The researchers were able to conclude that the opportunities of regular contact with peers with a disability fostered development of positive attitudes. The researchers cautioned that to promote inclusion, it was necessary to intervene at an early age to promote awareness and understanding of disability. However, the research did not look into the issue of frequency or whether the contact experience was positive or negative as reported in earlier studies such as Diamond et al. (2001). Peetsma et al. (2001) who worked with primary school children arrived at a similar conclusion, indicating that opportunities to interact in an integrated school environment enabled individuals without disabilities to acquire social cognition and better understanding of their peers with disabilities.

A qualitative study of the dynamics of interaction between regular primary school students and their peers with disabilities in an integrated school setting found that interactions and relationships were interrelated forces that influenced inclusion goals (Biklen et al., 1989). The study was conducted in an elementary school with 810 students, age 9-111. The subjects were interviewed and observations were made of their relationships with peers with severe disabilities, ASD and learning disabilities. Their teachers were interviewed to gather information about the nature of the school setting and the teaching strategies that foster interaction. The data collected showed that increased opportunities to form meaningful relationships indirectly enhanced the understanding and empathetic qualities of students without disabilities. The research

indicated that the inclusion experience provided the opportunity to interact which in turn had a profound positive impact on children's character development. The participants in this study were also better at building supportive relationships with their peers with disabilities. The researchers observed,

Students developed relationships with each other that were personal rather than stereotyped, interactive rather than one-sided, and caring rather than obligatory (Biklen et al., 1989, p. 220).

The study indicated that extended period of contact allowed students to make connections and develop close friendship as they learned about each other and appreciated each other's differences without external support. The researchers' observations also suggested that school setting and teachers facilitated students of different abilities to learn to accept, appreciate and interact with each other. Although the research was a qualitative study conducted in one school setting, the findings have limited generalisability, nevertheless it supported the contact model as advocated by Allport (1954) and an earlier study by Esposito and Reed (1986). The study also identified that in inclusive setting, teacher's skills in structuring interactive activities, role modelling of communication skills and enabling students to present themselves in the best possible light were key factors that facilitated the positive outcomes of integration.

Peck, Donaldson and Pezzoli's (1990) qualitative study identified a classification of prosocial skills gained by 21 high school students (age 15-18) who had direct contact with peers with severe disabilities in school-sponsored programs. The participants were selected based on theoretical sampling, from students who had demonstrated interest and commitment to socializing with disabled peers by initiating contact outside formal interaction times. The spontaneous commitment allowed the researchers to reason that they were useful informants to describe what they had 'gotten out of it'. They pointed out most students reported experiences of difficulties in their relationships in distinct themes of social discomfort. One was due to lack of

social skills and inappropriate social behaviour displayed by the students with disabilities such as violation of discourse conventions. Then there was the discomfort in reaction to physical characteristics of the disabled peers. There were accounts of negative reactions to physical appearance and behavioural characteristics such as drooling. However, there were also reflections of getting used to and accepting the negative physical characteristics over time.

The study (Peck et al., 1990) also evaluated the extent to which specific types of benefits were perceived across individuals as well as the number of benefits typically perceived by each participant. There were explicit accounts of positive personal changes such as tolerance and understanding of those who looked or behaved differently. There was an example of a participant described as alienated and who was at risk of dropping out of the program, how he gained self-actualisation through taking responsibility for supporting peers with disabilities. The researchers classified the benefits of integration for regular students into six general areas: improvements in self-concepts, social-cognitive growth, reduced fear of human differences, increased tolerance of other people, development of personal principles and interpersonal acceptance and friendship (Peck et al., 1990, p. 244). Although the researchers realised the limitation of their research regarding their validity and generalisability because of the small sample, their findings suggest that opportunities to build relationships with peers with disabilities could be the impetus for personal growth and character development for regular high school students. The narratives from the older students provided valuable insights into the specific factors in an integrated environment that facilitated prosocial behaviour that helps to inform evaluation of integration program.

Siperstein, Parker, Bardon and Widaman (2007) conducted a national survey of 5837 youths in 7th and 8th grades in the United States of America that investigated the multiple aspects of attitudes toward individuals with disabilities based on the hypothesis that contact with and exposure would influence perceptions in a positive way. In the survey, the participants from 26 states described their beliefs about peers

who had intellectual disabilities. The study found that most of the youths believed inclusion had a positive effect on them personally although less than 40% of youths in the country were found to have contact with peers who had intellectual disabilities in their schools. The findings also indicated that participants expressed stereotypical perceptions of the capabilities and competency of students with disabilities. They believed that peers with intellectual disabilities were less competent compared to the actual average competency of people with intellectual disabilities.

The findings were reflective of another survey conducted more than 30 years previously, and indicated that little appeared to have changed in general perceptions of the abilities of students with intellectual disabilities. The findings also confirmed that perceptions of the competency of individuals with disability and the inclination to interact with them were linked to exposure and contact. The researchers suggested that the opportunity to witness the competency of students with disabilities was the pivotal factor that would most likely lead to more positive attitudes. The findings implied that contact exposure had the potential to facilitate understanding of people with disabilities. Nevertheless, another important finding indicated that physical inclusion might not foster positive attitudes. Social interactions between regular students and their peers with disabilities did not occur spontaneously. The researchers suggested that to facilitate positive attitudes towards people with disabilities, young people had to witness the competency of peers with disabilities. Therefore, it is necessary to create contact opportunities through the use of mediation, that is, adults or teachers setting up positive contact experience.

The contact model advocates that the presence of others who are different, such as those with disabilities, would increase social interaction and acceptance (Allport, 1954; Zajonc, 2001). An early study (Esposito & Reed, 1986) on the effects of contact found that direct interaction lead to positive gains in attitudes toward persons with disabilities and the gains were maintained over a relatively long period of time. In the 2-year survey of 92 students from 7 public and private elementary schools, the investigation explored the dimensions of contact responsible for positive attitude

change, that is, the type of contact and timing. The type of contact in this study included a structured contact program, that is, integrated program with activities that were designed to promote social interactions, an unstructured contact program and a nil contact experience. The timing of the contact was defined as either a one-time encounter or a long-term exposure. The results of the study suggested that contact itself was related to positive attitudes change toward children with disabilities. The findings challenged the assumption that the duration of contact and the types of structured or non-structured programs were significant factors that influenced the positive effect of contact.

According to child development theories, the study of contact outcomes needs to be examined in the socio-cultural context of the integrated environment (Bronfenbrenner, 1989; Kozulin et al., 2004). The study of Esposito and Reed (1986) did not examine the different types of programs offered by these schools in contexts and did not elaborate on the structured contact programs that some of the participants had undergone, nor did it explain the dimension of 'unstructured contact'. Thus the findings were also not able to relate conclusively the lack of contact program to the positive attitudes as there was no description of the variables such as school culture, school support structures for inclusions and the developmental age of the participants that could have affected the findings of long term effects of different types of contact program. Nevertheless, this study applied the contact hypothesis to regular students' integration with peers with disabilities and found that the nature of contact is complex and needs to be further examined.

Findings from more recent research support the finding that contact experience has a positive impact on young children. In a cross-cultural study in Greece and the USA on 196 kindergarten students' attitudes towards individuals with special needs, it was found that children attending kindergartens that enrolled students with disabilities were more accepting when compared with children attending non-inclusive settings (Nikolarazi et al., 2005). The researchers also established that some inclusive schools did not have a planned curriculum that promoted acceptance of children with

differences or special needs. However, the findings indicated that contact per se lead to positive attitudes, regardless of timing of the contact, that is, whether the contact was a long time or one off encounter, or whether there were support structures such as affirmative programs in place. The researchers concluded that formal intervention strategies and support structures were not significant in shaping regular students' attitudes and behaviour towards social acceptance of peers with disabilities.

The research study, however, did not take into account the wider socio-educational context such as different settings of the classes, teaching styles and outside classroom access to information on inclusion such as mass media and books. The researchers also did not look at more complex social factors such as teachers and parents' influences, how students conceptualise abilities and the cultural aspects of the society. The assumptions were made that the participants were exposed to the same setting with the same classroom climate and the same teaching style. Therefore care must be taken when interpreting these results across other cultures.

An investigation of the effects of an educational program that promoted awareness of disability indicated that there were other aspects in the inclusive environment that could have a significant impact on the attitudes of students (Rillotta & Nettelbeck, 2007). The study was conducted in South Australia with 259 secondary school students from two private coeducational colleges. In this study, current students together with past students who had graduated eight years prior to study, from inclusive classes were assessed on their attitudes towards their peers with disabilities to identify the effect of participating in programs that promote awareness of disability in school. One group of regular students had participated in programs that promoted awareness of disability and were therefore described as being informed about disabilities in general and about the ideology of inclusion whereas the other group of students had not participated in similar programs. The results showed that the group that had undertaken the awareness program reported significantly more positive attitudes than those who had no training. These participants also reported significantly more contact with people with disabilities than those who had not

participated in the program. The researchers also noted that generally those who had the 8-session program outscored same-age peers who had the 3-session program. Although the results showed that the groups not exposed to training also registered 'overall fairly positive' scores, the study suggested that contact, combined with supports such as awareness training program enhanced the contact outcomes more positively. The researchers also pointed out that the 3-session program did not yield more positive contact outcomes than those who had not participated in the program. More importantly, the results for past students showed that longer training programs were able to yield long-term positive attitude change.

Nevertheless, the researchers (Rillota & Nettlebeck, 2007) could not conclude that awareness training and having more information about disabilities were the key factors that had led to positive attitudes among the integrated students. This is because the school with the disability awareness program had been running it for more than a decade. It was found that the school had an entrenched strong inclusive learning culture that actively encouraged respectful contact with students with disabilities. The study also did not look into the teachers' perspectives and their influence over the programs as it was also noted that the class teachers in this school stated that they were personally committed to inclusive education. The researchers thus acknowledged that these two aspects could have a significant bearing on the regular students' attitudes and their relationship with their peers with disabilities. The design of the quantitative study also did not capture the interrelatedness of personal experience such as contact with family members with disabilities and family values and beliefs that could have an impact on participants' attitudes towards people with disabilities. The study did not record if past students (who had graduated 8 years' prior to the study), had had personal experience with people with disabilities since they left school, and whether this contact had an impact on their attitudes. However, this comprehensive study identified that knowledge, gained through an explicit training program, had a significant impact on students' attitudes. As suggested by Allport (1954) observations of optimal conditions for positive contact settings, the structured program in schools had a positive impact on the contact experience

between the regular students and students with disabilities. The study also highlighted the importance of evaluating training programs as it suggested the duration of the training sessions was an important factor that increased regular students' awareness of disability.

2.7 Conclusions and Research Gap

This review has highlighted the influence of contemporary theories of education, child development and philosophy of human rights and social justice development has had on the inclusion movement. The education of children with disabilities and the attempts to include them into the mainstream system remains one of the most challenging goals of our time.

The Singaporean nation-building ideology of meritocracy has shaped its interpretations of equity and led to its ability-driven and merit-based education policy. This policy has affected the integration process as special education is not legislated and inclusion of children with disabilities is not mandatory in Singapore. Students with disabilities are accepted and placed into the mainstream schools if they are assessed as having the potential to meet the academic expectations. Therefore, it can be characterised as a placement program. Although recent indicators have found that the numbers of students being integrated into public schools in Singapore is increasing, there has been little research that has investigated the impact of this approach to inclusion.

There is thus a need to examine this problem using socio-cultural perspectives of child development to illustrate its complex nature (Bronfenbrenner, 2004; Viktorija & Gediminas, 2004; Vygotsky, 1993). These theories provide a systematic approach to study the dynamics of perceptions, relationship formation and attitudinal development in the classroom environment and within the larger school setting.

The theories of attitudes development allow the examination of the quality of contact and interaction which may help to reduce prejudice and aids in the development of positive attitudes (Allport, 1954; Allport, 1979; Zajonc, 2001). Meta-analysis of studies on contact experience showed strong correlations between contact and positive attitudes (Pettigrew & Tropp, 2006, 2008). On the other hand, social comparison theorists (Dagnan & Sandhu, 1999; Will, 1981) cautioned that contact could lead to downward comparisons toward the group that is perceived to be weaker, such as those with disabilities. Wright's (1983, 1988) concept of spread indicated that when the contact experience does not promote positive differentiation, it has the potential to lead to stereotyping and misinformation. These theoretical perspectives on attitudes and contact impact and provided a framework to examine the contact experience of students in the integration program.

Various studies showed that inclusive settings were beneficial to both the children with disabilities and the regular children (Baker et al., 1995; Peetsma et al., 2001). Children with disabilities in inclusive settings made more academic progress and the structure of the inclusive model had the potential to nurture positive social relationships between the typical students and students with disabilities (Bunch & Valeo, 2004; West et al., 2004).

Similarly, empirical studies evaluating the impact of inclusive learning environment on students from preschool to high schools illustrated the positive impact of contact (Biklen et al., 1989; Diamond et al., 1997; Dyson, 2005; Peck et al., 1990). These studies reported regular students in integrated classrooms were found to be more aware and more positive in their attitudes towards people with disabilities compared to students who had no such contact.

Some researchers were cautious about a one-dimensional endorsement of the positive impact of a mere-exposure paradigm (Biklen et al., 1989; Diamond et al., 1997). Several studies attempted to identify the specific aspects such as the support programs and duration of integration that could account for the positive attitudes of

regular students in the integrated environment (Dyson, 2005; Nikolarazi et al., 2005). However, the findings were inconclusive and researchers have implied that there were other aspects in the learning environment that could be linked to the positive effect of integration on attitudes towards students with disabilities.

The integration program in Singapore, which is likened to a placement program, presents a challenging study to uncover the dynamic of integration set in a complex urban society. The meta-analysis of studies on contact experience conducted during the last few decades (Pettigrew & Tropp, 2006, 2008) suggested that mere-exposure-effect within an integration program, such as in Singapore, has the potential to bring about positive contact outcomes and social acceptance. However, Singapore's highly regulated mainstream school system reinforces values that might affect the contact experience. The social structure of Singapore also encourages a highly competitive learning culture, which could pose challenge to positive contact experience (Pettigrew & Tropp, 2006).

Current literature on the effect of integration on regular students has not examined urban social mechanisms and competitive social mores on students' attitudinal development. It is not known if regular students would be positive in their attitudes towards students with disabilities, in a strongly-regulated, highly competitive learning environment such as the Singapore system.

The objective of this study is thus to examine the attitudes of the regular students in integrated classes towards people with disabilities in the Singaporean context. The research also intends to add to literature on attitudes and integration research in an urban culture. It intends to establish an understanding of the relational dynamics between ecological factors, the educational model and the program type that influence contact experience in a highly structured and competitive integrated learning environment.

2.8 Chapter Summary

This chapter traced the historical trajectory of the development of the inclusion movement through mapping the ideological influence of contemporary theories of education, child development and the philosophy of human rights and social justice. It described the issues surrounding service delivery, that is, the rationales and the controversy surrounding the different models of inclusion.

An understanding of inclusion as a democratic social ideology highlighted the need to examine the Singaporean integration approach in the socio-cultural context. The review of literature on the development of inclusion situated the Singapore integration policy as a placement program. The description of the educational practice in Singapore and the meritocratic philosophy posit the unique challenge to the Singaporean approach to integration. Child development theories based on Vygotsky's socio-cultural approach (1993) and Bronfenbrenner's ecological systems (1989) provided the framework to examine the impact of integration and attitudinal formation. Next, the chapter highlighted various perspectives on attitudes and the social mechanisms that affect attitudes to structure the approach to examine the impact of integration on regular students in Singapore schools. The chapter also presented an extensive review of studies on the impact of contact with people with disabilities on regular students in various settings. The review informed and identified the gap in integration literature and provided the direction to study the Singapore integration program.

CHAPTER THREE

AN OVERVIEW OF THE RESEARCH METHODOLOGY

3.1 Introduction

This chapter provides an overview of the aims and research methodology for the study. It presents an overall description of the mixed methods research design, which was utilised in this study. Further, specific details of the quantitative and qualitative methodologies are discussed in Chapter Four and Chapter Five. A description of the nature of the mixed methods approach used in this study follows with an overview of the various aspects of the quantitative and qualitative instruments employed. It also outlines the considerations in the construction of the instruments and the implementation of the approaches in the context of the participants' age and the local school culture. The sampling design section explains the theoretical and practical considerations in the selection of the participants. The flow of the research procedures illustrates the process of the research, starting from ethics considerations to the conduct of the pilot study.

3.2 Aims of Research

The main aim of this study was to explore the attitudes of regular students towards people with disabilities in integrated learning environments, as compared to the attitudes of students in regular schools and classes, in the current context of school education in Singapore. The attitudes of students towards people with disabilities were examined in close connection to the different social and cultural contexts of the particular educational settings involved in the study.

The study aimed to answer the two major research questions.

- Are there differences among the attitudes of regular students towards people with disabilities in integrated and regular learning environments?
- How do the attitudes of regular students towards people with disabilities relate to the socio-cultural contexts of the learning environments?

A number of specific research questions relevant to quantitative and qualitative parts of the study were drawn from these two main questions and are presented in full in Chapter Four and Chapter Five.

3.3 Research Design

The mixed-methods research design utilized in this study consisted of two studies, quantitative and qualitative, which were executed by sequential transformative procedures (Creswell, 2009). This approach expanded the breadth and range of the research in the discussion of the complex issues of attitudes and enhanced the reliability and validity of the research findings (Mathison, 1998). The sequence and the phases of research are presented in the flowchart below (Figure 3.1).

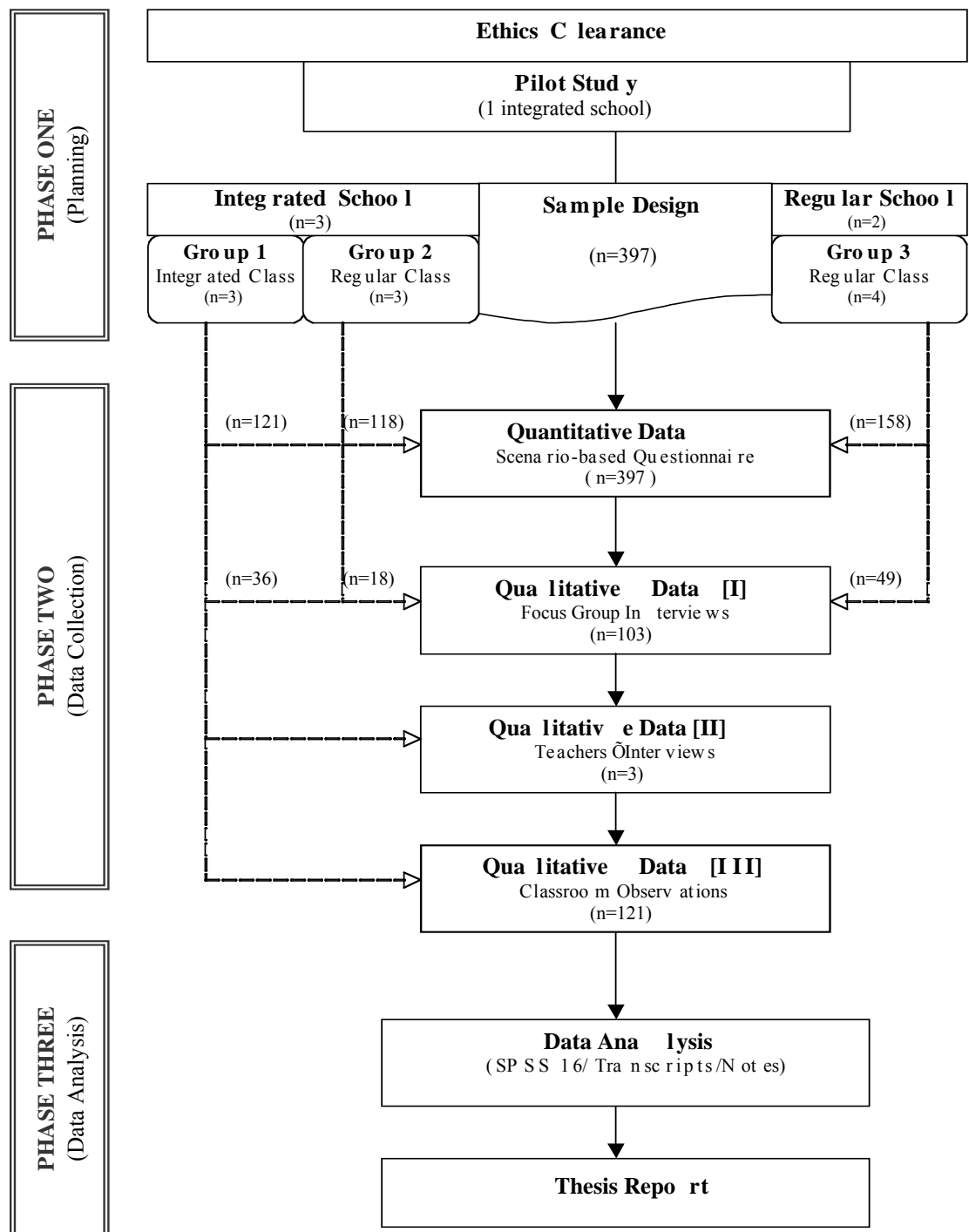


Figure 3.1 Flow chart of the phases of research procedures

The quantitative approach provided a statistical model to describe student participants' attitudes towards people with disabilities. It allowed collection of information from a large number of students in a short time frame. The quantitative data determined the selection of sub-groups to take part in the qualitative study (Figure 3.1).

The qualitative approach allowed for further elaboration of the quantitative results and enabled the researcher to conduct "a more holistic analysis" of the problem (Mertens, 2005, p. 231). It drew on an interpretive research approach to describe phenomena in the classroom culture (Marton & Booth, 1997), which allowed the provision of in-depth comprehensive information in real-life school settings. The rich and multilayered data that arose from the qualitative study helped in the understanding of the complexity of the dynamics of regular students' attitudes towards people with disabilities.

The following sections provide an overview of the methods and instruments employed in the study. First, the scenario-based questionnaires used in quantitative study followed by the methods employed for qualitative study, that is, focus group interviews, classroom observations and interviews with teachers.

3.4 Quantitative Study Instrument: Scenario-based Questionnaire

The quantitative method comprised the scenario-based questionnaire constructed by the researcher (Appendix A). It aimed to provide a broad picture of the participants' awareness, attitudes and values towards individuals with disabilities who were likely to be found in an integrated learning environment. This self-completed questionnaire was a relevant tool to elicit judgements concerning schemas and key themes (Caulkins, Trosset, Painter & Good, 2000). The objective of the questionnaire was to obtain quantifiable and definable results that lent themselves to be represented by neat numerical classification (Cox, 1996).

The development of the questions was based on “a priori approach” (Ryan & Bernard, 2003) which related to the researcher’s understanding of the local Singapore classroom culture, based on 13 years of professional experience as a teacher and school administrator and the contextual and theoretical views found in relevant literature. The battery of scenarios and the questions were designed in a way that they represented the range of the themes relating to students’ attitudes towards people with disabilities (as explained further in Chapter Four).

The main focus of the questionnaire was description on regular students’ response to someone with a physical or sensory disability in a typical class in a Singaporean primary school. Each question started with a brief narrative description of a scenario which was based on meaningful real life situations familiar to the young participants. The age of the participants was taken into consideration in the formulation of the expressions and the language used in the questionnaire. The short and easy to understand narratives offered a methodological advantage as they reduced reliance on language. After reading the scenario, the participants had to select one of the four statements provided which were related to the scenario content.

3.5 Qualitative Study Instruments

The qualitative study employed: semi-structured focus group interviews with the three groups of students (Group 1, 2 and 3), classroom observations and interviews with teachers in the integrated classes. The interviews and observations helped to capture the dynamics of integrated learning environment and the experiences of the students that cannot be meaningfully expressed in numbers and presented a broader view of real students’ interactions with their peers with disabilities (Berg, 2004; Cohen & Manion, 1994). The use of different instruments enabled triangulation of the data and various perspectives were examined to arrive at a more holistic understanding of the students’ attitudes (Miles & Huberman, 1994).

3.5.1 Focus group interviews

A series of focus group interviews, of 5-6 students, were conducted with selected groups of participants representative of the sample (described in Section 3.6.1 and Table 3.1). The focus group interview sessions aimed to gather a full spectrum of rich and deep understanding of the affective and evaluative meaning of the participants' attitudes that were not accessible from other research methods. The interviews allowed clarification and extension of the understanding of the data obtained from the quantitative study with an alternate interpretive and naturalistic approach to the learning environment.

The interviews were conducted during school hours in a comfortable room in the school. The semi-structured discussion format was intended to allow the young participants to engage in conversation and freely express their knowledge and attitudes towards disabilities. The structure of the focus group interviews included a set of pre-determined statements and questions to trigger discussions among the participants (Appendix B). Careful consideration was given to the language used to ensure an active dialogue. The list included questions such as 'Do you think a person who is blind can be the Prime Minister of this country?' or, 'What do you think about accompanying a person in a wheelchair to the garden?' The students with disabilities were not included in the interviews. Data were transcribed and coded according to a clearly articulated protocol on characteristics of the stressors (e.g. positive, negative or neutral/undecided). Further discussion of the focus group interview is presented in Chapter Five (Section 5.4).

3.5.2 Classroom observations

Observation of participants' behaviour in classroom setting helped to capture differential response so as to verify inferred schema and affective orientation towards peers with disabilities (Wragg, 2002). It enabled the researcher to judge general classroom climate and to further enrich the empirical evidence. The classroom observations in all integrated classes recorded students' spontaneous expressions of

the attitudes and behaviour during unstructured activities. It allowed the researcher to observe students' behaviour and the quality of interactions with each other, and in particular, the way that attitudes towards peers with disabilities were manifested. The observations also enabled the researcher to take note of the teachers' effort to facilitate and encourage the child with disabilities to engage in group work and interactions with the regular students in the class.

Classroom observations were undertaken in one-hour lessons that involved students working in groups based on the school curriculum and conducted by the class teacher. Prior to each lesson observation, the class teacher informed the researcher on the type of lesson and seating arrangement of the students, with special focus on the grouping of the student with physical or sensory disabilities. Observations were conducted as the last stage of the qualitative study at the school. It was anticipated that the students would meet the researcher at least four times in the course of the research work. Therefore, they were familiar with the researcher and were at ease with her observing the class from the back of the room. Further details of the data gathering and analysis of the students' interactions are discussed in Chapter Five.

3.5.3 Interviews with integrated class teachers

The teachers of all the integrated classes were interviewed to further understand the impact of integrated environment from teachers' point of view. Interviews were conducted in the narrative style to allow the teachers to express their ideas in a comfortable way (Beatty, 1995; Connely & Clandinin, 1990). In the interviews, teachers were asked to describe their work in the integrated classrooms, their students with disabilities and their understanding of their special needs. The interview covered five topics: initial recognition of the students with disabilities; the program adaptations to accommodate the child with disabilities; the initiatives provided by the teacher to engage the class to accept the peer with disabilities; teachers' impressions about the regular students' attitudes towards the peer with disabilities; school's program and structure that might have affected interactions

between regular students and the peer with disabilities. The interviews were conducted in the school, were confidential in nature and took between 60 and 70 minutes each to complete.

3.6 Participants: Sample Design

The design of the sample size for the qualitative and quantitative components aimed to generate adequate data to derive a thick, rich description to increase descriptive validity and interpretive validity (Maxwell, 1992). The design ensured the overall validity of the sample and enabled reliable generalisations to be made in both studies (Collins, Onwuegbuzie & Jiao, 2007). The quantitative sample allowed statistical and analytical generalisations to be made. The participants for the group interviews were then selected based on a profile developed from the quantitative findings. The sampling designs for classroom observation facilitated internal generalisations.

3.6.1 Purposeful sampling

The technique of purposeful sampling was applied in the selection of participants for the study due to the two constraints: 1) the identification and location of schools with children with physical or sensory disabilities and 2) the willingness of these schools to release time for interviews under the pressure of assessment procedures.

As mentioned in Section 2.3.2, the context, the level and the types of integration in Singaporean primary schools were arbitrary. There were no public channels to identify such schools. Thus to locate integrated schools which had students with physical or sensory disabilities in their enrolment was a challenge. The second challenge was in gaining access to conduct research in public schools. The assessment-driven climate of Singaporean schools and the pressures on curriculum time constraints also made schools reluctant to release curriculum time for research

study by external party. Some integrated schools declined to participate, citing the need for teachers to focus on completing the syllabus.

The three integrated schools that consented to participate in the study had official records of the students with visible physical or sensory disabilities at either grade 4 or grade 5. The integrated students in these schools, aged 10-12, were found to be a suitable sample as they were at the age of Piaget's concrete operational stage (Berk, 2000). Developmentally, these students were able to articulate personal feelings objectively regarding their social relationship or personal perception of people with disabilities.

To provide a comparison of attitudes amongst integrated schools' students, two schools (School D and School E) with no official records of enrolment of students with physical and sensory disabilities were invited to participate in the study. They were described as regular schools. Details about the schools are described in Chapter Five.

All the schools participating in the study (School A, B, C, D, E) were from different zones and the students were from varying social-economic status and racial composition. The participants were categorised under three broad groupings, based on their specific experience in an integrated learning environment:

- Integrated class students without disabilities, who had experienced at least four months of integrated classroom learning with students who had physical or sensory disabilities. They were in designated schools that provided an integration program for students with disabilities (Group 1).
- Regular students with no experience of integrated classroom learning with students with disabilities. They were in integrated schools that had students with physical or sensory disabilities. They were most likely to have met the peer with disabilities during school assembly or during recess time (Group 2).

- Regular students with no experience of integrated classroom learning with students with disabilities. They were in regular schools with no students with disabilities (Group 3).

Table 3.1 *Number of participants and groups in the quantitative and qualitative studies.*

Participants		Quantitative and Qualitative Data			
School	Group / Class	Questionnaires	Focus Group Interviews	Classroom Observation	Interview (Teachers)
Integrated School (3)	Group 1 Integrated class	121	36 (6 groups)	121 (3 classes)	3
	Group 2 Regular class	118	18 (3 groups)		
Regular School (2)	Group 3 Regular class	158	49 (8 groups)		
Total		397	103	121	3

3.7 Initial Steps of the Study

This section presents the initial steps undertaken in preparation of the study, which included ethical clearance and a pilot study.

3.7.1 Ethical considerations

As the study involved children, there were basic ethical considerations to protect the participants' rights. Firstly, ethics approval was sought to ensure that the students were accorded protection during the course of the research (University of Wollongong, 2005). Next, an application was also made to the Singapore Ministry of Education to secure approval to conduct the research in the public schools in accordance with the local legal requirement (Flick, von Kardorff, & Steinke, 2004). A written request was made to the schools for their permission to conduct the study with their students and teachers. Students' consent, through their guardians, was also collected. The classroom teachers were provided with information about the study and their consent was sought prior to participation in the study.

3.7.2 Pilot study

A pilot study was conducted in an integrated school as part of the planning and review procedure. Sixty-four students from grade 4 and grade 5 and two teachers from one integrated and one regular class participated. The objectives of the pilot study were to fine tune the research process, validate the instruments and flag possible problems and deficiencies before the main study. The pilot study also helped the researcher gain a better understanding of the population characteristics and their reactions to the research process. Additionally, the experiences and conversations that surfaced at discrete moments in the pilot study formed part of the reflection data that informed the review of the investigation process for the main study. As a result, some parts of the instruments were amended after reviews and changes were also made to certain parts of the process for the main study.

Dialogue with the school administrators and teachers during the pilot study provided another rich source of feedback on the instruments, processes and procedures. Recorded notes provided a rich array of ideas, strategies and reflections about the research process. For example, it was noted that it was the first time students from the pilot study had taken part in non-school developed surveys. The students were

not accustomed to the practice of filling in forms or engaging in a conversation with an adult stranger at a school setting in non-examination circumstances. Therefore, it was decided that the researcher would visit the participating classes, to speak to the participants to build up an initial rapport with the students. At least two visits were made before the main study, to explain the research objectives and the procedures and to seek their consent to participate.

It was also uncovered during the pilot study that both regular students and students with disabilities lacked general awareness about disabilities and the appropriate labels for disabilities. A child with a physical disability who walked with a severe limp and who was exempted from physical exercise class indicated in the scenario-based questionnaire that she had no disability and did not know anyone with disabilities. Several of her classmates also did not identify her as a person with disability during the focus group interview sessions. The regular students in the integrated class were also unaware of another classmate who used a hearing aid to assist with a hearing impairment. The teacher explained to the researcher that she had not overly informed the students about their classmates with special needs or their conditions as she considered it to be a sensitive topic, and that the students with disabilities should not be labelled. The researcher thus took care to clarify with the participating schools in the main study about the regular students' awareness of their peer with a disability and to provide a general explanation of different labels of disabilities at the start of the study.

During the group interviews, the participants were found to require a lot of coaxing to respond to the interview topics and questions as they had not participated in these types of sessions before. It was also noted that the dynamics of the participants in each group affected the flow of responses. For example, some participants dominated the discussion, while some were passive and reluctant to speak up.

The school principal also assisted by reviewing of the language used in the questionnaire to make it more attuned to in-class language usage. Changes were

made to the wordings of the instructions given to the participants before filling in the questionnaire during the main study. Amendments were also made to ensure that the items in the questionnaire were more focused.

During the pilot study, it was noted that class teachers had the tendency to intervene to check that the students were doing the ‘right thing’ when they were filling in the scenario-based questionnaire. A decision was thus made that during the main study, class teachers would not be present in the classroom. The pilot study also highlighted the sensitivity of the staff to a third party observing their lessons. The researcher had to spend time reassuring the teachers about the objectivity of the researcher’s role and the focus of the study.

The main study was carried out after reviewing the pilot study. The above mentioned changes and amendments were made to the organization of the research procedures: the formulations of some question items in the questionnaires to clarify the wordings which the students in pilot study had difficulties to understand; some interview procedures to make sure that all children had a chance to speak; and chose a different recording device to accommodate for the flexible environment where children could move freely around the room but still being captured on the recording.

The researcher made a number of preliminary visits to arrange for the data collection in the main study. Preliminary visits made to each school allowed the researcher to obtain valuable information about the school leaders’ philosophy toward integration, the participants’ needs and concerns regarding the research methodologies and the school culture in general. The researcher was also able to verify the integrated schools’ infrastructure support such as lifts and ramps and the location of integrated classrooms in the multi-storey school buildings.

3.8 Chapter Summary

The chapter outlined the approaches of the research methodology and clarified the principles guiding the research design. It provided support for the choice of the research instruments and also explained the stages of the research process. It elaborated on how each stage of the research process and measures had a specific purpose that intricately expanded each subsequent stage of the research. The mixed-methods approach was outlined as the chosen research paradigm that facilitated the analysis of the three groups of regular students. The multi-dimensional instruments were set to identify differentiation of attitudes and the observed behaviour towards people with disabilities. The detailed account of data collection and analysis are described in Chapter Four. The quantitative study is described in Chapter Five.

CHAPTER FOUR

RESULTS AND ANALYSIS OF QUANTITATIVE STUDY

4.1 Introduction

This chapter describes the details of the quantitative study. It presents the analysis and the results of the quantitative data collected from the scenario-based questionnaire. The questionnaire was developed to assess regular students' attitudes towards peers with various disabilities in integrated classroom settings. The main section of the questionnaire consisted of 40 questions based on ten descriptive scenarios. The statistical analysis of the data using Anova and t-tests with Bonferroni adjustments (Huck, 2008), examined the impact of sharing a class environment with students with physical and sensory disabilities, on the attitudes of regular students. Students in integrated classes (Group 1) were compared to 2 groups of students who were not sharing an educational environment with peers with disabilities (Group 2 and Group 3).

The literature as presented in Chapter Two indicated equivocal results as to whether integration had a positive impact on regular students' attitudes towards others with disabilities. Therefore, instead of research hypotheses, the following research questions were constructed to examine the Singaporean integration model for the quantitative part of the study:

1. Do regular students in integrated classes display more positive attitudes towards people with disabilities as compared to students in regular classes in integrated schools? (Comparison of Group 1 with Group 2)

2. Do regular students in integrated schools display more positive attitudes towards people with disabilities as compared to students in regular schools? (Comparison of Group 1 and 2 with Group 3).
3. Do regular students in regular classes in integrated schools display more positive attitudes towards people with disabilities as compared to students in regular schools? (Comparison of Group 2 with Group 3)
4. What are the significant subscales in the questionnaire?
5. Are there significant differences between the subscales of the questionnaire among the three groups of students: students in integrated classes of integrated schools; students in regular classes in integrated schools; and the students in regular schools?

4.2 Participants and Settings

The quantitative study was carried out in five mixed-sex public primary schools in Singapore. Three of the schools had integrated students with disabilities (known as integrated schools) while the other two schools did not integrate students with disabilities (known as regular schools). The integrated schools are labelled as School A, School B and School C while School D and School E denote regular schools (Table 4.1).

The participants were regular students who did not have physical or sensory disabilities. The participants were balanced for age and gender. Altogether there were 397 participants, aged 11 to 13 (mean age = 10.52), including 208 boys (52.4%) and 189 girls (47.6%) in grade 4 and grade 5 classes. As shown in Table 4.1, 200 (50.4%) participants were from grade 4 and 197 (49.6%) were from grade 5. School D comprised a class of grade 4 (Class D1) and grade 5 (Class D2) participants, while

School E comprised 2 classes of grade 5 participants (Class E1 and Class E2). Group 1 comprised 69 (57%) boys and 52 (43%) girls. Group 2 consisted of 65 boys (55%) and 53 (45%) girls. Group 3 was made up of 74 (47%) boys and 84 (53%) girls.

Table 4.1 *Demographic Characteristics of Male and Female Participants of Grade 4 and Grade 5 Students from 3 Integrated and 2 Regular Schools*

Group	School	Participants				
		Male	Female	Total	Grade 4	Grade 5
Group 1 (Integrated School/ Integrated Class)	A	22	20	42	42	
	B	24	16	40	40	
	C	23	16	39		39
Group 2 (Integrated School/ Regular Class)	A	24	18	42	42	
	B	17	19	36	36	
	C	24	16	40		40
Group 3 (Regular School/ Regular Class)	D	38	41	79	40	39
	E	36	43	79		79
Total	5	208	189	397	200	197

The integrated schools participants were categorised into two groups. Group 1 participants were regular students in integrated classes in integrated schools. Group 2 participants were regular students in regular classes in integrated schools. Regular students in regular classes in regular schools were categorised as Group 3 participants.

Table 4.2 *Groups and Types and the Number of Participants in the Quantitative and Qualitative Study*

Sch	Type	Group	Students with			
			Physical and	Quantitative Study	Qualitative Study	Focus
			Sensory Disabilities	Scenarios-based Questionnaire	Classroom Observation	
A	Integrated	Group 1	1 with visual impairment	1 class of 42 students	42	12
		Group 2	NA	1 class of 42 students		6
B	Integrated	Group 1	1 in wheelchair and with flaky skin condition	1 class of 40 students	40	12
		Group 2	NA	1 class of 36 students		6
C	Integrated	Group 1	1 in wheelchair	1 class of 39 students	39	12
		Group 2	NA	1 class of 40 students		6
No of Participants from Integrated Schools				239	121	54
D	Regular	Group 3	NA	2 classes of 79 students		26
E	Regular	Group 3	NA	2 classes of 79 pupils		23
No of Participants from Regular Schools				158		49
Total No of Participants			3	397	121	103

All the 397 students participated in the quantitative research (Table 4.2). The qualitative study comprised classroom observations and focus group interviews. One hundred and twenty-one participants (30.5%) from the three integrated classes in integrated schools (School A, School B and School C) of Group 1 were selected for classroom observations. A sample of 103 participants (25.9%) was chosen from the five schools to take part in focus group interviews. Altogether 54 (52.4%) students from integrated schools and 49 (47.6%) students from regular schools were interviewed. There were 36 students from Group 1 (integrated classes in integrated

schools), 18 students from Group 2 (regular classes in integrated schools) and 49 students from Group 3 (regular classes in regular schools) who participated in the focus group interviews. The report on the results of the qualitative study is presented in Chapter Five.

4.3 Administration of the Quantitative Instrument

The scenario-based questionnaire assessed awareness of the labels of disabilities, the level of interaction and friendship networks with individuals with disabilities. The questionnaire for the students was administered in class by the researcher while the class teachers retreated to the staff room. This helped to minimise anxiety and unfamiliarity as the subjects were juveniles and were not familiar with research procedures. The reason for the class teachers leaving was to prevent the class teachers from intervening as described in Chapter Three (Section 3.7.2).

4.4 Design of the Instrument for the Quantitative Study

The scenario-based questionnaire instrument (see Section 3.4) was developed to examine students' attitudes towards disabilities and peers with disabilities. The quantitative data were used to inform the qualitative study. The questionnaire was intended to be self-completed. It was in English, the participants' main language in school. The context was school based and the language used was matched to the participants' language competency. The self-report measure enabled the researcher to understand the participants' level of contact with people with disabilities. The concepts used were designed to be simple and straightforward and matched to students' perception and understanding of disabilities. This ensured that the exercise could be completed without interference from the researcher. The information gathered in the quantitative section of the study also informed the researcher of the

participants' awareness of the common types of disabilities which were used to facilitate dialogue during the focus group interview sessions (see Chapter Five).

There were two parts to the questionnaire (Appendix A). In the first part, participants gave personal demographic information such as age and class. There were three items that identified how many people with disabilities each respondent knew, either in school or outside of school, and the types of disabilities. The instructions were as follows: " Do you know any person who has a disability?". Participants also indicated if they were familiar with the disabilities by ticking the name in the list of disabilities provided. There was also a list of level of associations and relationships with the person with a disability. Item examples include 'I often talk to him/her' and 'I avoid him/her'.

Part 2 of the questionnaire comprised ten scenarios of brief narratives describing common integrated classroom situations with a student with disabilities (see examples in Figure 4.1). Specific terms familiar to the participants and which were culturally appropriate for the sample were used. The types of disabilities included in the scenarios included: 1) hearing and visual impairments; 2) physical disabilities and 3) hyperactivity and Autism Spectrum Disorder (ASD). The selection was based on observations made from government official's description of children with disabilities in regular schools (Ministry of Education Singapore, 2005, 2007, 2009c).

Based on each scenario, four questions were constructed to measure students' attitudes towards peers with disabilities in the classroom. The participants were asked to respond as a third person and take on a neutral and objective stance. This approach addressed the sensitivities of the community about the research focus and was designed to pick up candid responses.

The questions were developed using four main themes relating to students' attitudes towards people with disabilities and two minor themes (shown in Figure 4.2). These themes were developed from the literature and from discussions with workers in the

field (Peck et al., 1990; Chen & Tan, 2006). The first main theme relates to a students' ability to appreciate and recognise that a person with disabilities has strengths, such as being good in studies and being able to acquire special skills.

<ul style="list-style-type: none"> John has a hearing impairment. He is cheerful and clever. He understands through lip reading and uses sign language. He is able to do his work on his own without extra help. He is a new student in Xin Yi's class and it is his first day in school. (Circle the number that best describes Xin Yi's feelings towards John.) 				
A. I would play with John during recess.				
1	2	3	4	5
Strongly Agree	Agree	Not Sure	Disagree	Strongly Disagree
B. John could be the top student in class if he works hard.				
1	2	3	4	5
Strongly Agree	Agree	Not Sure	Disagree	Strongly Disagree
C. I think John is awfully smart because it is tough to communicate through sign language and lip reading.				
1	2	3	4	5
Strongly Agree	Agree	Not Sure	Disagree	Strongly Disagree
D. I would like to see if I can 'talk' to John. It would be fun.				
1	2	3	4	5
Strongly Agree	Agree	Not Sure	Disagree	Strongly Disagree
<ul style="list-style-type: none"> Farus is in a wheelchair because he is suffering from an illness that affects his nervous system. His teacher has appointed Jim and Bing to help to move him around in the school, such as during assembly and recess time. (Circle the number that best describes Jim and Bing's feelings towards their duties.) 				
A. We would have helped Farus even if teacher hadn't asked.				
1	2	3	4	5
Strongly Agree	Agree	Not Sure	Disagree	Strongly Disagree
B. Farus is our buddy.				
1	2	3	4	5
Strongly Agree	Agree	Not Sure	Disagree	Strongly Disagree
C. It is rather troublesome taking care of Farus. We would rather play with our friends.				
1	2	3	4	5
Strongly Agree	Agree	Not Sure	Disagree	Strongly Disagree
D. Our parents are glad that we are helping Farus in school.				
1	2	3	4	5
Strongly Agree	Agree	Not Sure	Disagree	Strongly Disagree

Figure 4.1 Sample scenarios from Part 2 of the questionnaire describing students and a peer with disabilities in an integrated classroom environment

The second theme examined the participants' perception of the likelihood of establishing a friendly relationship with a peer with disabilities. The third theme explored the receptiveness of the participants to integration or to sharing a learning environment with a student with disabilities. The questions investigated if the participants would welcome a peer with disabilities in the classroom or find it 'troublesome' to accommodate such a student. The fourth theme focused on being able to empathise or understand the challenges facing a student with disabilities.

Additionally, there were also 4 other questions which centred on participants' perception of teachers and parents' attitudes towards students with disabilities in the integrated classroom. The theme of the perception of teachers being less strict with students with disabilities and the perception of parents supporting integration in class were categorised as minor themes. They were used to uncover possible relationships between the participants' attitudes towards people with disabilities and their perception of significant others, such as, teachers and parents' attitudes towards integration.

Each question was presented in a simple format to allow participants to respond to the scenarios. The participants nominated a response along a continuum of value statements that described reactions and perception of individuals with disabilities. The response was based on a 5-point Likert-type scale (1=strongly agree, 2= agree, 3= not sure, 4 = disagree and 5=strongly disagree), and half the items were reverse-coded to help control for response bias. The 40 questions were scored and the scores could range from 200 to 40 for each participant, with higher scores reflecting more positive attitudes towards students with disabilities.

Main themes

1. Being able to appreciate and recognise strengths of people with disabilities.
2. Being likely to befriend people with disabilities.
3. Supporting integration in schools.
4. Being able to empathise with people with disabilities.

Minor themes

1. Perception of teachers being less strict with students with disabilities.
2. Perception of parents supporting integration in class.

Figure 4.2 Themes of the 40 questions found in Part 2 of the scenario-based questionnaire

4.5 Quantitative Data Analysis

The data were analysed using SPSS16.0 TM database program (Glenda, 2007). Data collected enabled group comparisons to be made and to measure the impact of the relationship between the variables. The individual substantive scores on the questionnaires were compared among regular students from integrated classes (Group 1) and regular classes (Group 2) in integrated schools and regular students in regular schools (Group 3). The data from seven participants were incomplete, such as the omission of some of the items in the scenario-based questions in Section 2 of the questionnaire. These missing values were removed from the final computation. The final sample included only the data collected from 390 participants (4th graders 197, 5th graders 193; boys 204, girls 186).

4.5.1 Assessment of the reliability of the scenario-based questionnaire instrument

As the questionnaire instrument was developed by the researcher, a test to examine the probability that the scenario-based questions structure was supported by the data was carried out. A Confirmatory Factor Analysis (Cramer, 2003) was conducted on the 40 items scenario-based questions in Part 2 of the questionnaire. Cronbach's alpha test was applied to measure the internal consistency of the 40 items so as to ascertain the reliability of each individual item. The Cronbach's alpha calculated was 0.894 indicating good reliability (Table 4.3) and 3 items were shown to have poor correlation with the sum of the remaining items. The corrected item-total correlation were -ve 0.010, -ve 0.002 and 0.069.

The first item found to have poor correlation related to the scenario of a boy with brittle bones. The question asked the participants to imagine if such a peer would be sad or unhappy ($r = -0.010$). The second question stemmed from a scenario description of a boy who often trips in class because of weak muscles and poor coordination ($r = -0.002$). Participants were asked if they think that he should not have a PE lesson as he is not healthy. The third question found to have low correlation was an item describing a girl who is a diabetic and is one of the top students in her integrated class ($r = 0.069$). The question posed to the participants suggested that the girl's achievement had to be attributed to the extra help she received from teachers. As these items were not consistent with the remaining items, they were removed from the scale. After removing these items from the scale, the reliability analysis was re-run on the remaining 37 items. This yielded an improved Cronbach's alpha of 0.907 with all of the items correlating well with the total score.

Table 4.3 *Reliability Statistics for the 40 Question Items and 37 Question Items in Part 2 of the Questionnaire*

Cronbach's Alpha	Cronbach's Alpha based on standardised items	No of items
0.894	0.901	40
0.907	0.910	37

4.5.2 Analysis of the mean scores by groups

Based on the final total of 37 items, the scores of the 390 participants in their respective groups (Group 1, Group 2 and Group 3) were tested for significant differences (Howell, 2002). An analysis of variance on the scores using One-Way ANOVA procedure was applied to compare the means scores among the groups (refer to Table 4.7).

The relationships are presented in the summary table for the analysis of variance (Table 4.4). The table shows that participants in Group 1 scored lower on the questionnaire ($M = 137.89$, $SD = 17.945$, $n=113$) than participants in Group 2 ($M = 143.28$, $SD = 15.833$, $n=119$) and Group 3 ($M = 144.04$, $SD = 17.332$, $n=158$).

Table 4.4 *The Means and SD of Participants' Scores based on 37 Question Items in Part 2 of the Questionnaire*

Total	390	142.03	17.236	.873	140.31	143.74	48	180
Group	N	Mean	Std. Deviation	Std. Error	95% Confidence Interval for Mean		Min	Max
					Lower Bound	Upper Bound		
1 (Integrated class in integrated sch)	113	137.89	17.945	1.688	134.55	141.24	48	180
2 (Regular class in integrated sch)	119	143.28	15.833	1.451	140.40	146.15	82	176
3 (Regular class in regular sch)	158	144.04	17.332	1.379	141.31	146.76	87	180

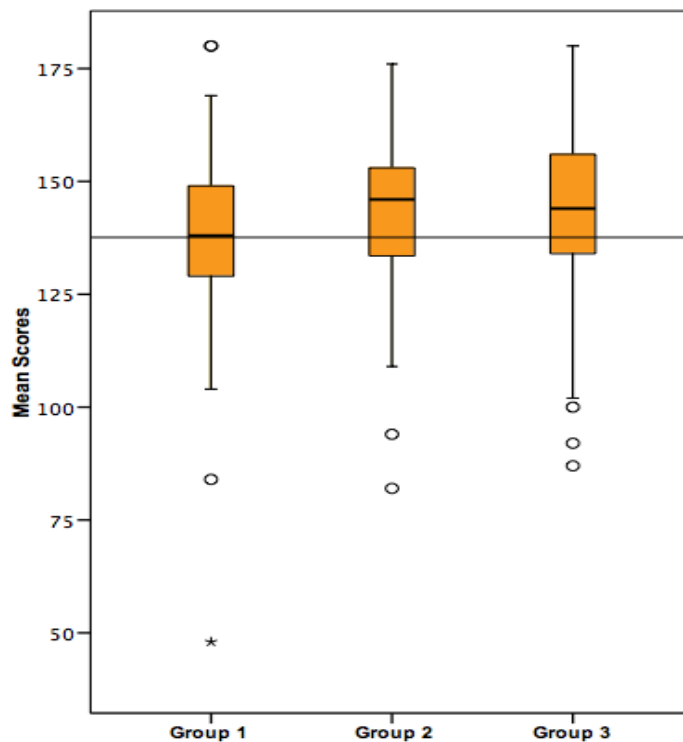


Figure 4.3 Box plot of the range scores of participants on the 37 items of part 2 of the questionnaire

The figure above (Figure 4.3) illustrates the distribution of mean scores of the participants from Group 1 (integrated classes in integrated schools), Group 2 (regular classes in integrated schools) and Group 3 (regular classes in regular schools). The figure illustrates the differences between groups and mean scores. The outliers suggest that some participants' attitudes were significantly different from the groups they were in. The views of these participants would be gathered through the focus group interviews.

The results of the 37 items scenario-based questionnaire on attitudes towards disabilities and peers with a disability showed that the mean scores of the regular participants in integrated classes (Group 1) were the lowest among the 3 groups

(Figure 4.4). The overall mean scores of Group 1 were 137.89 while the mean scores of Group 2 participants were 143.28 and Group 3 was 144.04. The Group 3 overall mean scores were higher than Group 1 and Group 2 combined. The result indicated that students in regular schools (Group 3) had more positive attitudes towards disabilities and peers with disabilities than students in integrated schools (Group 1 and Group 2).

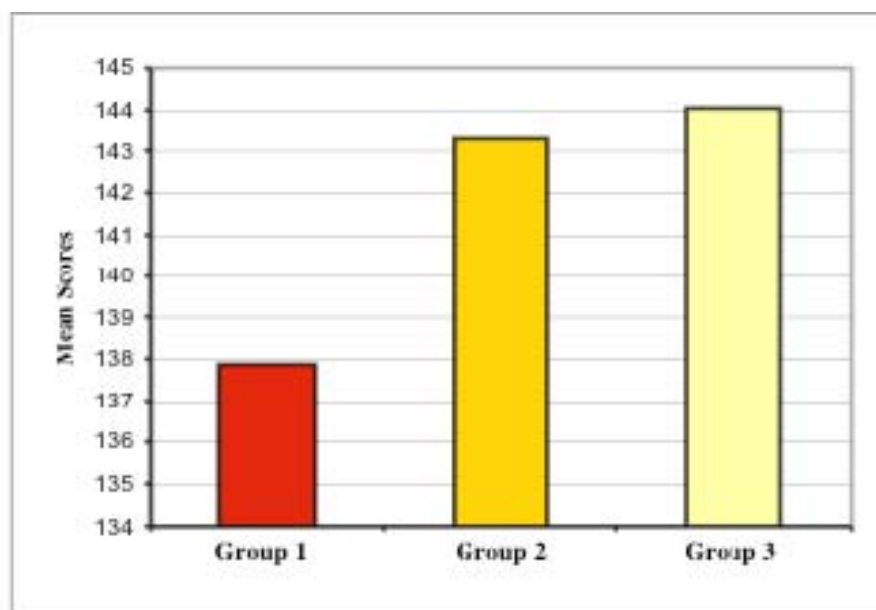


Figure 4.4 The overall participants' mean scores of the questionnaire

To analyse the difference in scores between and across groups, non-parametric Kruskal-Wallis one-way ANOVA (Huck, 2008) procedure was conducted to determine if there were significant differences between Group 1 participants (integrated classes in integrated schools), Group 2 participants (regular classes in integrated schools) and Group 3 participants (regular classes in regular schools). The p value of 0.05 or lower indicated significant difference in the means. The Kruskal-Wallis (K-W) test results (Table 4.5) showed that there was a significant difference between the scores of participants across the groups, $\chi(2)=11.41$, $p < 0.003$.

Table 4.5 *Significant Difference of the Participants' Mean Scores based on 37 Question Items of Questionnaire*

	Scores in Questionnaire
Chi-Square	11.407
df	2
Asymp. Sig	0.003

Table 4.6 *Kruskal-Wallis Test on the Participants' Questionnaire Mean Scores*

	Group	Mean Rank
Scores (based on 37 items)	1	165.41
	2	205.82
	3	209.25

An analysis of the mean scores of the participants (Table 4.6) also shows that Group 1 mean rank was 165.41, which was lower than Group 2 (205.82) and Group 3 (209.25). This was because Group 2 and Group 3 participants tend to have an overall higher mean score on the questionnaire than Group 1 participants.

Table 4.7 *Kruskal-Wallis ANOVA Test on the Scores of Participants based on 37 Items of the Questionnaire*

	F	Sig.
Between Groups	4.726	.009

To confirm if the difference in scores of the participants among the three groups was significant, an ANOVA (Sirkin, 2006) was run. The analysis of variance table (Table 4.7) indicated that scores differed significantly for students among the different groups, $F(3,389) = 3.667$, $p = 0.009$.

Table 4.8 *Multiple Comparisons on Participants' Scores with Bonferroni Tests*

(I) Group	(J) Group	Mean Difference (I-J)	Std. Error	Sig.	95% Confidence Interval	
					Lower Bound	Upper Bound
1	2	-5.384	2.243	*.05	-10.78	.01
	3	-6.144*	2.103	** .01	-11.20	-1.09
2	1	5.384	2.243	.05	.00	10.78
	3	-.761	2.072	1.00	-5.74	4.22
3	1	6.144*	2.103	** .01	1.09	11.20
	2	.761	2.072	1.00	-4.22	5.74

* The mean difference is significant at the 0.05 level.

Post hoc analyses were conducted to determine where the significant differences were (Howell, 2002) among the three groups of participants i.e. Group 1 (integrated classes in integrated school), Group 2 (regular classes from integrated school) and Group 3 (regular classes in regular school). Multiple comparisons with Bonferroni adjustments as shown in Table 4.8, established that there was a significant difference between Group 1 and Group 3, ($p \leq 0.01$) and between Group 1 and Group 2, ($p < 0.05$). The difference between Group 2 and Group 3 (the regular classes) was not significant. Participants in regular schools (Group 3) had significantly higher scores, that is, they were more positive in attitudes towards people with disabilities than Group 2 (regular class in integrated school) and Group 1 participants from integrated schools.

4.5.3 Analysis of the mean scores by types of classes

An investigation was conducted to investigate the difference between the regular classes and integrated classes. Table 4.9 indicates that the integrated classes (Group 1) and the regular classes combined (Group 2 and Group 3) had quite similar standard deviations (17.99 and 16.68).

Table 4.9 *Mean Scores based on 37 items of the Questionnaire of Participants from Integrated Classes and Regular Classes*

	Class Type	N	Mean	Std. Deviation	Std. Error
Means Scores based on Integrated 37 items		113	137.89	17.945	1.688
	Regular	277	143.71	16.679	1.002

The mean scores of the Group 2 students in regular classes in integrated schools and Group 3 students in non-integrated schools were also generally higher than their counterparts in integrated schools (Group 1) as shown in Figure 4.5.

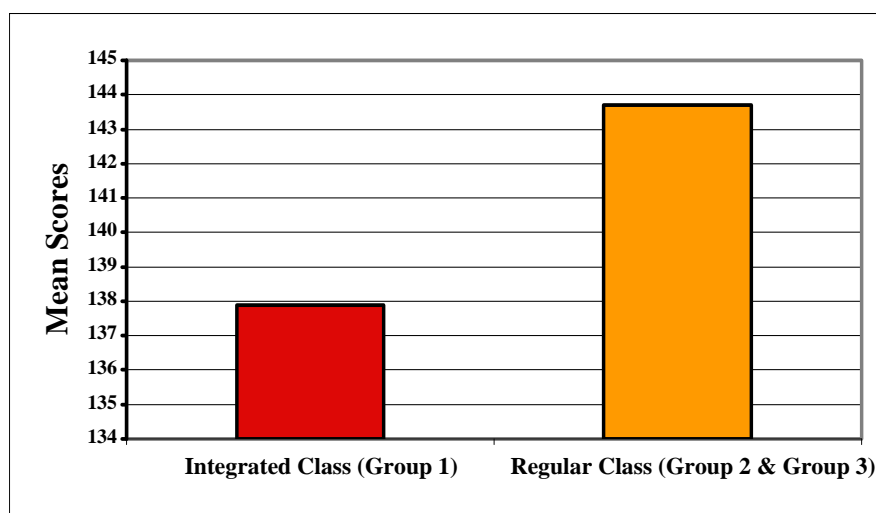


Figure 4.5 Mean scores of Group 1 integrated classes compared to combined regular classes from Group 2 and Group 3

In the t-test, the Levene's test shows that the difference between the sample variances was not significant ($F = 0.038$, $p = 0.847$) so the equal variances t-test was used. An Independent Samples t -Test (Table 4.10) indicated that the mean scores differed significantly for participants in regular classes (Group 2 and Group 3) and integrated classes (Group1). The average scores for regular classes ($M=143.71$, SD

=16.679, N =277) was substantially higher than that for integrated classes (M = 137.89, SD = 17.945, N = 113), and this difference was significant, $t(388) = 3.0536E0$, $p < 0.003$. This means that participants in regular classes in both integrated and regular schools (Group 2 and Group 3) were significantly more positive in their attitudes towards disabilities than participants in integrated classes (Group 1).

Table 4.10 *Independent Sample Test on the Mean Scores of Participants from Integrated Classes and regular classes*

Mean Scores Based on 37 Items	Levene's Test for Equality of Variances		t-test for Equality of Means						
	F	Sig.	t	df	Sig. (2-tailed)	Mean Difference	Std. Error Difference	95%	
								Lower	Upper
Equal variances assumed	.038	.847	-3.056E0	388	.002	-5.817	1.904	-9.560	-2.075
Equal variances not assumed			-2.963E0	1.950E2	.003	-5.817	1.963	-9.689	-1.946

4.5.4 Analysis of the mean scores by schools

Table 4.11 shows the means and standard deviations of the scores for all the participants from School A, School B, School C, School D and School E by the groups they were in. The mean scores of Group 1 participants in School A (M= 137.36, SD = 10.429) and School B (M = 135.03, SD = 24.836) was lower than School C (M = 141.32, SD = 15.792). Group 2 participants mean score was 143.28 (SD = 15.833), with School A (M=148.09, SD = 14.740) higher than School B (M = 142.32, SD = 13.481) and School C having the lowest scores (M = 138.87, SD = 17.864). In Group 3, School D participants obtained higher mean scores (M = 146.65, SD = 15.876) than School E (M = 141.43, SD = 18.407).

Table 4.11 *Mean and Standard Deviation from the Scores based on 37 Items of the Questionnaire*

Group	School	Mean	Std. Deviation	No of Participants
1	A	137.36	10.429	39
	B	135.03	24.836	37
	C	141.32	15.792	37
	Overall	137.89	17.945	113
2	A	148.09	14.740	43
	B	142.32	13.481	37
	C	138.87	17.864	39
	Overall	143.28	15.833	119
3	D	146.65	15.876	79
	E	141.43	18.407	79
	Overall	144.04	17.332	158

Integrated students from School C had the highest mean scores ($M=141.32$, $SD = 15.792$) in Group 1 and their schoolmates from the regular class obtained the lowest mean scores ($M=138.87$, $SD = 17.864$) in Group 2. The regular schools (School D and School E) Group 3 participants were more positive in their attitudes than were Group 1 participants from School A, School B and School C. The mean scores of participants from School D ($M = 146.65$) and participants from School E ($M = 141.43$) were higher than both the integrated and regular class participants of School C in Group 1 ($M = 141.32$). This shows that students from regular classes in regular schools (Group 3) were generally more positive than participants from integrated and regular classes in School C.

School A and School B were similar as their integrated participants were generally less positive in their attitudes towards disabilities than their counterparts in the regular classes. The difference in School A was particularly significant $t(80)=-3.771$, $p = 0.000$. On the other hand, School C was the exception among the integrated schools. Notably, School C participants in Group 1 (integrated class in integrated

school) scored higher than their schoolmates in Group 2 (regular class in integrated school). Participants in the integrated class in School C demonstrated that they were likely to be more positive than regular class participants in the same school towards disabilities and towards peers with disabilities (Figure 4.6).

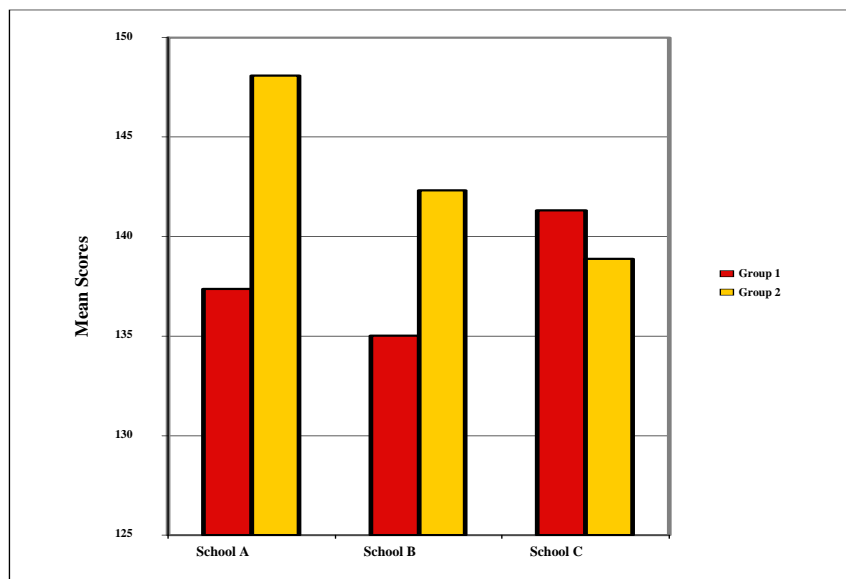


Figure 4.6 School A and School B regular class participants demonstrated more positive attitudes than their integrated class schoolmates

4.5.5 Thematic analysis of attitudes towards people with disabilities

As described in Section 4.4, the scenario-based questions measured underlying attitudinal dimensions. They were constructed based on four main themes and two minor themes (refer to Figure 4.2). The first theme was about regular students' awareness and appreciation of the strengths of people with disabilities. The second theme focused on regular students' attitudes towards befriending a person with disabilities. The third theme described the attitudes of regular students towards the integration of students with special needs in their class or school and the fourth concerned empathy towards people with disabilities. There were also five questions centred on two minor themes. Three questions were related to students' perception of

teachers towards people with special needs and two questions were related to parents' perception towards their children making friends with people with special needs.

To confirm the hypothesis of the factor structure of these six themes, confirmatory factor analysis was conducted with Kaiser-Meyer-Olkin Measure of Sampling Adequacy and Bartlett's Test of Sphericity (Dziuban & Shirkey, 1974).

Table 4.12 *KMO and Bartlett's Test of Factor Analysis on Questions based on 4 Major Themes and 2 Minor Themes*

		<i>Theme 1</i>	<i>Theme 2</i>	<i>Theme 3</i>	<i>Theme 4</i>	<i>Theme 5</i>	<i>Theme 6</i>
Kaiser-Meyer-Olkin		.721	.885	.839	.841	.500	.500
Measure of Sampling							
Bartlett's	Approx.	2.425E2	1.491E3	6.795E2	1.308E3	44.261	10.779
Test of	Chi-						
Sphericity	df	28	91	21	78	1	1
	Sig.	***.000	***.000	***.000	***.000	***.000	**.001

*** $p < 0.000$, ** $p < 0.001$, * $p < 0.05$

If the KMO value is 0.60 or higher, the degree of common variance is considered adequate and at 0.90 to 1.00, the degree of common variance is considered excellent. Estimates of goodness of fit for the 37- items, for the first 4 factors either exceeded or approximated ideal values, indicating the model was highly acceptable in statistical as well as conceptual terms. For example, the analysis on the theme of being aware and able to appreciate the strengths of people with disabilities (Theme 1), the Bartlett's Test of Sphericity was significant, $p < .001$ and $KMO = 0.721$ (Table 4.12). This indicates that there were highly significant correlations between the variables. The KMO for the last two factors (Theme 5 and Theme 6) relating to

the perception of teachers' attitudes and parents' support for integration was 0.500. The low correlation for these two minor themes could be attributed to the small sample size as these two themes were covered by only five questions.

To establish if there were correlations between the variables and participants' experience of integration, participants' scores were analysed based on the themes of the questions. Table 4.13 shows the mean scores based on the six thematic classifications of Group 1 participants (integrated classes in integrated schools), Group 2 participants (regular classes in integrated schools) and Group 3 participants (regular classes in regular schools). Group 1 integrated class participants scored the lowest among the three groups in all the themes. Group 3 participants from regular schools who were not in integrated classes, were found to be more likely than the other participants to befriend peers with disabilities and support integration in schools. On the other hand, Group 2 participants were more likely to recognise and appreciate the strengths of peers with disabilities and to empathise with them than were the other groups of participants.

Table 4.13 *Descriptive statistics of the scores of participants by groups based on thematic classification of the questions*

Questions based on Themes	Group	N	Mean	Std. Deviation	Std. Error	95% Confidence Interval for Mean		Min	Max
						Lower Bound	Upper Bound		
Likely to befriend people with disabilities (PWD)	1	113	53.47	8.022	.755	51.97	54.96	18	70
	2	119	54.61	7.682	.704	53.22	56.01	27	69
	3	158	55.35	8.066	.642	54.09	56.62	25	70
Recognise and appreciate strengths of PWD	1	113	30.81	4.066	.383	30.05	31.56	12	40
	2	119	32.66	3.499	.321	32.03	33.30	23	40
	3	158	32.49	3.574	.284	31.93	33.06	23	40
Support integration in schools	1	113	26.03	4.786	.450	25.13	26.92	11	35
	2	119	27.14	4.480	.411	26.33	27.96	12	35
	3	158	27.41	4.899	.390	26.64	28.18	11	35
Able to empathise with PWD	1	113	52.04	7.708	.725	50.61	53.48	17	65
	2	119	54.25	6.754	.619	53.03	55.48	27	65
	3	158	53.78	7.153	.569	52.65	54.90	20	65
Perception of teachers being less strict with PWD	1	113	6.26	1.792	.169	5.92	6.59	2	10
	2	119	6.60	2.064	.189	6.22	6.97	2	10
	3	158	6.73	1.986	.158	6.42	7.04	2	10
Perception of parents supporting integration	1	113	8.04	1.611	.152	7.74	8.34	2	10
	2	119	8.30	1.459	.134	8.04	8.57	3	10
	3	158	8.24	1.491	.119	8.01	8.47	4	10

*** p < 0.000, ** p < 0.001, * p < 0.05

Table 4.14 *Results of Kruskal-Wallis ANOVA Test on Participants' Scores based on Themes of Questions*

Themes	Comparison	Sum of Squares	df	Mean Square	F	Sig.
Likely to befriend person with disabilities (PWD)	Between Groups	234.362	2	117.181	1.860	.157
	Within Groups	24386.512	387	63.014		
	Total	24620.874	389			
Recognise/ appreciate strengths of PWD	Between Groups	250.994	2	125.497	9.161	***.000
	Within Groups	5301.765	387	13.700		
	Total	5552.759	389			
Support integration In schools	Between Groups	134.238	2	67.119	2.985	.052
	Within Groups	8701.751	387	22.485		
	Total	8835.990	389			
Able to empathise with PWD	Between Groups	316.573	2	158.287	3.052	*.048
	Within Groups	20070.463	387	51.862		
	Total	20387.036	389			

***p < 0.000 , **p < 0.001 , * p < 0.5

An Kruskal-Wallis ANOVA was run to compare the scores of participants from Group 1, Group 2 and Group 3 based on the themes of the questions (Table 4.14). It showed that there was a significant difference among the groups on the theme centred on being able to recognise and appreciate the strengths of people with disabilities, $F(2,387) = 9.161$, $p < 0.001$. There was also a significant difference in the scores of the 3 groups on questions concerning showing empathy towards those with disabilities $F(2,387) = 3.052$, $p = 0.048$. The difference was not significant on the theme relating to supporting integration ($p = 0.052$). The analysis also showed that there was no significant difference among the 3 groups on questions about befriending people with a disability ($p = 0.157$).

Table 4.15 *Comparisons of Differences in Scores of Participants using Bonferroni Test*

Themes	(I) Group	(J) Group	Mean Difference (I-J)	Std. Error	Sig.	95% Confidence Interval	
						Lower Bound	Upper Bound
Likely to befriend people with a disability (PWD)	1	2	-1.144	1.043	.819	-3.65	1.36
		3	-1.885	.978	.164	-4.24	.47
	2	1	1.144	1.043	.819	-1.36	3.65
		3	-.741	.964	1.000	-3.06	1.58
	3	1	1.885	.978	.164	-.47	4.24
		2	.741	.964	1.000	-1.58	3.06
Recognise / appreciate strengths of PWD	1	2	-1.859*	.486	***.000	-3.03	-.69
		3	-1.688*	.456	**.001	-2.78	-.59
	2	1	1.859*	.486	***.000	.69	3.03
		3	.170	.449	1.000	-.91	1.25
	3	1	1.688*	.456	**.001	.59	2.78
		2	-.170	.449	1.000	-1.25	.91
Support integration in schools	1	2	-1.116	.623	.222	-2.61	.38
		3	-1.385	.584	.055	-2.79	.02
	2	1	1.116	.623	.222	-.38	2.61
		3	-.269	.576	1.000	-1.65	1.12
	3	1	1.385	.584	.055	-.02	2.79
		2	.269	.576	1.000	-1.12	1.65
Able to empathise with PWD	1	2	-2.208	.946	.060	-4.48	.07
		3	-1.734	.887	.154	-3.87	.40
	2	1	2.208	.946	.060	-.07	4.48
		3	.474	.874	1.000	-1.63	2.58
	3	1	1.734	.887	.154	-.40	3.87
		2	-.474	.874	1.000	-2.58	1.63

*** $p < 0.000$. ** $p < 0.001$, * $p < 0.05$

The ANOVA analysis (Table 4.14) highlighted 2 themes that delineated the participants' attitudes towards people with a disability. The first theme was being aware of and able to appreciate the strengths of people with a disability. The second was being able to empathise with those with disabilities. A post hoc test was conducted to further examine the differences in scores for participants in different groups in questions centred on these two themes (Table 4.15). The Bonferroni test on the theme of being aware and able to appreciate the strengths of people with a disability showed that the scores between Group 1 (integrated class in integrated schools) and Group 2 (regular class in integrated schools) participants was highly significant, $p < .001$ and between Group 1 and Group 3 (regular class in regular schools) participants the $p = 0.001$. On the other hand, there was no significant difference between Group 2 and Group 3 students. The test also showed that there were no significant differences on questions relating to showing empathy towards those with disabilities ($p > 0.05$), between Group 1 and Group 2, $p = 0.06$, between Group 1 and Group 3, $p = 0.154$ and between Group 2 and Group 3, $p = 1.000$

The analysis indicated that being able to recognise and appreciate the strengths of people with a disability was the main factor that contributed to the differences in attitudes among the participants. Questions that centred on this theme yielded different levels of response from the participants from the three groups of participants. Group 1 participants who were in integrated classes scored significantly lower than Group 2 participants in non-integrated regular classes in the same school and from Group 3 participants who were in schools with no integrated programs. Overall, students from regular classes from both integrated and regular schools (Group 2 and Group 3) did not differ significantly in their response to questions that focussed on their ability to recognise and appreciate the strengths of people with a disability. Another Bonferroni test was conducted focusing on this theme by the schools. As indicated in Table 4.16, the p value is 0.020 for School A participants and for School B participants the p value is 0.016. These results confirmed that Group 1 and Group 2 participants from School A and School B differed significantly in their responses compared to participants from School C. Notably, the attitudes of

School C participants were closer to the responses of Group 3 participants from regular schools (School D and School E).

Table 4.16 *Bonferroni Test on the Mean Scores of Participants that Focused on the Theme 'Being Able to Recognise and Appreciate the Strengths of People with A Disability'*

Themes	School /Group or Class		Mean Difference (G1-G2)	Std. Error	Sig.	95% Confidence Interval	
						Lower Bound	Upper Bound
Able to recognise / appreciate strengths of people with disabilities	Sch A (Group 1)	Sch A (Group 2)	-2.874	.810	.020	-5.54	-.21
	Sch B (Group 1)	Sch B (Group 2)	-3.072	.652	.016	-5.87	-.27
	Sch C (Group 1)	Sch C (Group 2)	.256	.835	1.000	-2.49	3.00
	Sch D (Class D1)	Sch D (Class D2)	.017	.830	1.000	-2.74	2.71
	Sch E (Class E1)	Sch E (Class E2)	1.309	.830	1.000	-4.04	1.42

*** $p < 0.000$, ** $p < 0.001$, * $p < 0.05$

4. 6 Connections between Integration and Attitudes of Regular Students

The analysis of the mean scores of the questionnaire shows that there was a negative relationship between the attitudes of students towards disabilities and the experience of integration with peers with disabilities in class and school. Students from regular classes (Group 2 and Group 3) who had not experienced integration in the class were found to be more positive towards students with disabilities than students from integrated classes (Group 1). The difference was more pronounced between students from regular classes in regular schools (Group 3) and students from integrated

classes in integrated schools (Group 1). Group 1 students from School A and School B were found to be more negative towards disabilities. The regular students in integrated classes (Group1) in both schools were significantly less positive towards students with disabilities than their schoolmates who had not experienced integration (Group 2) and the regular students in School D and School E (Group 3).

The thematic analysis using Bonferroni tests (Section 4.5.5) identified the key aspect of difference in attitudes among the different groups of students. Regular students in integrated classes, students in regular classes in integrated schools and those in regular schools with no integration differed significantly in their abilities to recognise and appreciate the strengths of people with a disability. The overall negative scores of Group 1 students implied that the sharing of a learning space with students with disabilities did not positively affect the ability of regular students to recognise and appreciate that people with a disability could have strengths. Comparatively, Group 3 (regular students in regular schools) exhibited the most positive attitudes towards disabilities and people with a disability.

The results suggested that direct and active participation in integration was associated with regular students' negative attitudes towards students with disabilities. It is also noteworthy that relative proximity to people with a disability, as in the case of Group 2 students (who were in integrated schools but in non-integrated classes), had no significant negative effect on their attitudes towards students with disabilities compared to their Group 1 schoolmates in an integrated class. Like Group 3 participants in regular classes, Group 2 students were also more positive towards students with disabilities than their counterparts in integrated classes. The anomaly in School C participants, who recorded positive scores between integration and positive attitudes towards people with a disability, was investigated further with the qualitative data in Chapter Five.

4.7 Discussions and Summary of Quantitative Findings

This chapter presented the statistical analysis of the quantitative study on the difference in regular students' attitudes towards students with disabilities among the different groups of participants. It was found that the students who were in an integrated school (either in integrated or regular classes) displayed more negative attitudes towards people with a disability as compared to those studying in regular schools. At the school level students in regular schools exhibited more positive attitudes towards peers with disabilities than students in integrated schools. At the classroom level, students who shared a learning environment with peers with disabilities were generally more negative in their attitudes than their schoolmates who were in regular classes. Overall, students who had daily close contact with peers with disabilities in their classes were likely to be the least positive in their attitudes towards disabilities compared to students who did not share classroom learning time with peers with disabilities.

Students from regular schools, who were not in contact with peers with disabilities, demonstrated more positive attitudes towards students with disabilities compared to students who studied in integrated schools and therefore had regular or occasional contact with students with disabilities during school hours. In other words, students in regular schools (Group 3) had the most positive attitudes towards disabilities and peers with disabilities than did students in integrated schools (Group 1 and Group 2).

The analysis of participants' attitudes in each of the three integrated classes demonstrated that not all integrated classes had the same level of negative correlation between integration and attitudes towards peers with disabilities. The participants in integrated classes in integrated School C appeared to develop relatively more positive attitudes towards disabilities than students from School A and School B (refer to Figure 4.6). This unexpected result provided the impetus to uncover the conditions that produced such a phenomenon.

The analysis of themes in the quantitative study highlighted the factor that significantly distinguished the three groups of participants. Among the six themes, responses on the theme of being able recognise and appreciate the strengths of people with a disability differentiated the participants by groups and by schools. Students who had fewer opportunities to relate to peers with disabilities scored more positively in this aspect compared to those who had more opportunities. This was also the theme that differentiated students from integrated classes in School A, School B and School C.

In particular, School C integrated class students who had registered more positive attitudes towards students with disabilities than their counterparts in regular classes differed also on this theme. This means that students in School C were better able to appreciate the strengths of people with a disability compared to their schoolmates in classes with no peers with disabilities. This finding suggests that there might be some particular factors in the learning environment of School C which account for this difference. The next chapter presents the analysis of the qualitative investigation and discusses the features that set the participants apart.

CHAPTER FIVE

RESULTS AND ANALYSIS OF QUALITATIVE STUDY

5.1 Introduction

This chapter presents details of the qualitative study. It outlines the methodology and instruments and presents the data and analysis of the qualitative findings. The qualitative results were derived from data collected from the focus group interviews with regular students, classroom observations in integrated classes and interviews with teachers. The qualitative study builds upon and expands the results gathered from the quantitative study (Chapter Four).

The aim of qualitative study was to further explore the attitudes of regular students towards people with a disability and provide an in-depth understanding of the factors that might have contributed to the development of such attitudes. In particular, the differences between the attitudes of regular students from integrated classrooms (Group 1) and non-integrated classrooms (Group 2 and Group 3), and between the students from integrated schools (Group 2) and non-integrated schools (Group 3) were analysed and discussed in connection to the classroom and school contexts. The presentation of the results of the qualitative data analysis consisted of three interconnected parts: 1) focus group interviews; 2) classroom observations and 3) teacher interviews. The qualitative study aimed to address the following questions:

1. What are the characteristics of the viewpoints of regular students towards their peers with disabilities and integration? How do the attitudes of Group 1 (integrated classes in integrated schools), Group 2 (regular classes in integrated schools) and Group 3 (regular classes in regular school) participants differ from each other?

2. What are the factors that mark the differences between the attitudes of students from integrated schools (Group 1 and Group 2)? What are the integrated class students' (Group 1) observable behaviours and attitudes displayed during class towards their classmates who had disabilities?
3. What are the social and cultural characteristics of the learning environments that are associated with the different attitudes of regular students towards people with a disability?

5.2 Overview and Further Expansion of the Quantitative Findings

The qualitative study was built upon, and further elaborated on, the results of the quantitative study. In Chapter Four (Section 4.5), the analysis of quantitative data established the following patterns in the attitudes of regular students towards peers with disabilities.

The data identified that overall, the students in integrated classes who had contact with peers with disabilities were significantly less positive in their attitudes towards disabilities, compared to students in integrated schools who were not in contact with peers with disabilities in their classes. On the other hand, students from regular schools scored the most positive attitudes among the three groups. The analysis implied that not sharing classrooms or schools with peers with disabilities had a positive effect on attitudes towards disabilities. Whilst participants from regular classes in integrated schools (Group 2) were generally more positive towards disabilities than students in integrated classes (Group 1); the students from regular schools were the most positive of the three groups.

The study on three integrated schools showed that in one of the schools (School C), integrated class participants had registered more positive attitudes towards peers with disabilities than their regular class counterparts in the same school (refer to Figure

4.6). This is an anomaly that differs from the common trend shared by participants from the other two integrated schools (School A and School B). This finding, that integrated students in School C who spent time at school in contact with peer with a disability were able to build up positive attitudes towards people with a disability, implied that integration could bring about a positive impact on regular students' attitudes.

The analysis of the thematic scheme of the results of the quantitative study demonstrated a significant difference in the participants' ability to recognise and appreciate the strengths of people with a disability. This result delineated the integrated students from the regular students, either from the same schools (Group 1 and Group 2), or between the students from integrated and non-integrated schools (Group 1 and Group 3). Students who had fewer opportunities to relate to peers with disabilities were able to better recognise and appreciate the strengths of people with a disability, compared to those who had everyday contact and therefore more opportunities. Notably, this theme also differentiated the integrated classes from the regular classes of School C. In School C, the integrated class students, who had every day contact with peers with disabilities, were better able to appreciate the strengths of people with a disability compared to their schoolmates in classes with no peer with a disability.

The qualitative part of this study provided a further investigation of the students' and teachers' perceptions and allowed the researcher to uncover the circumstances that could be accounted for the differing attitudes among the regular students in integrated schools and regular schools.

5.3 Structure of the Qualitative Study

The qualitative data was gathered from focus group interviews with student participants, classroom observations and interview with class teachers (Figure 5.3). This section presents the description of the students with disabilities in the integrated classes, selection of the regular participants and settings of the study, followed by the analysis of each of the three sets of data.

5.3.1 Description of students with physical and sensory disabilities

The integrated classes had a student with either physical and/or sensory disabilities. As illustrated in Figure 5.1, School A had Student S with visual impairment. School B had Student J with physical disabilities. He used a wheelchair and had a scaly skin condition. The integrated class of School C had Student N who was in a wheelchair. These students with disabilities did not participate in focus group interviews.

Students In Integrated Classes		Disabilities/ Special Needs as informed by class teacher
School A	Student S	Visual impairment
School B	Student J	Physical disabilities, uses a wheelchair, scaly skin condition
School C	Student N	Physical disabilities, uses a wheelchair

Figure 5.1 Description of students with physical and sensory disabilities

During the course of this study, the teachers in School A and B identified additional students in their classes who had special needs. School A had a child, Student M, identified as having behavioural problems. In School B, Student K was diagnosed

with high functioning Autism Spectrum Disorder (ASD) and Student H was described as one who “refused to speak” and appeared disengaged during lessons.

5.3.2 Focus group interviews: participants and settings

The sample of participants for the focus group interviews comprised 103 students selected from the 397 participants from the quantitative part of this study. Selection of the student participants for the focus group interviews was based on the quantitative data analysis, that is, participants’ scores in the questionnaire. As the mean reading of the students’ attitudes was captured in the quantitative study, participants for the focus group interviews were chosen from across the range of scores, including low scores and high scores. The aim was to capture the breadth of variation in students’ perspectives (Table 5.1).

Of the 103 participants, 54 were from schools A, B and C (integrated school); 36 participants were from integrated classes (Group 1) and 18 participants were from the regular classes (Group 2). The remaining 49 (Group 3) participants were from regular schools (Schools D and E). There were 48 (46.6%) 4th graders and 55 (53.4%) 5th graders. The 4th grade students included 18 (37.5%) females and 30 (62.5%) males. The 5th grade students included 16 (29%) females and 39 (71%) males. A total of 34 (33%) females and 69 (67%) males participated in the focus group interviews. Students with physical and sensory disabilities did not participate in the interviews.

All the interviews were audio-recorded. Due to the population size and the demands for teaching spaces, locating an area suitable for the interview during school hours was a challenge in most schools. To minimize disruption to the students’ learning, rooms were selected based on the following criterion:

(i) a relatively sound proof environment that facilitates uninterrupted conversation and voice recording,

(ii) a room that students are familiar with so that they could locate them easily. This is particularly important as most schools had more than 70 rooms in multi-storey buildings with multiple annexes.

With the help of the school administrators, the focus group interview sessions were conducted in the following venues: 1) a classroom next to the class of the participants; 2) a counselling room; 3) a staff meeting room; 4) a music/band room; 5) a tutorial room; and 6) a garden corner.

Table 5.1 *Mean Scores of Participants in the Focus Group Interviews*

Group	School	Number of Participants	Interview Participants' Scores	
			Lowest Score	Highest Score
1 (Integrated Sch/ Integrated Class) N = 121	A	12	120	152
	B	12	60	141
	C	12	94	166
2 (Integrated Sch/ Regular Class) N = 118	A	6	114	147
	B	6	125	191
	C	6	94	166
3 (Regular Sch/ Regular Class) N = 158	D	26	112	197
	E	23	98	194

5.3.3 Classroom observations: participants and settings

The classroom observations were conducted in three integrated classes (Group 1). The observations were conducted in conjunction with focus group interviews and scenario-based questionnaires. The objective was to understand students' behaviour,

the dynamics of interaction and contact experience among the students and the peer with disabilities in the integrated class (the procedures are described in detail in Chapter 5, Section 5.7).

Altogether 121 participants from the integrated classes were observed. The class sizes ranged from 39 to 42 ($M = 40$) students, ages ranged from 10 – 12 years. None of the classes had classroom assistants or co-teachers. The class teachers were informed about the general purpose of the study. They agreed to participate, allowed access to their classrooms for the observations and gave consent to be digitally recorded. Observation days and times were selected according to the convenience of the teacher and the researcher. All observations occurred in one-hour lessons during normal teaching time by the appointed class teachers. Lessons scheduled for observation involved cooperative learning activities with the students working on either large or small-group activities, to maximise the possibility to capture the social interactions which were organised in the integrated environment.

5.3.4 Interviews with integrated class teachers

The teachers of the three integrated classes participated in semi-structured interviews. The interviews were conducted in school during school time. The interview time ranged from 30 to 50 minutes.

The teachers were asked about their role as teachers of integrated classes, awareness of the special needs of their students and about the strategies they applied to intervene and support integration. They were also asked specific questions to clarify observation notes such as seating arrangements and specific teaching strategies noted during classroom observation.

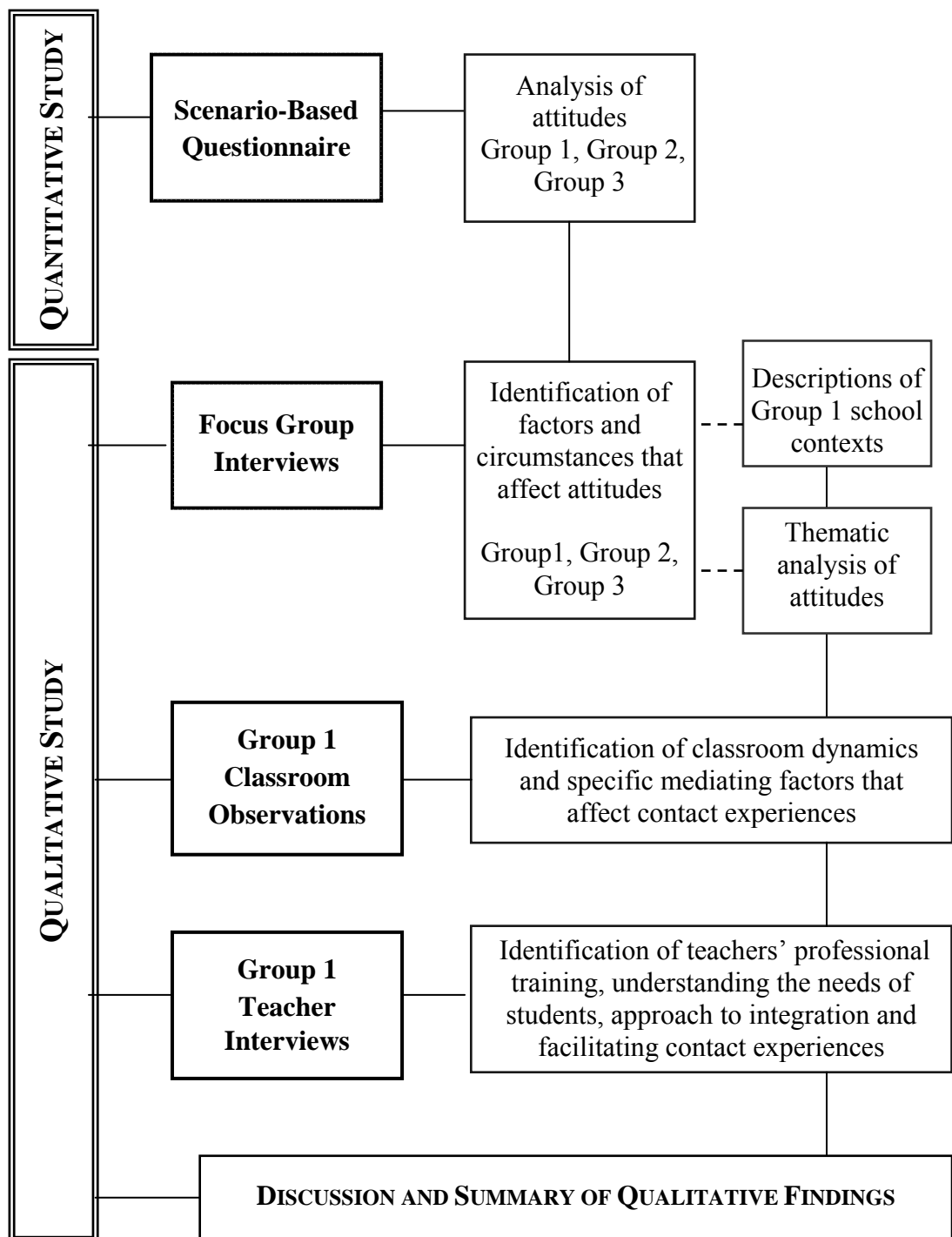


Figure 5.2 Structure of presentation of the qualitative findings

5.4 Analysis of Focus Group Interviews Findings

The focus group interviews aimed to further explore the attitudes and perceptions of the three groups of participants. It also aimed to identify the factors and circumstances which might have affected the attitudes of regular students towards people with physical and sensory disabilities.

This section starts with a detailed description of the questions and the procedures of the focus group interviews. This follows by the presentation of the interview findings of each of the three groups of participants which allows to extend and specify the characteristics of the students' attitudes towards people with disabilities identified in the quantitative study.

5.4.1 The interview questions and procedures

The semi-structured interview questions directed interviewees towards the context of integration. The interview questions, grouped in three clusters, were designed to inquire into the participants' knowledge and awareness of, and attitudes towards disabilities and people with a disability (refer to Figure 5.2). The approach was to ensure the questions allowed sufficient scope for participants to respond meaningfully without feeling that they were expected to respond in a particular way.

Each interview session started with Cluster 1 "trigger questions" to set the context. It served as an opening from which more open-ended questions followed. The trail of questions in Cluster 2 and Cluster 3 were developed to elicit responses that would enable the researcher to explore the participants' views in relation to the theme in focus. The questions were pilot tested (refer to Chapter Three) and then revised before the interviews.

Interview Questions	
Cluster 1	<ul style="list-style-type: none"> • Do you know anyone with disabilities? • Do you know their disabilities? • Do you talk to the person?
Cluster 2	<ul style="list-style-type: none"> • Do you think a person with disabilities can look good? • Do you know of anyone with disabilities who looks good? • Can a person who is in a wheelchair be the top student in class? • Do you think a person with disabilities can/should do sports? • Can a person with disabilities be the Prime Minister of a country? • What sort of job can a person with disabilities do?
Cluster 3	<ul style="list-style-type: none"> • Would you agree if your teacher were to ask you to accompany a person with disabilities to the shopping mall? Why? • How would you feel if you were stared at when you were in the company of a person with disabilities? • Would you like the idea of a person with disabilities being in the same class/group as you? Why?

Figure 5.3 Sample interview questions grouped by clusters

Cluster 1 were ‘trigger’ questions to orientate the young participants and to lead them into the context of disabilities. Participants were asked about their awareness of the presence of people with a disability. Cluster 2 questions explored participants’ perception of disabilities and how they relate to people with a disability in their environment. During the interview sessions, Cluster 2 questions were juxtaposed to maximise the impact of questioning and to draw out forthright and candid responses. Cluster 3 questions were structured as scenarios to explore how participants respond objectively in situations that call for interaction with people with a disability. Sample clusters of the interview questions are illustrated in the table below.

In conducting the interview, each question was read aloud by the researcher and repeated upon request as the students could have not been familiar with the terms relating to disability as found in the pilot study. Questions were also rephrased when

the participants showed difficulty in comprehending the context of the questions. The responses to the interview questions were transcribed and analyzed through both inductive and deductive coding by the researcher. Participants were interviewed in small focus groups of five to six by the researcher. The group interview sessions were set up in a discussion mode to facilitate dialogue and conversation. Each group spent approximately 30 minutes answering both closed and open-ended questions.

The transcripts from the focus group interviews were read and carefully re-read. Repeated reading of the raw data gave rise to expanded categories (Miles & Huberman, 1994; Svensson, 1997). A set of themes based on the interview text was developed in consultation with two other experienced research personnel. Words and concepts that were conceptually similar were extracted and paraphrased to form the following themes:

1. Knowing people with a disability and discourse on disability
2. Perception of disabilities and acceptance of people with a disability
3. Perception and opinions on integration
4. Empathy towards people with a disability

The first theme identified participants' awareness of the state of disabilities and the labelling of disabilities. The second theme clarified participants' personal experience in interacting with people with a disability. It probed the relationships between the participants and those whom they knew with disabilities, particularly participants attending integrated schools with a schoolmate who had disabilities. The third theme pinpointed participants' attitudes towards people with a disability and their understanding of the needs and strengths of people with a disability. The interview questions also drew out the participants' opinions towards integration, especially their personal experience with inclusion and their attitudes towards interactions with people with a disability in their class. The fourth theme summarized the participants' response regarding empathy towards those with disabilities. It also highlighted the influence of parents on their children's attitudes towards integration.

To organise and transform the qualitative data to theme-based representations of the participants' ideas and attitudes, topical discourses were mapped out. The analysis began with an overview description of each school, followed by a group examination organised in thematic structure. Entwistle (1997) suggested that inclusion of short extracts from the interview transcripts to illustrate the range that resided within the identified conceptions to "delimit the meaning of the category fully, and also to show where appropriate, the contextual relationships which exist" (p. 132). Therefore extracts from the interview transcripts were carefully selected to allow the voice of the participants to lend "validity and support the basis for generalisation" (Svensson, 1997, p 170).

The presentation of the focus group interview findings in the following section was structured based on the quantitative analysis of the attitudes of students by the group category that they were in.

5.4.2 Focus group interview findings: integrated classes (Group 1)

This section presents the results of focus group interviews for Group 1 participants in integrated classes in integrated schools A, B and C. During the interviews with integrated school participants, references were made to their peers with physical disabilities in their schools. Information about other students who were disruptive in class was also discussed.

Most of the integrated class participants from School A and School B informed the researcher that they had not received much information/education about the conditions or labels of disabilities from either school or home. Some had poor awareness of specific conditions. For example, at School A, a participant when questioned whether he knew anyone with a disability responded, "What is a disability? No, I don't know". He later clarified that he had "forgotten" about his classmate S who had visual impairment.

The participants in School A and School B in general had minimal active interactions with their peers who had disabilities, unlike School C participants. Some participants mentioned that they had family members who had disabilities. Those who claimed to have interacted with a person with a disability were able to articulate a better understanding of the specific condition and strengths of their classmates with disabilities. One participant from School A, whose cousin had a hearing impairment, was able to state that she believed that Student S did not respond to others because “she is shy to answer” and not because she could not hear, or was strange. Another participant whose grandfather “could not hear so well” stated that “I think when she (Student S) grows up, her voice will get louder”.

During the interviews, School A and School B participants made several callous remarks about their classmates with disabilities. In both schools, the participants’ responses highlighted that there were no planned purposeful interaction/activities to foster better understanding between the regular students and their peers with disabilities. The participants in School A stated that their teacher had not told them much about Student S and “they guessed” that the school treated her well because of her disability. School A participants also had a tendency to equate the physical disability of Student S with having an intellectual disability. They were aware of her special visual needs but were keen to emphasize her “odd” behaviour in class, despite the fact that one of them recalled that S had done exceptionally well in one of the English tests,

“We tell her to move to the front then she doesn’t move at all...because her brain can’t think”;

“She can’t think properly”;

“I talk to her, she can hear but like, she doesn’t want to answer”.

In School A, participants in Group 1 expressed their understanding of their classmate’s disability as “eye got problem”, “eye balls very big”, “she cannot speak loudly” etc.

Misinformation and a lack of understanding gave rise to much speculation about the conditions of the peer with a disability. One participant from School B described Student J as having, “weak bones, weak muscles”; another participant said, “the bones are very hard but he doesn’t have much muscles”.

All believed that Student J had not bathed and verbalised varied beliefs regarding this issue,

“He can’t stand too long... so he can’t bathe”;

“He can hardly bathe”;

“He has a skin problem, so he can’t bathe”.

The participants saw classmate J’s disability as a bad habit, a personal “irresponsibility” that could be avoided,

“He says he does not like to bathe, he can bathe but he does not bathe. He loves stink”;

“I think he does not want his carer to help him to bathe...”.

All the integrated class participants in School B said that they did not know much about classmate J who used a wheelchair. One mentioned, “I don’t go near him”. One participant stated that being in the class with Student J could be useful to her as she could “learn how he is disabled and don’t do the same as him”.

The apparent disdain in their comments regarding Student J and his disability indicated that Student J had characteristics that were objectionable to them. It appeared that the combination of Student J’s disability together with his skin condition and their perception of his lack of responsibility for his personal hygiene projected an image of weakness and undesirability. According to social comparison theories, the act of engaging in downward comparisons could be linked to an attempt to boost one’s self-image and self-concept (Dagnan & Sandhu, 1999; Will, 1981).

Interestingly, the participants in School C expressed quite different views about disability. They were able to name the disabilities of the people they knew unlike the participants in School A and School B. They displayed a better awareness of the appropriate labels of disability. They knew people with ‘autism’, ‘behavioural disorders’, and who were ‘visually impaired’ etc, although, like School A and School B participants, they mentioned that the schools had not spoken much about disabilities or their peer’s particular condition. A small number of the participants declared that the topic was discussed at home, while others spoke about learning from books and the Internet.

The participants in School C indicated that the community program at a neighbourhood special school gave them the opportunity to celebrate school holidays with children with intellectual disabilities. It included putting on performances and playing games with their special friends. Some of the participants were keen to speak about the acquaintances they made in the special schools; including the students’ names and their particular disabilities.

During the interview, the integrated class participants affirmed that there was also a well-organised ‘buddy’ system in their class. Two of the participants were buddies to Student N and had first hand knowledge of the circumstances of classmate N’s disabilities. They indicated that they looked beyond her disabilities and accepted her,

“Her leg bones are very weak and then cannot carry her body weightshe told me”;

“She is more comfortable with girls pushing her”;

“She is in fact quite a kind person”;

“They (people with a disability) can be trained to be independent”.

During the discussion on whether a person in a wheelchair could be the Prime Minister of the country, the participants were unequivocal that a person with a

disability could aspire for public office. However, they were quick to add that disability could be self-serving, as a person with a disability could solicit sympathy and favour. Some also expressed the opinion that people with a disability could be deceitful,

“People see this type of president (with a disability) won’t say more bad things about him...”;

“They pity the president”;

“Not all people sitting in the wheelchair is very kind”;

“Sometimes they fake”.

All School C participants believed that their parents would be supportive of them helping out Student N. Some cited that their parents had not objected to them visiting the special school and helping out. This highlighted the outcomes of positive contact with the special school. In comparison, School A and School B participants were mixed in their perception of their family’s reaction to helping out their peers with disabilities. Some thought that their parents would be supportive while some said that they would not be happy as “it might affect our studies”.

One common thread shared by all integrated class participants from Group 1 is that they supported integration principles and believed that people with a disability should not be in different schools. However, the participants in School A and School B expressed opinions against the integration of students who had conduct disorders. They explained that they had classmates with behavioural problems who often disrupted lessons and cited incidents of being ‘bullied’ by these students. In School A, the participants identified Student M as one who “misbehaved” and irritated classmates during lessons. At School B a female student described an incident whereby Student K used a pair of scissors to cut her hair. Other participants from School B reported that Student K displayed inappropriate behaviour, including shouting and arguing with the teacher. In their opinion, Student K’s behaviour disrupted their lessons and had a negative impact on their learning.

School C participants appeared to be neutral towards integration of peers with behavioural disorders. These participants stated they had not experienced a disruptive student or one with behavioural problems in their class. Initially, they stated they would not oppose having a disruptive student in their class. They did, however, state that if such a student negatively impacted on their capacity to maintain their academic progress then they would oppose the integration of such a student in their class or group,

“We will get them out of the group...because it would affect our studies... I am not willing to give up my marks to help them...”;

“Just kick them out of the class ... it’s better”.

All the participants from the three schools were able to empathise with those with disabilities in general. However, School A participants appeared indifferent towards those with a disability, such as their classmate S. School B participants made some negative statements towards those with disabilities, including their classmates J and K. School C participants were generally more empathetic towards others with disabilities. They were able to articulate the strengths of classmate N, such as “she was good in her studies”. By contrast, the participants from School A appeared to relate to Student S as an ‘odd presence’, not a peer. In School B, the participants did not have an understanding of Student J’s strengths. One of the participants spoke about his ‘personal tiff’ with Student J,

“I don’t like him...always cleverer than the rest. Always say I am a busybody”.

The participants did not speak of Student J’s school performance, but were very aware of what they perceived to be his bad personal hygiene. Generally, their attitudes towards Student J expressed as disgust and avoidance. One spoke about not going near J while another vehemently declared, “I don’t like people who are disabled, that’s all”.

Overall, the above findings uncovered the complexity of the attitudes of integrated students towards people with disabilities as identified in the quantitative study. All the participants in integrated environments were found to be supportive of integration in principle, however, when questioned further, a number of participants made negative comments about their peers with disabilities in the class, this demonstrating negative perceptions of their peers with disabilities. Other participants were able to articulate positive characteristics of their classmates with disabilities.

5.4.3 Focus group interview findings: regular classes in integrated schools (Group 2)

Group 2 regular classes from the integrated schools of School A, School B and School C were generally the best classes of their respective levels and achieved a higher academic standard than their integrated counterparts in Group 1, as these schools practised streaming by academic performance (refer to Chapter Four). As a result of the streaming process, students from such classes were known to be very competitive academically, as they had to meet the benchmarks set by the school to be placed in the top class. They were keen to share with the researcher their knowledge of famous people with a disability and their capabilities. Paradoxically, they did not have much knowledge of the integrated peers with disabilities in their schools. Participants were unanimous in stating that their schools had not discussed disability in general. Most of School B's participants mentioned that they did not know of peers with disabilities, at school or outside school. In School A, the presence of the schoolmate with a physical disability did not appear to registered in their mind,

“I don't know about her”;

“I don't know about her eyes ... she always walk in the front”.

Several of participants from School A and School C knew someone with a disability either at school or outside of school. Some of these participants registered more general information regarding people with a disability, their strengths and the

challenges faced by them based on their personal readings and exposure to Internet materials.

School C participants demonstrated a high level of awareness towards the principle of integration. Most were able to accept people with a disability philosophically. All said that they knew of schoolmate N in the integrated class who used a wheelchair. Like their schoolmates in Group 1, they demonstrated a high level of ability to use the appropriate labels for disabilities such as hearing impairment, autism, dyslexia etc. School C participants likened discrimination towards those with disabilities as a violation of human rights and evoked concepts of equality,

“They have their own freedom to do what they like”;

“They have their human rights”;

“...but isn’t it like racist ...?”

The discussion revealed a high level of cognitive awareness of personal rights among the School C participants in the regular class, which was significantly different from other students in School A and School B.

There was also a balanced debate regarding the election of a person with a disability as head of government. Group 1 participants raised several opposing issues. Some students expressed the view that a candidate with a disability could “gain sympathy votes”, or that “some will take advantage of it” while others claimed “some people will see the person with a disability and won’t elect him... people will look down on him”.

There appeared to be gross misinformation towards the needs and responsibilities of the people with a disability and their personal well being for School A and School B participants. For example, there was a similar callous association of physical disability with intellectual disability in School A towards Student S who was visually

impaired. The participants from the regular class echoed what their Group 1 counterparts from the integrated class expressed,

“ She is like sort of mental...”;

“ It is a waste of time talking to her ...”;

“ She can’t hear properly”.

This level of misinformation was not congruent with their academic and intellectual abilities. In general, the Group 2 participants were callous towards those with disabilities. They were also ambivalent towards their peer with disabilities and attributed the occurrence of the disability to the lack of responsibility of the individual concerned. For example, there was a notable remark about seeking “recovery” from a disability. Some of the participants held the person with a disability accountable for recovery,

“She surely wants to recover. If she has tried hard enough, she should have confidence in recovering. She should keep trying and trying until she succeed”.

This is indicative that some of the students, probably based on misinformation, were assuming that a disability equates to an illness. They held a misconception that a person with a disability could recover if he or she and their family had sought out, and complied with, medical treatment. This concurs with Vygotsky’s notion of the development of secondary disability that goes against the principles of integration.

Similarly, the integrated class participants (Group 1), the regular class participants from integrated schools (Group 2) were supportive of general integration principles, such as the sharing of public space and equal job opportunities for people with a disability. However, School A and School B regular class participants were unaware of the current school integration programme. Most of them claimed to be unaware of the presence of peers with disabilities in their school.

The participants in School A cited that if they were to help out a peer with a disability in class, their parents would be supportive. As one participant from School A stated,

“We are doing a good deed, so my father will say yes”.

School B participants also believed that their families would be pleased with them for helping out their peers with disabilities. In their viewpoint, they ‘gained’ from learning from their peers and from “learning to be more caring”. However, a School A participant qualified her likelihood to volunteer as “if I have the free time, then I will help”. Another participant believed that “they should have a specialist” instead of relying on the students to help. School C participants, however, qualified their positive views about family support, as one summed up that as long as their studies were not affected adversely, their families would not object to them being a buddy to a peer with disabilities.

During the discussion about being a buddy to a peer with disabilities, one regular class participant from School A stated that integrated class participants were compelled to be buddies. Most shared that they had taken no personal initiatives to befriend a peer with disabilities. In particular, School A participants were callous in their remarks about the eyes of schoolmate S, while those in School B were not aware of their schoolmate J’s scaly skin condition and his need to be in a wheelchair.

The Group 2 participants from School A and School C would not support integration if it were to affect their academic success. Most of the negative sentiments were focused on the “sacrifices” they had to make to accommodate those with disabilities,

“...have to wait for him, I get impatient” ;

“He will slow down he whole class, and then the whole class will, like, slow down”;

“...will feel very angry if you sacrifice a lot of time”;

“It is, like, you must sacrifice something for something better... (so it is not worth sacrificing for them) ... but don’t tell them...they will feel bad about themselves. And they would hurt themselves”;

School A and School C participants were quick to point out the criterion of integration into their class, that is, the academic streaming practised by the school meant that only students who did well in the school examinations would be placed in their classes,

“First thing is they wouldn’t be in our classif they are in (our class), they must be very clever”

“If he can qualify....to be in our class”

“The teacher should check with the government policy”

By contrast, School B participants were more open to integration even if it might adversely impact on their academic performance. In the interviews, they voiced their support for integrating, expressing empathy for people with a disability. They made supportive statements indicating they would embrace peers whose pace of learning could be slower,

“They should not go to another school ... no one is stupid... just have to work hard”

“They go to another school... how do you know they can’t do it here?”

Nonetheless, unlike the participants from School A and School C, they were not aware of schoolmate J in the neighbouring class. Similarly, they did not mention Student K who had a diagnosis of ASD. These students appeared to be ignorant and ‘shielded’ from the presence of their schoolmates who were different from them.

In summary, the attitudes of students in the regular classes in integrated schools were generally positive towards integration, However, further analysis indicated that they did not have a great deal of familiarity with people with disabilities. Some were not

aware of the presence of peers with disabilities in their schools. Their understanding of disability was often based on stereotypical views. Additionally, most perceived integration as a distant possibility which was unlikely to happen to them in the near future. Some participants would not support integration if it were to affect their academic progress.

5.4.4 Focus group interview findings: regular classes in regular schools (Group 3)

Group 3 participants (regular class in regular school) from School D and School E were from the top classes in their schools. They were articulate and demonstrated a high level of knowledge of social awareness. During the interview they stated that they had not been explicitly taught nor were there discussions about disabilities in their schools. They also mentioned that there were no open discussions about disabilities in their homes either, even when one of the family members had a disability. For example, one participant spoke about her brother with ASD,

“My brother is sort of, like, act in a funny way and makes strange noises at times and he can’t really help himself... my mum didn’t really mention (if he has been checked by a specialist). All I know is just that he is autistic. No, he does not go for any extra class after (regular) school. He just comes home after school. I am his family, I have to help him”

While School D participants demonstrated a good factual knowledge of disabilities from their personal reading, School E participants were unaware or ill informed regarding people with a disability; their conditions and their needs. One notable characteristic demonstrated by participants from both schools, was those participants who knew someone with disabilities were able to express greater understanding and a more sympathetic position towards disabilities. For example, when discussing whether the heavy weight of the wheelchair would deter them from offering to assist

a person with a disability, one of the participants from School D used an analogy to explain his point of view,

“Let’s say I am accompanying my grandfather, it is not going to be realistic if I run away because you have to get used to it. If you care for your grandfather and you bring him out many times, you will be used to it”.

On the other hand, participants from School D and School E who did not know anyone with disabilities highlighted the “troublesome” factor in integration,

“I think that it is very troublesome. Maybe the teacher will ask us to bring the disabled person to recess everywhere we go”.

Participants from School D were able to express their understanding of the rights of people with a disability,

“They have their own rights to go anywhere they like”;

“All of us are very fortunate, we don’t have any disabilities. We have to put ourselves in their shoes”;

“This is not all about your own self, you have to care for others, the whole world doesn’t revolve around one person, it revolves around everyone in the world.”

Participants from School E on the other hand, while they did not demonstrate strong awareness and knowledge of disabilities, stated that having a disability could be an advantage,

“Being disabled can mean a good thing also. It means that you are special from others. You can do other things that people can’t do”.

Some of the participants from School D spoke about people with a disability being teased and the likelihood of them taking their own lives,

“If someone sees them doing that in public they might laugh at them and they might feel very upset and they might commit suicide because of that... because they know that they have physical disabilities, so they are very sorry for themselves, that’s why they want to commit suicide”

When discussing family support for integration of peers with disabilities in class, School D participants reported that their parents would be displeased if they spent time helping those with disabilities instead of on their personal studies,

“I think my mother will be very unhappy, because she say helping other people need time”;

“My mother will not be happy, because she wants me to study and do more exercise, bring up my marks. She doesn’t want me to spend my time taking care of them (people with a disability)”;

“I think parents nowadays want their children to study hard, not serving other people”.

However, they took a negative stance when questioned about integrating peers who struggled academically. One referred to the academic standard,

“The disabled person in our kind of school, maybe they might not catch up with the work ... they cannot catch up with the topic like what the teacher is teaching. So they should go to another school so they can learn slowly”.

School E participants affirmed that their parents would be pleased if they helped out with the peers with disabilities. However, they expressed doubts about having time to do so,

“No... maybe. Sometimes when I am busy they surely don’t let me help”;

“No time to help. My parents may be happy but I won’t be so happy”;

“I find it a waste of time (to help those with disabilities). I want to go home to do my things”.

Generally, all the participants in Group 3 supported the principles of integration. However, they were cautious of the negative impact on their on learning created by the presence of peers with disabilities in their classes/groups. By contrast, Group 3 participants who had experienced personal interaction with a person with a disability in their circle of friends and family were able to provide anecdotal examples of the strengths and normality of people with a disability. School D students were supportive of integration in general and had mixed reactions to the possibility of integrating with peers with special academic needs. The participants in School E, however, were adamantly opposed to integration in their classes.

5.4.5 Summary of the focus group interviews by groups

The analysis of focus group interviews demonstrated that all the three groups of participants were generally supportive of integration. However, there were significant differences among the individual groups.

Students in Group 3 from regular schools who had no experience in integrated program showed overall positive attitudes towards integration. Group 1 students from integrated classes in two integrated schools took particular issues about the students with disabilities in their classes. They were negative in their perceptions of their peers with disabilities. The Group 2 students in regular classes in these same integrated schools also showed lack of awareness of their peers with disabilities in their schools. In contrast, the interview data from the other integrated school indicated that the students from both the integrated and regular classes were positive in their attitudes towards their particular peer with a disability in their school. There was, however, general concern among all the students about integration and its possible impact on the academic performance.

To investigate the factors that delineate the attitudes of students, the interview findings are further examined in the socio-cultural contexts of the individual school environments. This provides a macro-level analysis of the socio-cultural contexts of the differences in the attitudes among individual groups of participants (Bronfenbrenner, 2004, Vygotsky, 1993).

5.5 The School Contexts and the Students' Attitudes towards People with Disabilities

This section aims to understand the students' attitudes towards people with disabilities in relation to the dynamics of the socio-cultural contexts of the learning environment. Information on the participating schools (School A, School B, School C, School D and School E) was sourced from the school websites, the official government website on education (Ministry of Education, 2009), mainstream media, school newsletters and personal communication of the researcher with class teachers, the principals and other school staff. The participating schools comprised a mix of 'neighbourhood' schools (public schools built to serve residents in housing estates) and 'affiliated' schools (public schools with affiliation to and supported by business or community groups). Some were considered as 'top' schools for academic excellence, while some were not known as academically high-achieving schools. All the participating schools were co-educational, multi-racial and multi-cultural. The school buildings were four to five storeys multiplex buildings. Some had lift facilities. The school enrolments ranged from 1800 to 2500 students.

5.5.1 Description of the context of integrated schools

The integrated schools participating in this study were public schools sharing a similar national curriculum. They were situated in different parts of the country. Each of these schools had at least one student with physical or sensory disabilities. Some had students with ASD and other behavioural disorders (refer to Figure 5.1).

These students were placed in classes with regular students, followed similar standard timetables and sat for common examinations. The class teachers had varied teaching experiences. One teacher had more than 40 years experience, another six years and the third teacher had previously taught in preschool and had no training to teach primary classes. None of the integrated classes had teachers' aide support.

School A was an integrated school. It is known as a 'neighbourhood' school, that is, a public school built to serve newly relocated residents in a new public housing estate in the western part of the country. The enrolment was approximately 2000 students who are generally from lower social economic status (SES) families. According to the school website, School A had received media publicity for its effort to reach out to families that needed welfare assistance.

Two classes in this school were included in the study. The regular class (Group 2) was stronger academically, according to the school, and was taught by a trained permanent teacher. On the other hand, the integrated class did not have the same consistency. They experienced considerable change with three different teachers on their class since the beginning of the year. The current class teacher was an untrained casual teacher. The school had informed the researcher that they were expecting a trained teacher to take over the class in a few months' time.

The integrated class (Group 1) was not considered to be a strong class academically. This grade 4 class had Student S who had a visual impairment. There was also Student M, with observable behavioural disorders although this was not discussed with the researcher during the course of the study. Student S had an awkward gait and spoke in a whispery voice. The participants had stated during the focus group interviews that they were not comfortable interacting with her. Some participants shared that they were aware that the teacher had organised some of their classmates to assist Student S but they were not clear about the buddy arrangement. The interview data showed that participants from Group 1 and Group 2 made callous

remarks in their response towards Student S and her visual impairment. Group 1 participants were quick to dismiss her presence but were at the same time aware that academically she was not the weakest student in class.

Group 1 participants in School A were supportive of the ideals of integration, stating that job opportunity is based on merit and hard work. In general, they were supportive of the concept of accepting people with disabilities or behavioural disorders and empathetic towards others with disabilities. However, their concept of acceptance and integration were not translated into their attitudes towards classmate S.

All of Group 2 participants in School A claimed to know people with disabilities. Nevertheless, most were not clear of the labels and diagnosed conditions of disability. They were also unaware of their schoolmate S and her disabilities, although all stated that they had seen her in school and in the playground. They expressed negative towards her needs and claimed that she was intellectually dysfunctional. They appeared to equate her physical disability to have ‘spread’ to affect her mental capacity (Wright, 1983). Similar to Group 1 participants, they believed that one could recover from disabilities and Student S was not trying hard enough. They had no knowledge of Student S doing well academically, though they shared that they were empathetic and able to express the notion of merit and equal opportunity for all. Unlike their counterparts in Group 1, however, these Group 2 participants were not supportive of integration of students who were not achieving high level of academic success. They cited that they would be “impatient” and fearful that these peers might “slow down” their learning.

School B was an integrated school highly regarded in the community. It had an illustrious history and was affiliated to a religious group. Its enrolment was approximately 2300 students. The school was well known for its track record of students obtaining high scores in the national examination. The participants were from two grade 4 classes. Both classes were taught by trained teachers who had more

than 20 years of teaching experience. The regular class participants (Group 2) were from one of the top classes in the grade level.

Student J, who was in a wheelchair and suffered from a scaly skin condition, was in the integrated class. He was tall and was seated at the back of the class. There was also Student K, who was diagnosed with ASD and was known for his regular ‘outbursts’ of disorderly behaviour. Student K displayed inappropriate behaviours such as banging his head against his writing desk or wall. The class teacher reported that in addition to the two students discussed, there were other students with behaviour disorders and special learning needs in the class. One student was brought to the researcher’s attention. Student H, who was seated next to the teacher’s desk, was described by the teacher as a child who was not keen to speak and appeared uninterested during lesson.

Group 1 participants from the integrated class in School B indicated that they were not clear about disabilities, including their classmate, Student J. They were not close to him and made inappropriate remarks about his skin condition. They claimed Student J should be personally accountable for the condition and they could learn not to be like him. They distanced themselves from him and appeared to make downward comparison as a way of bolstering their own self-esteem (Bunnk & Gibbons, 2007). Although they perceived that a person with a disability could do well in school and have a good job based on merit, they recounted limited opportunities for people with disabilities. They supported integration of peers who were slower in their learning and expressed their willingness to help. However, they were inclined to be negative towards those with behavioural disabilities based on their experience with the peer with ASD and the peer with physical disabilities, citing the inconvenience of having peers with disabilities in their class.

Unlike Group 1 participants, regular class participants in School B (Group 2) expressed their attitudes towards students with disabilities in a more detached voice,

claiming that they did not know anyone with a disability. They were not familiar with the appropriate labels and claimed had no experience of people with disabilities. Some of them described a person with a disability as someone who “sits in a wheelchair” or “a person who can’t walk”. On the other hand, they were able to state that disability was “not intentional” and that people with disabilities could achieve and succeed like them. Despite this view, they did not have any knowledge of the strengths of Student J. They did, however, support integration of those with physical and behavioural disabilities in their school.

School C was an integrated school supported by a financially strong business foundation. It was situated in a relatively affluent area. The school had in excess of 1800 students, who were mostly from higher socio economic status groups. The school was known as a good school because of its history and the above average school performance in the national examination. The grade 5 participants were from the top classes of their level. All the participants indicated that they were aware of being in “good classes” and were focused on doing well academically. At the interview sessions, participants from Group 1 and Group 2 revealed that the school had a program for both the integrated and regular class participants to visit a special school in the community.

In the integrated class (Group 1), Student N was in a wheelchair. Participants also informed the researcher that the integrated class had a well-organised buddy system to enable the students to help Student N move around the school compound. According to the school management, the Group 1 teacher was a competent and experienced teacher who had been teaching more than six years. Participants in Group 1 were knowledgeable about the characteristics and labels of disabilities. Some were able to describe Student N’s daily routine. They informed the researcher how Student N travelled to school and who was involved in moving her to the classroom, which was on the top floor. Some shared information about her therapy sessions. They knew Student N personally, although they claimed the class teacher

had not spoken about her condition explicitly. They recognised her strengths, her abilities and her needs and were able to disassociate the disabilities from the abilities.

Group 1 participants from School C perceived people with disabilities positively, supported integration and were opposed to stereotypical discrimination against people with disabilities. While they were supportive of the integration of Student N, they were opposed to the integration of those students whom they perceived were weaker in their studies, as they feared that their academic progress would be negatively affected.

The regular class (Group 2) was the top class of the level (grade 5). The class teacher was a young and competent teacher with more than five years of teaching experience. Similar to Group 1 participants, Group 2 participants supported integration. However, most of the participants had little information about their schoolmate N and her disability. Like Group 1 participants, they had not learnt about disabilities explicitly from their teachers. They had also participated in the community project of visiting and befriending students from a neighbourhood special school. They were articulate about the rights of those with special needs and opposed to discrimination.

Unlike Group 1 participants, School C participants in the regular class were not able to relate personal interactions or awareness of people with disabilities. Similar to Group 1 participants, they were opposed to the integration of students who had learning disabilities and cited their concerns about the impact on their own academic progress. They were acutely aware of their academic performance as a class and as individuals, dismissing the researcher's suggestion that a peer with a learning disability could be in their class. They strongly expressed their opposition to integrating a student into their class who was not achieving academically.

5.5.2 Description of the context of the regular schools

School D and School E were the regular schools with no students enrolled with physical or sensory disabilities. The participating classes were described by their respective schools as high-achieving classes. They also followed the national curriculum and had similar class enrolment as integrated classes in Schools A, B and C. School D was an established school, while School E was a relatively new school serving a new housing estate.

School D was a regular school established in the 1930s by rural community leaders. The school served a high-density housing neighbourhood in a relatively non-affluent industrial region. It was a popular neighbourhood school, attracting students from high socio-economic status backgrounds because of its high academic achievements and its history. Its enrolment was more than 2400 pupils. The main blocks were four-storeys high and there were more than 60 classrooms. There were no lifts and the design of the buildings was not wheelchair-friendly. The school had no students with a physical or sensory disability.

The participants in this school were top grade 4 and grade 5 students. The parents were known to be actively involved in the school. As the school practised streaming at every level, the participants were highly competitive in their studies. They were focused in their preparation to excel in the national examination in grade 6. The participants were aware that they were in the best classes. Many of the participants did not know of anyone who had disabilities. However, some participants shared that they had close family members who were in a wheelchair or were diagnosed with ASD. These participants were more understanding towards the special needs of people with disabilities.

The participants in School D were articulate and widely read. They had a sound factual knowledge of disability and labels. Most of the participants indicated their parents had shared information about disabilities with them. Like School C participants, they were advocates for equal rights for students with disabilities. They

shared their personal philosophy regarding caring for the less fortunate. They believed that disabilities did not equate with inability to do well in school, or at work.

Unlike School C's Group 1 and Group 2 participants, School D participants were unequivocal in their support for integration, including those with learning disabilities. Most of them claimed to be unaware of peers who were not achieving academically. None of the students identified classmates whose disruptive behaviour had impacted on the learning environment. However, they conceded that their parents would not be pleased if they spent time helping a schoolmate. Many of them related their parents' expectations on their success at the national examination. Those who did not know anyone with disabilities expressed their concerns about sharing public spaces with people with disabilities, citing chaos and inconvenience.

The theme that emerged was that knowledge with positive contact led to general attitudes of acceptance. School C participants' integration experience in class and social interaction with peers from the special school demonstrated that both awareness and positive contact facilitated the development of inclusive attitudes.

School E was a regular school; it did not have any students with physical disabilities. It was a relatively new neighbourhood school built to serve new housing zones. There were four main multi-storey blocks with more than 50 rooms. The pupil enrolment was more than 2000 and spread over 57 classes in two sessions a day. The socio-economic status profile of the students was generally less affluent. The school had no record of academic excellence at a national level. It had instead focussed on its sporting program. Integration ideals took on a personal meaning to the school principal as he had a child with a disability. He also shared his general concern about students' lack of empathy for people with disabilities. He described the teachers from both classes as competent and motivated who had five years of teaching experience.

The regular class participants (Group 3) were from two grade 5 classes. They were above average in their academic performance. They were articulate and were

concerned about their academic progress. There were no accounts of classmates who displayed disruptive classroom behaviour. Most indicated that they knew someone with a disability; some had close relatives with a disability, although they were not sure of the conditions or labels. They cited the rights of people with a disability and spoke about being special as being unique. By contrast, those who had little interaction with people with disabilities were inclined to distance and dissociate themselves from a person with a disability.

All the Group 3 participants in School E were supportive of the ideals of integration in principle. However, when discussing a scenario about being in an integrated class, many of the participants were against the concept of integration in their own class. During the interview sessions, the term “troublesome” was repeatedly used by several of the participants in relation to interacting and integrating with students with disabilities. They were concerned about the ‘undesirability’ of those with special needs and how it might ‘spread’ to them. They were apprehensive about their academic progress, which they feared could be adversely affected in an integrated learning environment. School E participants also revealed one common characteristic shared with Group 2 participants from School C and Group 3 participants from School D; they believed their parents would be concerned that spending time to help a peer with a disability might negatively affect their academic performance.

5.6 Thematic Analysis of the Interviews

This section outlines the analysis of participants’ attitudes towards people with disabilities based on the responses from the interviews and the information about the participating schools and classes. It presents a summary of the analysis of the focus group interview data that distinguished the differences and identifies the common traits among the participants’ viewpoints towards disabilities and integration of peers with disabilities.

5.6.1 General statements in support of integration

All the participants, from Group 1, 2 and 3, regardless of the class or school they were from, expressed “in principle” support for integration of peers with disabilities. Most believed that a person with a disability could do well in school and have a good career. They were also aware of the constraints in the social and physical environments that challenge people with a disability and impede their access to public places and job opportunities.

Some participants with minimal or no opportunities to interact with peers with disabilities in school demonstrated a high level of awareness of general integration principles. In particular, Group 2 and Group 3 participants from the integrated and regular schools were very knowledgeable about general information about people with disabilities, their strengths and the challenges they faced. They mentioned their personal readings and exposure to Internet materials.

Participants from regular schools also spoke about the unequivocal human rights of people, with or without disabilities. They likened discrimination against people with disabilities to racism and expressed moral support for accepting someone with a disability into the mainstream society. By contrast, most participants also expressed reservations about welcoming them into their immediate social groups, such as their school and their work groups in class.

5.6.2 Lack of knowledge and misconceptions

Most of the participants from the three groups stated that they were unclear or had limited knowledge about the labels and the actual conditions of people with disabilities. It was not a topic that was spoken about explicitly in class, either in integrated schools or regular schools. Some participants who had family members with disabilities revealed that actual condition was not spoken about. They were not able to name the appropriate disability label of their family members.

The thematic analysis of the interview data showed that participants in integrated schools, both in Group 1 and Group 2, had concerns about specific issues regarding people with disabilities and their needs. They were apprehensive that people with disabilities could be self-serving, as the state and condition of needs could be used to gain sympathy and unfair attention. The participants stated that people with disabilities might seek public office and use their disability to gain support from the public.

Notably, when participants from integrated schools were not given appropriate information, they speculated about the conditions of their peers with disabilities. Some participants made demeaning, crude remarks about their schoolmates and their disabilities. This was outlined when students from School B were interviewed about their peer who was in a wheelchair. They were not aware of their peer's special needs and associated his disability with an illness and made references to the notion of recovery. They also blamed him for not trying hard enough to be "cured" from the disability condition.

Those who had interacted with families or friends with disabilities at a personal level were more likely to articulate a better understanding of specific conditions and the strengths of people with disabilities. Overall, there were misconceptions expressed by the participants. The lack of dialogue and information appeared to create misunderstanding and confusion, which in turn led to what seemed to be paradoxical callous attitudes towards people with disabilities.

5.6.3 Focus on physical appearance

Analysis of the focus group interview responses indicated the remarks that integrated students made about their peers with disabilities tended to be focused on their overall physical appearance. These integrated students tended to judge their peers with disabilities negatively. They described their peers with disabilities as smelly, and

commented on their “strange looks” and awkward gait. Some integrated students admitted that they shunned their classmate who was in a wheelchair. Some spoke of the student with visual impairment’s ‘inaudible’ voice, her bad handwriting and associated her lack of control over her muscles as a sign of mental incapacity. In close proximity, the disability conditions had ‘spread’ (Wright, 1983) and affected the overall perception of the attractiveness of their peers with disabilities.

On the other hand, the integrated class students identified in the quantitative study as more positive in their attitudes than their non-integrated schoolmates were not overtly focused on the physical appearance in their general comments about their peer using a wheelchair. In the focus group interviews, they commended on her neat appearance and took note of her amiable disposition. Some participants who were her buddies went on to describe her as ‘beautiful’ and ‘sweet’. Generally, participants from this particular integrated school, including those from the non-integrated class, did not make a single derogatory remark about her disability or her appearance.

5.6.4 Negative contact experience and ambivalent attitudes

This study found that integration without proper mediation by knowledgeable adults such as School C teacher who was trained, could lead to negative contact experiences. Participants from the integrated schools spoke about the negative aspects of the peers with disabilities and their frustrations in their attempt to interact with them. Some participants shared negative anecdotal reports about their peer’s ineptitude in class and their perception that peers with a disability were slower academically.

The participants were very conscious of the perceived negative impact on their academic progress of being in an integrated program. Some participants from the integrated schools, which had no planned purposeful interaction activities to foster better understanding between the regular students and their peers with disabilities were found to have negative contact experiences with people with disabilities.

5.6.5 Positive contact experience and attitudes towards people with disabilities

The quantitative study and the focus group interviews suggested that integration experience in one of the integrated schools (School C) indicated a positive contact experience. The participants from both the integrated and regular class spoke about their school-wide visitation program to a special school in the neighbourhood. The program had an apparent impact on them and some spoke fondly about the acquaintances made during the visits.

The integrated class participants also reported about the class buddy system that enabled them to know their peer who used a wheelchair personally. Compared to the other integrated students, they expressed a clearer understanding of the conditions and the needs of their peer. Participants in the interview who had been her buddies were aware of the therapeutic treatments she was undergoing and were also able to explain the 'reasons' for her disability. The close and personal contact experience of these buddies appeared to have resulted in informal sharing of information about her needs. Notably, the students in this integrated class were generally positive in their comments about associating with people with physical disabilities. The findings suggested that information, positive affirmation and positive contact had an impact on the development of positive attitudes.

The study also suggested that a contact experience with someone with a disability outside school could have a positive impact when a family member mediated positively. Participants indicated that socialising with a personal friend or family member with a disability made them more aware and enabled them to take on a more sympathetic position towards those with disabilities. Often, they also developed a personal philosophy towards integration.

5.6.6 Academic competency and downward comparison

As the schools in this study practised academic streaming, the integrated students who were categorised as relatively academically weaker than their respective schoolmates were placed in the classes that need more guidance. Nevertheless, there were mixed reactions to integrating students who were perceived to be slower learners. Academic success had a significant impact on a student's level of pride and self-esteem. The negative comments about their peers with disabilities (Student S with visual impairment who walked with an awkward gait and Student J who was in a wheelchair and had a scaly skin condition) suggested that students in integrated schools engaged in downward comparison in their evaluations of the "abilities" of their peers with disabilities. They also expressed stereotypical and misinformed associations of physical and sensory disabilities to intellectual disabilities.

When discussing family support regarding spending time with peers with disabilities, some participants claimed that their parents would prefer them to focus on personal studies rather than helping out with peers with special needs. They were quick to point out that the streaming practised by their schools meant that only students who did well in the school examinations would be placed in their classes.

Integrated students discussed learning from their peers who had a disability to avoid suffering from a similar 'fate'. Some integrated participants acknowledged that it was "advantageous" to assist those with special needs because it would help them to appreciate what they had. This finding suggested that integrated students drew on the negativism and antipathy to enhance their self-esteem and their competency.

5.6.7 Summary of the focus group interview findings

To sum up, most of the participants generally believed that people with a disability have rights to regular schools, job opportunities and life experiences. They also believed that persons with disabilities could excel at school. Similarly, most of the participants, including those from integrated classes, claimed their schools did not

instruct them about disabilities in general. Thus, most participants, including those from integrated classes had a low level of knowledge about disabilities. Those participants from non-integrated classes who were more aware about disability and their prevalence attributed their knowledge to personal readings or family. They also articulated their support for integration and rights of people with a disability to education.

Notably, participants from two of the integrated classes and their schoolmates from regular classes spoke negatively about their peers with disabilities. They made derogatory remarks about the physical traits such as the eyes, the skin and the gait of their peers with disabilities. Their descriptions appeared to be fixated on the physical abnormality. They perceived their peers as strange and stated that they were not keen to befriend them. It was apparent that there was a negative contact experience for these regular participants in these integrated schools.

The lack of appropriate information regarding the special needs of students placed in the mainstream environment also created a dearth of information among the regular students about their schoolmates who were different. This led to misconceptions, ignorance and lack of understanding about people with special needs. Most of these regular students appeared to have an ambivalent attitude towards their peers with disabilities and had negative perceptions about sharing classrooms with them.

On the other hand, a positive contact experience was reported in an integrated class with high achieving students. The interview data indicated that there were several aspects that supported an inclusive culture in this environment. Firstly, the participants reported that they had prior interactions with students with disabilities because of their visits to a neighbourhood special school. The student with disabilities in their classroom was well thought of because of her academic abilities and intelligence. Unlike School A and School B, participants in School C did not make any negative remarks about Student N's disabilities or her difference. Secondly, the students spoke about the buddy system organised by the teacher to

help their peer to move around the school outside lesson time. Those who had been a buddy spoke positively about Student N's personal traits. These regular participants were able to provide anecdotal examples of the strengths and normality of people with a disability. Their remarks indicated that a peer with a disability was socially accepted.

Some of the participants from regular classes who appeared to be better informed about specific conditions gained from their personal reading, expressed dire prospects for those who were living with a disability, suggesting that people with disabilities would be subjected to teasing, bullying and were more likely to take their own lives. Also, participants from regular classes were generally wary about the negative impact of integration on their academic performance. Despite verbalising support for the principles of integration, it was not indicative of their endorsement of integration occurring in their particular learning environment.

Overall, apart from School C, the analysis showed that if there had been no effective agents that facilitated positive interactions or socialisations, students held stereotypical impressions of people with disabilities. Their attitudes towards these people who were different from them were likely to be negative, regardless of whether they were in an integrated or non-integrated learning environment.

The next section describes the findings from observations in the integrated classrooms. The observations aimed to identify specific mediating factors and the classroom dynamics that affect the contact experiences of the participants in each integrated class.

5.7 Observation of Integrated Classes

The integrated classes were observed to further identify the differences in context of the contact experience. Each class was observed for approximately a one-hour

activity based lesson. Two sets of behavioural categories were observed, that is, interaction dynamics and the behaviour of regular students in the setting. In analysing the interaction dynamics of the regular students with their peers with disabilities, the following details were identified:

- i) The frequency of interaction between the person with disabilities and the regular students,
- ii) The type of interaction – an initiation, or an ongoing interaction,
- iii) The quality of interaction – either positive, negative or neutral.

The categories for analysis of student behaviour in the classroom, particularly the students with disabilities, were as follows:

- i) On-task,
- ii) Off-task-neutral (eg. unoccupied behaviour, onlooker behaviour, solitary play),
- iii) Off-task-disruptive (eg. interactive play with classmates, unsolicited noise),
- iv) Off-task-aggressive (eg bullying, arguing, fighting).

5.7.1 Analysis of integrated classroom observation: School A

In School A, 42 participants were in the class being observed. A student with a visual impairment, Student S, was a member of this class (refer to Figure 5.1). She had a slouched posture, moved with an awkward gait and had poor gross-motor coordination. Unlike the rest of the students, who sat in rows of threes, she was seated alone in the front of the middle row. According to the teacher, the seat enabled her to see the writing on the whiteboard better.

At the start of the lesson, Student S was actively on task and participating in the assignment given. She made small attempts to turn to face her group, but they ignored her actions. During the course of the activity, she made several small movements to turn around again, but no one appeared to notice her or attempted to

include her in the activity. Other than her body movements, she did not initiate verbal interactions with her group. There were no engaging gestures from the regular students towards her.

Not long after her failed attempt to be included, she turned back to the front to look at the resources on her table and was engaged in solitary play with her stationery. She was off-task-neutral and occupied in solitary play, talking to herself and smiling as she gazed at her learning resources. Meanwhile, the rest of her group members were engaged in a noisy interaction. The teacher, who was moving around the class, did not stop by her desk. When the teacher stopped at the desks of her group members, she did not encourage them to involve Student S in the work either. The teacher appeared to be preoccupied with the other students in the class.

In the same class, there was one student with behavioural problems, Student M. During observation he displayed inattentive behaviour, talking and getting out of his seat. Ten minutes into the lesson, he was off-task and disruptive. He was moved to a solitary seat at the back of the class. The teacher appeared to focus more on him than Student S. She approached him several times to monitor his behaviour. While he was at the back seat, his behaviour was nonchalant and he was engaged in solitary play. He moved his chair around, leaning towards the door. When he was permitted to rejoin his group towards the end of the lesson, he appeared to be happy and settled back to work with his group. He was seen initiating interactions and interactive play with his group members. The group showed that there was a general acceptance of his presence. During the focus group interviews, the participants mentioned incidences of misbehaviours of Student M and expressed frustrations at the disruptions caused by him.

During the observation the teacher did not seem to be in control of her class. Other than Student M, the teacher did not intervene when students were displaying off-task-disruptive behaviour and the noise level was high. There was a failure to address the off-task-neutral behaviour of Student S. She did not mediate the group dynamics

to promote acceptance or assist to engage Student S in the activity. She did not model appropriate interactions with Student S. Although the regular students did not display animosity towards Student S in class, they were nevertheless oblivious to her presence. There was no evidence of spontaneous socialisation taking place between Student S and the rest of the class

5.7.2 Analysis of integrated classroom observation: School B

The observed class in School B consisted of 40 students and included Student J, who used a wheelchair and had a scaly skin condition. He was seated in the last row behind the class, near the door, between two students. The teacher informed the researcher that the arrangement was made because he was tall and had no behavioural issues. The other student in this class who, according to the teacher, “required intervention” was Student K who had been diagnosed with ASD. He was seated in the middle of the class, within close eye contact range of the teacher.

During the lesson, Student J was engaged in interactions with his peers. He was participating in group and pair work. The amount of interaction between Student J and his peers was the same as interactions among other regular students. There appeared to be social acceptance of him in an integrated setting within his small group, there were no sign of his classmates showing disdain over for his disabilities that they had expressed during the focus group interviews. There was no significant difference between the participant with disabilities and the regular students in the student/peer initiation patterns. When not interacting with the other group members, Student J was observed to be on task and focused.

Student K, who had ASD, on the other hand, was off-task after the first 5 minutes into the lesson. He was disruptive for the rest of the lesson and was observed to be fidgeting. He also engaged in solitary play with his learning resources. At times he took on an onlooker’s position, watching listlessly at what other students were doing. Student K’s inappropriate and challenging behaviour increased as the lesson

progressed. Towards the end of the lesson, he was noted to be engaging in off-task aggressive antics. He was fidgeting, flipping through the dictionary, dropping and picking up things from the floor. He spoke loudly to his peers, made faces and persistently called out his teacher name. At one point he “fell asleep”. This was interpreted by the teacher as an off-task misbehaviour. The teacher attempted to wake him up by sprinkling water in his face. He was agitated, became aggressive and ran out of the class. The teacher chased after him and brought him back to the classroom. According to the teacher, this was a common occurrence. During the commotion, the rest of the class continued with their work but appeared to be affected by the incident. The teacher’s composure remained calm and she appeared to be caring in her words. She was adamant that he had to stop his aggressive behaviour. After their discussion, the student apologised to the teacher. He also appeared to acknowledge that his behaviours were inappropriate.

The incident illustrated the teacher’s lack of appropriate management skills to support and engage a student who had a diagnosis of ASD. The teacher appeared to have positive intentions when she intervened. Her lack of knowledge regarding ASD was evident. Strategies employed to manage his behaviours were not consistent with best practice for a student with ASD. She had used strategies to manage his behavioural problems and was unaware that her management techniques exacerbated the student’s behaviours. Her public attempts to ‘manage’ the students’ behaviours had an apparent impact on the regular class. The students perceived the behaviour of their peer with a disability to be intentionally disruptive.

It was noted that Student H, described by the teacher as one who “refused” to speak, was seated at the front desk, beside the teacher’s desk. Unlike the rest of the class, Student H’s desk was devoid of any resources and displayed an onlooker demeanour from the start till the end of the lesson. She was off-task, quiet and solitary. The class teacher did not stop by her empty desktop, nor did she question her regarding her non-participatory attitudes or made any attempt to redirect her.

After the lesson instructions were given, it was noted the teacher did not actively move around the class nor did she make any attempt to guide Student K, Student J or Student H. She did not provide the structural support required to engage them. There appeared to be a lack of rapport between the teacher and the students. The needs of Student K seemed to overshadow the needs of all other students, including Student J who appeared well adjusted and responded positively to class routine. He was working quietly with another student and the teacher made no attempt to support him during the class activity. There was no negative communication, but there was also no positive reinforcement to encourage him for his effort.

The observation illustrated the lack of support structures in place to facilitate integration in this classroom. The students with disabilities and special needs were not guided or supported in their learning. The teacher did not model positive communication skills to facilitate understanding and appreciation of the different groups of students. The finding indicated that inappropriate response to a student with particular special need created distress. As the interview findings revealed, the contact experience in the class was negative as students were negative in their perceptions of their classmates with disabilities.

5.7.3 Analysis of integrated classroom observation: School C

The classroom observation took place during an activity based, semi-structured lesson with students gathering in groups of fours to discuss a short narrative and working on creative writing related to the story. The 39 students were seated in rows of two. The teacher had an established class routine for students to move to their seats and form their working groups with minimal disruption. The students appeared familiar with the system and were on task.

Student N who was in a wheelchair, was described by her peers as a kind and smart student (refer to the description of the focus group interview, Section 5.4.2). She was seated at the front desk of the class beside another student. During group discussion

time, Student N and her partner moved and faced the members of the class. Like the other students in the class, Student N was on-task and appeared to be highly motivated at all times. She was seen poised to respond to the teacher, her body was always turned towards the teacher who mostly stood in the middle of the classroom.

Student N initiated successful interactions with the group members who were reciprocating her interaction. She appeared to be well adjusted and had a positive learning attitude. She was often seen smiling and on-task. Her eyes were always on the whiteboard or on her teacher. When the teacher called for answers, she often put up her hand enthusiastically. The teacher was responsive towards her. At the end of the lesson, while acknowledging some pieces of work, which were done well, the teacher made a special mention of Student N's work. When she called for a round of applause for Student N, the student was beaming with pride and joy. The response from the regular students was also supportive and enthusiastic. The group dynamics were harmonious and pleasant.

There was spontaneous and active interaction among the regular students and Student N. The regular students appeared to accept her socially. The teacher was in control of her classroom. The class teacher monitored the noise, and when necessary, spoke to the students who were making excessive noise and asked them to use a more appropriate tone so others could work. Her delivery of the lesson was systematic and clear. She made eye contact with the class and her direct questioning targeted a good spread of students around the class. The teacher moved around the class and initiated interactions with the students in their respective groups. She also stopped casually at Student N's desk. This appeared to be part of her teaching routine. The teacher's attitudes towards the regular students and the student with a disability did not appear to be differentiated.

The classroom interaction dynamics amongst students and teacher appeared active and vibrant. There was positive adult interaction with Student N. The teacher facilitated acceptance and appreciation of Student N. Overall, the classroom had a

positive environment for effective integration to take place. This supported the findings from the focus group interviews, which revealed that regular students perceived Student N's academic performance to be on par with the rest of the class.

5.7.4 Summary of classroom observation findings

The classroom observations supported the findings from the quantitative study and the focus group interviews regarding regular students' attitudes towards their peers with disabilities. The observations were consistent with the findings that there were differences in attitudes among the three integrated classes. The integrated classroom climate in School A and School B appeared to have less in place to encourage integration and social acceptance of the students with disabilities, compared to the integrated class from School C. During the group activity session, the regular students from School A displayed clear rejection of their peer with a disability while School B students maintained a small-clique socialization which excluded interaction and socialisation with their peer with a physical disability.

A notable difference between School C and Schools A and B was the positive and respectful attitudes displayed among the students to each other. The learning environment of the School C integrated class was structured, supportive and welcoming. There was good classroom tone. It was evident that the student with a disability in School C was more socially accepted.

The teacher in School C also displayed appropriate organization and classroom management. She was effective as a teacher and incorporated inclusive teaching techniques into her classroom practice. There was more spontaneous interaction in the class. This corresponded with the participants' positive comments about their perception of their peer with a disability during the interviews. The teacher's effort in relating, instructing and organising the lesson created opportunities for the student with a disability to demonstrate her academic calibre. There was evidence that the

teacher guided the students to learn to appreciate their peer with disabilities as a contributing member of the community.

The observation confirmed that Student N, in the class of school C was similarly positive and motivated to study as her typically developing peers. The teacher was observed commending her efforts. In comparison, the learning behaviours of students with disabilities in both School A and School B were not positively differentiated by their teachers. This could account for the downward comparisons made by the regular participants in School A and School B and their negative perceptions of their peer's disabilities.

The seating arrangements and opportunities to participate in group activities were organised differently in School A and B, compared to School C. The segregated seating in School A alienated the child with visual impairment, which further aggravated the perception of difference and disability. Similarly, the teacher in School B had kept the student who used a wheelchair at the back of the class. This had limited the opportunities for his peers to be near him physically, and to get to know him socially. On the other hand, Student N in School C was seated in a manner that encouraged her to work and interact with the regular students.

At School C inclusive dynamics were apparent. The social benefits of the integration program were not realised in School A or School B. The teacher's inability to create opportunities to engage the whole class effectively had created a confusing and disruptive learning environment for students in School A and School B. The observations concurred the focus group interview findings that the contact experience in School A and School B were negative. The regular students' negative behaviour observed in class confirmed the findings from the focus group interviews that revealed their negative attitudes towards integration and people with disabilities.

5.8 Integrated Class Teacher Interviews

The semi-structured interviews with classroom teachers aimed at determining the teachers' professional training and experience, their awareness and understanding of the needs of students with disabilities and their approach to integrating them.

The integrated class teachers differed significantly in their formal training and experience. One was a qualified, senior teacher with more than 40 years teaching experience (School B), while another was a young graduate with no teacher training and was filling in as an untrained casual teacher (School A). The third teacher, in School C, was a qualified young teacher with six years teaching experience and was described by the school as an effective and proficient teacher. The following sections outline the interviews with the integrated class teachers.

5.8.1 Analysis of teacher interview: School A

The teacher in School A had no formal educational qualifications and had only two and a half years of experience teaching in a pre-school; she was waiting for admission to teachers' college in the near future. When the study took place, the teacher was in the third month of teaching the class. She was the third class teacher the students had had in the year. She was aware that Student S had a visual disability. She was given a few documents (doctor's certificates and brief notes from the school) about her condition. She revealed that she had not told the students about Student S's condition and she also was not aware if any of the previous class teachers had spoken to the students about it.

The teacher informed the researcher that she had benefited from the advice given by the other class teachers who had taught the students in previous years. She considered the class to be a challenging class, though Student S was well behaved. She had kept the same seating arrangement, which placed Student S in the front row, isolated and away from the rest of her work group. According to the teacher, this

arrangement purportedly helped Student S to read the writing on the whiteboard better and also served to protect her from being harassed by other students.

The teacher supported integration in principle. She described Student M's behaviour as the most challenging and found Student S docility acceptable. Information gathered during interview showed that she was unclear about how to cater for the specific needs of Student S. It was apparent that she was not aware of the social difficulties affecting the student with a disability in an unaccommodating environment. This confirmed the classroom observation findings that the teacher did not make any special arrangements for Student S to help enhance her learning experience. While she was observed monitoring the boy who had a behavioural disorder, she made no attempt to attend to Student S, nor did she encourage or facilitate other students to include Student S in their group work.

5.8.2 Analysis of teacher interview: School B

The teacher in School B was one of the most senior teachers in the school. The school management had described her as very competent and firm when managing students with challenging behaviour. The class teacher was happy with the support given by the school and the parents of the students. She described the class as a challenging class. She knew that she was assigned to the class because she was an experienced teacher who could deliver lessons without being overwhelmed by the problems and the needs of the students. In her opinion, she had the abilities to manage a class with several students with special needs. She stated that it was not the best class in this particular level as the academic performance of the students was average. She expressed her care for the students and indicated that she was focused on ensuring learning took place in the class.

The teacher was unclear about Student J's condition, except that he was using a wheelchair because of an illness. She described him as a quiet and diligent boy. As for Student K, his parents had informed her that he had been diagnosed with ASD.

During the interview she stated that Student K was “disruptive”. The teacher also described Student H, who sat in the front row beside the teacher’s table, as one who “did not want to speak”. It was noted during the classroom observations that the teacher did not intervene when Student H was off-task most of the time.

The teacher stated her strategy for helping Student J was to appoint a good-natured boy as a buddy to sit beside him. However, the other students in the class were not aware of the ‘buddy’ arrangement. According to her, the class could see that Student J was in a wheelchair so she did not particularly point out his disabilities to the class. In her opinion Student J was well behaved, did his work on time, was an above average student and did not require much supervision.

On the other hand, Student K’s behaviour was a daily challenge to her. She had to manage his bullying antics towards his classmates. According to her, Student K did what he wanted and it was hard to stop him. She explained that Student K would often knock his head on the table, shout and swear at her. Her focus was to manage Student K’s “disruptive” behaviour. However, she did not speak about any specific strategies, which would be appropriate to the nature of his disability, that is ASD. Her remedy to calm him down each day was to apply a cream his parents had given her. She was satisfied that his parents were supportive of her discipline of their child.

On the whole, the teacher was confident about her own strategies and intervention techniques, which in her opinion, catered to the diverse needs of the class. Observations confirmed that she employed good classroom management techniques and had established a structure that ensured that learning took place with the majority of the students. Her firm strategies however were not effective with all the students. The case of Student K, demonstrated the teacher’s lack of knowledge about appropriate management techniques to support a student diagnosed with ASD.

5.8.3 Analysis of teacher interview: School C

The teacher in School C was a trained teacher with more than five years of teaching experience. The principal described her as an effective and efficient teacher, who had excellent instructional and classroom management skills. She had taught five students with disabilities previously (ADHD, ASD, polio, and hearing impairment). She informed the researcher that she had a neighbour who was visually impaired.

The teacher spoke enthusiastically about Student N who was in her class. Student N was in a wheelchair and the teacher had organised a buddy system to take care of Student N's mobility needs. The interview findings confirmed this and found that the class were aware of the routine and arrangements. The teacher stated that when organising the buddy system, she considered Student N's nature and involved students whom she considered to be sensitive to Student N's needs.

The class teacher described Student N as a sweet natured girl. She was cheerful and had a few girls in the class who were her good friends. She stressed kindness and helping each other as the class ethos. However, she shared that she had not spoken to the students explicitly about disabilities due to Student N's sensitive nature.

The teacher explained that Student N had strong family support. She had a relative who worked in the school and this facilitated communication between the teacher and Student N's family. Student N's parents had high expectations of her academic performance. She worked independently and had strong computer skills. Even though she was well behaved and performed well academically, she was sensitive about her academic achievements. The teacher recalled that once when questioned about her IT project, she cried because she was worried that the teacher doubted her abilities.

The teacher described the class as a "good class" and considered the students to be very bright. The students were generally well behaved and the teacher was quite firm in implementing classroom discipline. She stated that she had no classroom

management issues. She had expectations for high academic performance in her classroom. She expected the class to perform well in the national examination in the following year as they were highly motivated and all were focussed on doing well.

The teacher indicated that she believed integration was beneficial for regular students as they could learn about people with special needs. In her opinion, integration was to be supported. The classroom observations supported this and it was evident that she had applied several effective strategies to facilitate integration and social acceptance among the students in her class.

5.8.4 Summary of the teacher interview findings

All the teachers spoke about their personal support for integration in regular schools. However, as learned adults and teaching professionals, not all were clear about the principles of an equitable and inclusive learning environment. The interviews revealed that teachers needed a set of guiding principles regarding sharing information and knowledge about disabilities with their students.

The teachers appeared to focus on their classroom management techniques as a way of facilitating learning and to ensure that their students performed well academically. School A and School B teachers' self-evaluation of their skills and teaching practice were not always congruent with the observations. Their perceptions of their professional effectiveness were based on classroom management skills, rather than the effect they were having on contact experience and their understanding of teaching strategies for specific disabilities. These findings concurred with the results from the student interviews that the emphasis in the class was on academic achievement.

The interviews uncovered a trend that indicated that teachers' knowledge of special education was haphazard. The teachers agreed that they needed guidelines and professional support in dealing with students with special needs. They often had to

rely on their personal experience, or in the case of School A, on fellow teachers' "advice" to manage their classes.

The interview with the School C teacher yielded several insights into her ability to facilitate learning and promote social acceptance and understanding between the student with disabilities and the regular students. Compared to School B, the teacher had a high level of knowledge about the needs of the student with a disability. Her statements concurred with the classroom observation and the focus group interview findings of her ability to develop an integrated learning environment.

The interview results supported the findings from focus group interviews and classroom observations about the quality of contact experience in the three schools. The results identified the differences in approach towards integration among the teachers, which were consistent with the students' perceptions of the learning environments and classroom observations.

5.9 Discussion and Summary of Qualitative Findings

The qualitative findings supported the overall quantitative finding that close proximity to peers with disabilities was not necessarily associated with regular students' positive attitudes towards disabilities and general perceptions of those with disabilities. In fact, there were relatively more negative expressions among integrated students when talking about disabilities and people with disabilities. In contrast, participants from regular classes, either from regular schools or integrated schools, were generally more aware of the strength of people with disabilities, even though they generally had fewer opportunities to interact with them than integrated class participants. They were also able to empathise with the challenges facing people with disabilities.

The qualitative study found that the integrated learning environment, in most cases did not provide many opportunities for the students to learn to interact or socialise with others with special needs. The qualitative study identified several challenges faced by integrated participants in regard to interacting and socialising with peers with disabilities.

Most of the participants claimed that there were few discussions on the issue of disabilities either in school or at home. The integrated class teachers confirmed that they had not engaged in dialogue about the specific conditions, as they were aware of the sensitivity of the issue and were concerned about the impact of labelling a child. They lacked clear guidelines to support professional judgment regarding what constituted appropriate information to facilitate awareness and understanding among their students. The lack of information and the misinformation was a systemic weakness that created a negative impact on the integration program.

Anecdotal evidence from the interviews indicated that regular students in integrated schools focussed on hearsay and gossip about the actual condition of a disability. Some indicated that they perceived that a disability condition ‘spread’ to other aspects of the individual and would affect their intellectual abilities. This was evidenced from the negative comments about the intellectual capacity of students with a disability. The participants from regular classes and schools, however, read more widely and had stronger factual knowledge on disabilities; they were more vocal and articulate about their support for integration. Thus, being in an integrated environment did not lead to better understanding. Instead, the findings showed that participants in integrated classes were more likely to have misconceptions about the specific conditions. They also equated disabilities to illness and thought that the individual student had a personal responsibility to seek recovery and a cure for their disability. The qualitative study thus established that the absence of discussion and information reinforced negative stereotypes and prejudice (Brown & Gaertner, 2000).

The overall physical appearance and mobility of the students with disabilities was an important factor that influenced integrated students' attitudes towards their peers with physical and sensory disabilities. The findings suggested that regular students' social acceptance of their peers who were different was largely based on physical and psychological developmental characteristics. For example, they focussed on the shape of the eyes of the child with visual impairment, associating her awkward gait and lack of control over her muscles as a sign of mental incapacity.

Observations in two integrated classrooms showed that minimal spontaneous social interaction took place between regular students and their peers with disabilities. The classroom contact experience in these classrooms was generally negative and sharing the learning time appeared to exacerbate stronger negative viewpoints regarding the limitations of students of disabilities. In these classes, the teaching strategies were ineffective in modelling communication and to ensure the needs of the students with a disability were met.

The focus group interviews established that students were fearful that peers with special needs might slow down their academic progress. Some participants stated that their parents had high academic aspirations for them and thus would not be supportive of integration if it were to affect their assessment results. The interviews with teachers also confirmed that the school focussed on academic achievements. Even those participants from regular schools who were stronger academically expressed concerns about the negative impact that social integration with peers who had disabilities might have on their academic performance. Further analysis of integrated school community suggested that prevalent culture that focused on merit was an influence on the attitudes of regular students towards people with disabilities.

A closer investigation of the integrated class in School C, which had more positive attitudes toward their peer with disabilities, found that there were various support structures in place that promoted positive contact experience. The integrated class teacher in this school demonstrated the impact of a teacher can have on a successful

integration program. The class observations revealed that the teacher engaged the student with a disability actively in the class. There was an appropriate level of attention and acknowledgement of her as a contributing member of the class. The positive teacher-student relationship had contributed to an inclusive and accepting climate that empowered the whole class to model positive interactions. There were spontaneous interactions and bonding between the student with disabilities and her classmates through a well organised and implemented buddy system. Even though there were no overt discussions of her disability by the school and teachers, the class was kept well informed of her strengths and her needs through personal communication. They did not perceive her immobility and having to use a wheelchair as a confronting impediment that set her apart from them.

The findings suggested that the school culture in School C facilitated positive contact experience with people with disabilities. There was a well-organised regular visit to a neighbourhood special school for students with intellectual disabilities. This whole school approach to interact positively with children with disabilities in the wider community had an impact on nurturing positive attitudes. The regular students in this school did not make a single derogative remark about their peer with a disability. They spoke of her as a competent student. They did not make downward comparison, as they believed that she shared their drive to excel academically.

In contrast, the integrated students from other schools who were more negative in their attitudes than their non-integrated class schoolmates held relatively negative opinions about the academic abilities of their peers with disabilities. The peers with disabilities were criticised for being unable to speak intelligibly, being smelly and unable contribute to group work. The regular students in these schools also made downward comparisons of their peers with disabilities and were not accepting of their placement in their class/school. The classroom observations also revealed that when teachers did not encourage active engagement or applied inappropriate strategies, this created increased tension, which was indicative of an overall negative contact experience.

The tension within the integrated schools suggests that a complex matrix of social and cultural contexts and support structures impact attitudes and perceptions. Overall, the findings suggested that regular students' attitudes towards their peers with disabilities were affected by the quality of contact experience. A positive contact experience can create a successful integration experience and lead to positive attitudes. The qualitative findings indicated that information and knowledge increase awareness of the strengths and needs of peers with disabilities. Positive contact experience needs to be supported by appropriate structures. School-wide activity that promotes social interactions with people with disabilities would encourage more dialogue and understanding.

The study also implied that contact experience has to be mediated by well- trained and informed adults to facilitate learning about disabilities. The findings affirmed the importance of teachers as agents of influence and models of desirable behaviour in relating to those with special needs. Teachers need to be able to make a balanced professional judgment regarding sharing information. In this study, all of the teachers were very hesitant to share knowledge with classes. By encouraging dialogue about disability, they play the role of an effective mediator that facilitates learning and understanding. Greater awareness creates a positive contact experience in integration, which will bring about positive attitudes towards disabilities and inclusion, in class, at school and at home.

The academic aspirations, competitive school culture and the importance of academic achievement in Singapore were found to affect the willingness to interact and integrate with peers with disabilities whom they perceived as weaker academically and likely to slow down their learning progress. The societal focus on academic achievements appeared to have an inherent negative effect on the participants' attitudes towards integration. If there are to be advances in inclusion, it will be necessary to broaden the definition and understanding of what constitutes success and merit in school.

5.10 Chapter Summary

The chapter presented the qualitative findings of the focus group interviews by the three groups to explore the findings of the quantitative study. It confirmed findings of the quantitative study that students in integrated learning environments were negative towards people with disabilities generally. It also uncovered the socio-cultural contexts that differentiate the students' attitudes of different schools. An analysis of the classroom observations of the integrated classes allowed further examination the mediating factors of the contact experience and the classroom dynamics of individual learning environment. The integrated class teachers were also interviewed to confirm that teachers played a significant role in modelling appropriate communication with the students with disabilities and promoting positive contact experiences. Overall, the qualitative study analysis uncovered the complex nature of the students' attitudes towards people with a disability. It indicated that the quality of contact experience affected the integrated students' attitudes towards integration and people with disabilities. Teachers and macro-level school ethos played significant roles in affecting positive attitudes of students in integrated settings.

CHAPTER SIX

CONCLUSION AND RECOMMENDATIONS

6.1 Introduction

This chapter brings together the discussion of the qualitative and quantitative parts of the research study that investigated the impact of integration on regular students' attitudes towards people with disabilities and how these attitudes can be understood in relation to the dynamics of the socio-cultural contexts of the learning environment. The chapter explains the significance of the findings and outlines new information on the impact of integration on regular students. It also provides recommendations for further research into the implementation of integration programmes in regular schools in Singapore. In addition, the chapter highlights the contribution that this study made to the understanding of integration program set within the socio-cultural contexts of the Singapore's primary education system.

The study suggests that being in an integrated environment with peers with disabilities has a significant impact on the regular students' attitudes towards people with disabilities. The findings established that integration program in Singapore schools provided opportunities for regular students to socialise and interact with peers with disabilities. However, the findings of the study led to the conclusion that contact experience with children with disabilities in integrated primary schools could either have positive or negative impact on regular students' attitudes towards people with disabilities. The study found that integration yielded positive outcomes in behavioural and attitudinal development when the contact experiences were positive. On the other hand, when integration was not supported by effective mediators such as support structures and trained personnel (Allport, 1954; Pettigrew & Tropp, 2006),

there were indications of anxiety among regular students towards the peers with disabilities. The findings showed that these students in these negative environments showed that they were more negative in their attitudes towards their peers with disabilities. The results challenge once again the ‘contact model’, or mere-exposure-effect, that states that regular contact, and simple exposure to persons with disabilities influences children’s attitudes in a positive way (Allport 1954; Esposito & Reed, 1986; Zajonc, 2001). In fact, the quantitative research findings yielded quite the opposite results: the attitudes of regular students in regular learning environments towards peers with disabilities were generally more positive than the attitudes of those in integrated environments.

6.2 The Quality of Contact Experience

All integrated schools under this study shared several characteristics, which were regarded as sufficient for providing successful contact experience (Allport, 1979). They were all in the regular public system, which practised streaming by academic merit; had common curriculum for all the students; and provided equal opportunities for regular students to socialise with peers with physical and sensory disabilities in class. However, the findings indicated that sharing several similar features in social settings did not lead to similar successful contact experience outcomes for all integrated students as suggested by some researchers (Pettigrew & Tropp, 2008; Zajonc, 2001; Esposito & Reed, 1986).

The regular students’ perceptions of people with disabilities appeared to be associated with the quality of the contact experience. The students in integrated environments who demonstrated more favourable attitudes towards their peers with physical and sensory disabilities were found to have positive contact experiences with people with disabilities, either in their classroom, at school and/or at home.

On the other hand, less positive contact experiences with peers with disabilities “reinforced the negative stereotypes and prejudice” in regular students (Brown & Gaertner, 2000, p.165). They displayed negative attitudes towards those whom they perceived as different and expressed the intention to avoid future contact experience with people with disabilities. Additionally, the negative contact experience with members of an ‘outgroup’, that is, peers with disabilities, was associated with the concern of regular students that the presence of students with disabilities might affect their academic achievements, which undermined any beneficial impact of a contact experience.

The study identified a number of contextual characteristics that were associated with positive attitudes of regular students towards peers with disabilities. These included overall school programs that promoted inclusive ideals and class teacher who focussed on positive differentiation and effectively orchestrated the relationships in the integrated classroom to create a positive learning environment. These and other contextual influences are discussed in detail below (Section 6.2.1).

The findings also identified two key characteristics of regular students’ perceptions of disability and integration that were inextricably connected to the quality of their contact experience with peers with disabilities. Firstly, the ability to recognise and appreciate the strengths of people with disabilities was identified as a significant factor that contributed to the difference in attitudes among regular students. Secondly, regular students’ concern about the presence of peers with disabilities in their classroom affecting their academic achievements shaped their attitudes towards their peers with disabilities. The concerns over academic performance and fear that their achievements could be jeopardised had a negative impact on their attitudes towards integration with peers with disabilities. The following section provides an extended summary of these findings.

6.2.1 Awareness and appreciation of people with disabilities

The thematic categorisation of both the quantitative and qualitative data revealed that regular students who knew and were aware of the strengths of people with disabilities and were able to appreciate their strengths had more positive attitudes towards disabilities. Integrated class students who held stereotypical perceptions of people with physical and sensory disabilities lacked knowledge and awareness about disabilities in general. The integration experience had not been positively mediated to lead to positive differentiation. Instead, the findings indicated that integrated students were more likely to believe that people with disabilities were not able to function as effectively in their daily lives as regular students. They commented that people with disabilities would ‘need help to move around the shopping malls’, ‘they may get hurt’, ‘it is quite hard to take care of them’ etc. They made specific critical comments about their classmates with physical and sensory disabilities, such as ‘she speaks so softly’, ‘he is mental’, ‘he stinks’, ‘he always disrupts the lesson’.

In contrast, regular class participants who lacked contact experience were found to have more factual knowledge about people with disabilities being similar to them, able to learn and achieve. These regular participants in regular classes cited their personal reading as they made reference to well-known public figures with disabilities who were acknowledged for their beauty and talents. Therefore, they were more aware of and able to appreciate that people with disabilities had the potential to make remarkable achievements in various fields.

The qualitative findings demonstrated that the students in the school with positive contact experience had more knowledge, not only about the specific conditions, but were also able to identify specific strengths of their peer with a physical and sensory disability. The students from both the integrated and regular class in this school did not make any derogatory remarks about their peer with disabilities; indicating that this particular integrated school differed from the other integrated school in two aspects. First, it had in place a community service visit program to a neighbourhood special school. This program was well thought of by both the integrated and regular

class students as they spoke of their ‘friends with disabilities’ in that special school. Secondly, the integrated class had a teacher who facilitated positive differentiation that further enhanced the contact experience. The child in the wheelchair in this class had opportunities to speak up and to participate actively as a contributing member of the class. The class teacher had also organised a buddy system to help to this child move around the school. The findings indicated that this program had created opportunities for the regular students to socialise with their peer in the wheelchair at a personal level. As a result, the students in this class spoke of their peer with disabilities in more personal terms and were able to describe her strengths more specifically than students from other integrated classes. For example, they described her as being a kind and beautiful girl who worked just as hard as they did. They knew of her after-school therapy sessions and believed that she had as much an equal opportunity to a quality life experience as they should have.

A small number of regular students were found to have contact with people with disabilities outside school or at home. The study suggested that when contact experiences were mediated positively by informed adults, regular students were more aware and able to appreciate the strengths of people with disabilities. They had more knowledge about disabilities and their comments were more centred on strengths rather than differences. For example, some participants with siblings with disabilities were less likely to focus on the negative aspects of physical appearance but shared about their siblings’ abilities to complete chores independently. These regular students were also more positive in their attitudes towards people with disabilities.

Although it was not the original intention of this study to draw attention to a child diagnosed with Autism Spectrum Disorders (ASD), he was identified through the research process. The study revealed the effect of his placement in the mainstream system with weak or non-existent support structures. Although most of the integrated students did not consider him to have a disability, as he was of normal physical appearance, they were keenly affected by his disruptive behaviour. The qualitative findings indicated that contact experience was negative as the integrated

class was distressed and focused on his inability to conform to classroom discipline. The class teacher was not able to effectively mediate the child's special needs or negotiate any understanding or social acceptance. His classmates perceived him as 'mental' and 'weird' and the reputation of being disruptive had preceded him even among students from the regular class. The negative contact experience of this child with ASD in the class caused the regular students from both the regular and integrated class to reject integration of peers with ASD.

6.2.2 Concerns over academic performance

The qualitative results revealed that overall regular students were anxious about their academic performance. All the participants in the study indicated that they were focused on doing well for their examinations. Regular students were aware of the rigorous streaming system practised by their schools and to do well academically was their priority. This appeared to have an effect on their attitudes towards socialising with peers with disabilities. The students indicated that one of the main reasons that they would not spend time to help out their peers with disabilities was that it would take time from their study. These students perceived that integration required them to set aside time to accommodate the students with disabilities, such as being called on to be a buddy or help out the child with disabilities in group activities. The students also cited that their parents would not support the integration program if they had to 'sacrifice' their individual performance.

Perceptions of academic potential of students with a disability had an apparent effect on regular students' attitudes. Nearly all of the regular students were unwilling to support integration if a peer with a disability was academically weaker than they were. They feared that the class teacher had to compromise the whole class' progress to accommodate the child with special needs. Most of the regular school students specifically mentioned that they did not believe that students with disabilities who were not academically competent would be placed in their class. This suggests that their attitudes were not dissimilar to the integrated students. Both groups of students

were able to support integration in principle but were unwilling to participate actively when they perceived their academic performance was under threat.

The integrated class that was more positive in attitudes than their non-integrated schoolmates had described their peer with a disability as being academically competent. It is noteworthy that the non-integrated class in this school also recognised her as a good student who shared their drive to excel. Both the integrated and regular students in this school were supportive of integration. The contact setting was successful as there was perceived equal status, that is, academic competency among the students in this particular integrated environment.

In comparison, the students with disabilities in the other two integrated schools were not recognised as academically strong. The regular students in these schools, especially those from integrated classes, made downward comparisons to the students with disabilities. While some pointed out the special arrangement required by their peers with disabilities during assessments, others were critical of specific weaknesses. For example, some students perceived that their peer with visual impairment would be inaudible during oral language assessments. They were dismissive of her abilities to contribute to group work and were overtly ostracising her during lessons. These integrated students made derogatory remarks about her impairment and highlighted her awkward gait and referred to it as an abnormality. They perceived the physical and sensory disabilities as having ‘spread’ to her cognitive development. The contact experience with this child with a disability was not positively differentiated.

6.3 The Contextual Influences

The results of the study provided evidence that placement of students in an integrated environment was not necessarily associated with positive attitudes towards others with disabilities. In fact, in the schools under study the opposite tendency was found.

Overall, the students in regular schools displayed more positive attitudes when compared to integrated and regular students from integrated schools. Additionally, a comparison of integrated classes and regular classes from the same integrated school found that integrated students were more negative in attitudes towards those with disabilities compared to their schoolmates from non-integrated classes.

Qualitatively, the study established that most of the integrated class participants were not aware of people with disabilities and their needs in their communities. They held mixed perceptions of what people with disabilities could achieve and were apprehensive about sharing learning time with them. In contrast, participants who had no contact with peers with disabilities in school or outside were also found to be significantly more knowledgeable about disability conditions than those who had social contact in schools. These regular class students indicated that they read more and had more factual knowledge about the achievements of well-known public figures with disabilities.

The contact settings of each of the integrated schools were different. The analysis revealed that children's attitudes towards disabilities, integration and people with disabilities were linked to multileveled social and cultural contexts. According to Vygotsky's social cultural theory (Kozulin, Gindis, Ageyev, Miller, 2004) and Bronfenbrenner's (1979) ecological model of child development, learning is a shared, joint process in a dynamic social context. Significant others such as teachers, friends, classmates, family and the community are moderators of development of behaviour and attitudes. Some very recent research in contact theory expounded that positive contact experience has to be moderated effectively to reduce anxiety, through enhancing knowledge, empathy and perspective taking (Pettigrew & Tropp, 2008).

The following sections discuss the three factors in the socio-cultural contexts that had an impact on the attitudes of regular students towards people with disabilities. These factors in the micro, meso and macro systems were the significant drivers that moderated the impact of the contact experience of integration. They are the class

context and teachers' role as an agent of integration, school ethos and societal expectations towards academic achievements.

6.3.1 School ethos and the desire for high academic achievements

In the context of the Singaporean school system, where students spend a large part of their time in schools, the findings suggested that school culture had an impact on the relationship formation and the development of positive attitudes towards people with disabilities.

Generally, the school structures were unsupportive of educating regular students about disabilities. There was an absence of structured discussions about disability, about the presence of peers with disabilities and their needs in schools. According to Allport (1954, 1979), knowledge is a key mediator of 'intergroup' contact that helps to facilitate learning about the 'outgroup' and reduce prejudice. The lack of any knowledge resulted in most of the integrated schools' students demonstrating a lack of awareness about disability. It also hindered positive differentiation as regular students focussed on hearsay and gossip about their peers with disabilities, about their physical state, their abilities, their special needs and also about the class teachers' special attention to them.

As noted in the earlier section, all schools in the regular system practised a streaming policy that segregated students according to academic results. The integrated classes in this study were not the top classes in their schools. This had an apparent impact on the regular students' perception of differences and abilities. The integrated classes were perceived as relatively weaker classes by the regular class students, marked by the presence of a child with disabilities. The students in regular classes from integrated schools were aware that, integration would not take place in their classes if it were based on academic criteria. The practice of streaming students by academic ability is therefore antithetical to the practice of including students with disabilities into the regular schools (Foreman, 2007; Graham & Slee, 2008).

Another practice, noted in one of the integrated schools, was the assignment of temporary and untrained teachers to teach the integrated class. The practice resulted in several changes of class teachers over a short period of time. This lack of explicit and systematic structures such as assigning experienced and permanent staff to facilitate integration suggested a low level of commitment to a quality contact experience.

The study had identified one particular group of integrated class students who demonstrated more positive attitudes towards people with disabilities than the regular class students in the same school. A finding that was completely unlike their integrated counterparts in other integrated schools is that this particular school had several structures, which supported an inclusive learning environment. At the school level, these structures included an effort to engage the students from integrated and non-integrated classes with an external special education community. The impact of the program was significant as a number of participants from both the integrated and regular class recounted their visits positively and their friendships with students from that special school. Participants in this school were also noted for not making derogatory remarks about people with disabilities compared to participants from other schools.

This suggested that when the school created opportunities to nurture prosocial attitudes, empathy and positive attitudes of inclusiveness, a culture of understanding and acceptance of those with disabilities evolved (Emerson, 2007). The following section looks into how the school's supportive ethos towards the special education community was further validated at the class level.

6.3.2 Class context and the teacher as a significant agent of integration

The main findings of this study have several implications of the role of the teacher in affecting the attitudes of regular students towards people with disability. The study

showed that a more inclusive learning environment facilitated the nurturing of positive attitudes.

The integrated class that was more positive in attitudes than the regular class in the same school was found to have more inclusive structures in the contact setting. The class teacher had applied inclusive classroom practice and pedagogical skills compared to the other integrated classes from other integrated schools. Firstly, the lesson was structured with opportunities for the child to speak up and showcase her work. The class teacher also supported positive interactions between regular students and their peer with disabilities. She paid equal attention to the child with disabilities and modelled appropriate communication style and made strategic engagements with the child with disabilities throughout lesson time. She also made deliberate attempts to compliment the child's effort during the lesson.

The teacher also organised the class to participate as a buddy to the child with disabilities. This enabled the regular students to socialise with their peers with disabilities at a personal level. Thus the student with physical disabilities was perceived by her regular classmates as a competent and independent fellow student requiring minimal help to do her work.

Comparatively, there were inappropriate methods of intervention observed in the other integrated classes. The integrated teachers, one a senior teacher and another an untrained teacher, were not able to effectively meet the diverse needs of the students. For example, the teachers were not aware that seating a child with special needs away from the rest could isolate the child from the class community and increase negative differentiation. There was misunderstanding and apathy among regular children towards their peers with disabilities. Regular students in these integrated schools focussed on the negative aspects of students with special needs and held stereotypical opinions about people with disabilities. For example, the regular children described their peer in the wheelchair as one who was 'smelly' and had chosen "not to bathe", "cannot bathe" and described the child with autism as a

student with a "mental problem". They thought that a person with a disability should be held responsible for his or her state of having a disability.

The study also showed that the class teachers needed guidelines to intervene with their special needs students. The teachers were found to focus more on children with disruptive behaviour and ignored 'quiet' children with disabilities. The practice of streaming also had an impact on teachers' interpretation of how to achieve good learning outcomes. Teachers in these classes were preoccupied with behaviour management and decisions on seating arrangements. The emphasis was on the students with special needs 'fitting in' and minimising disruptions in class. Interaction between the students with and without disabilities was limited. This lack of positive contact experience appeared to influence the degree of acceptance and understanding.

When teachers were not able to effectively mediate the contact experience or model appropriate appreciation of diversity, the regular students developed skewed perceptions about their peers with disabilities. Participants in the integrated school with a child with visual disabilities gossiped about the need for a special seating arrangement and enlarged print materials. Most also believed that people with disabilities, unlike them, required special help and attention to go about their daily lives. Thus they perceived integration as a 'troublesome' affair which was occurring at their expense.

A teacher is a significant agent in children's learning and development (Vygotsky, 1993). The findings affirmed earlier studies conducted in Singapore with teachers and students which found that students with diverse needs required teachers trained in special education who could create responsive learning environments (Heng & Tam, 2006). This study demonstrated that interaction between the regular students and the children with disabilities failed to eventuate in most of the integrated classrooms when teachers were not able to facilitate understanding and interaction.

6.3.3 Societal expectations towards academic achievements

The Singaporean education system is known for its highly centralised and competitive structure. Several features specific to the Singaporean school culture, such as the meritocratic system, the emphasis on social cohesion and good citizenship (which means doing as well as one can in school) have led to high academic aspirations among every student (Ministry of Education, 2005). At the primary level, students were constantly evaluated; besides the regular school tests and project work, there were national assessments and the practice of streaming and ranking of students at class and school level. The primary school participants in this study were highly aware of the focus placed on academic performance in the 'meritocratic' system (refer to Section 6. 8). In their opinion, those with disabilities were also expected to compete to attain good education standards and skills to get good jobs.

The findings implied that regular students' attitudes towards the support for integration and people with disabilities had to be considered in relation to their academic aspirations. The study indicated that there was a distinct difference in attitudes of students of different academic calibre and aspirations.

Generally, integrated students were supportive of integration of children with special learning needs in principle. They agreed that their teachers could slow down lessons to accommodate special learning needs. However, they were strongly opposed to the integration of peers with behavioural disabilities when they perceived that the behavioural difficulties of these students would jeopardize their academic progress. Their apprehension corresponded with the negative contact experience with their peers who displayed disruptive or 'odd' behaviour that they perceived would undermine the learning environment of the class.

The study suggested that the pressure about academic performance affected all students in this study, whether they were from a better performing class, integrated or

regular class. Regular students perceived integration as acceptable only if it was not at the expense of their academic performance.

In this study, regular class students who were higher achievers than integrated students were more inclined to fear that their learning progress would be adversely affected by sharing learning space with peers with disabilities. They spoke about their worries over the instructional programme being slow down to accommodate a peer with disabilities. Some justified their unwillingness to accommodate peers with disabilities because of the need to get ‘good grades’ to remain in the ‘good classes’. These students from both integrated and regular schools, on the one hand, had more factual knowledge about disabilities and were generally able to articulate their willingness to engage with people with disabilities. However, they were against compromising personal academic progress for integration, compared to integrated participants from classes described as not being academically strong.

The study indicated that a societal focus on academic achievements appeared to have an inherent negative effect on the participants’ attitudes towards integration. The fear that integration could possibly impede achievement increased the pressure to disassociate from peers with disabilities. Whilst the authority put in place infrastructure support to facilitate integration, the conditions of competition in this society perpetuated a sense of pressure to perform well academically and thereby diminished the potential for achieving positive outcomes from contact experience. Thus, the findings indicated that the regular students who had the highest performance expectations were the least supportive of integration. These findings supported the conclusion that students’ behaviour and positive attitudes towards integration were related to their aspirations for educational attainment and the quality of contact experience with people with disabilities.

Participants also cited their parents’ aspirations for them to succeed academically as a key determinant in their behaviour and attitudes towards spending time socialising with peers with special needs. The students in both integrated schools and regular

schools indicated that their parents most likely would not be supportive of integration if it were to affect their assessment results. Their viewpoints were congruent with statements about family, and general societal expectations of academic excellence (Ministry of Education Singapore 2000, Tan, 1998; Wong et al., 1998). Therefore, attitudes towards peers with disabilities were also reflective of family values.

Academic achievement is a socially valued outcome in Singaporean families (Stiles, 2005). The study highlighted the tension within the complex matrix of attitudes towards integration. To resolve this tension required a holistic engagement of all learning aspects. In Vygotsky's social and cultural theory of special education, the main goal of inclusive environment is to provide best opportunities of social learning for all children included. (Gindis, 2004). However, as the study showed, there were minimal social understanding and acceptance of children with disabilities in most of the integrated classes. Thus it is apparent that the placement of children with disabilities into regular schools had not led to reduced prejudice, as suggested by the contact theorists (Allport, 1954, Zajonc, 2001).

The school and teachers were dynamic mediators that affected how regular students' negotiate integration and its impact on their attitudes towards people with disabilities. In the context where meritocracy is an overriding social force that influenced regular students' behaviour and attitudes, it is apparent that it is in opposition to the promotion of inclusiveness. Schools and teachers need to be supported to help bridge the divergence between the natural and social paths of inter-relational development brought about by the conflicting values and aspirations. Further exploration and investigation is thus needed to develop a paradigm that moderates the emphasis on competition and merit so that positive attitudes towards inclusion and acceptance can be developed by regular school children.

6.4 Discussion of Limitations and Implications for Further Research

Although several important implications can be drawn from the findings, there are also several limitations to this study. First, the current study is limited to the Singaporean context only and that the researcher is a key insider. Whilst this study can be replicated in other schools in Singapore to add to the body of knowledge about regular students' attitudes towards people with disabilities, generalisation cannot be made beyond the context of Singapore. Without alteration of the study methods and instruments, the results would remain specific to Singapore's version of inclusion/integration. Additionally, the position of the researcher as a person who had worked in the school system in Singapore could result in bias viewpoints towards the study and affect the results and the analysis. For example, in constructing the questionnaire, the choices of disabilities presented in the scenarios, were made on the basis of common knowledge, for a Singaporean educator, but this would not be obvious for an outsider. Nevertheless, the fact that this study was conducted, analysed and written by a key insider helped capture some of the intense dynamism of this experience and increased the relevance of the study. The findings provided insights for future school-based research in societies with similar meritocratic ideals and vision for integrated and inclusive learning.

Another issue involves the research scope. Firstly, the qualitative part of the study included a small number of integrated classes with a limited observation time. Obviously, extended observations of more of integrated classes would have allowed for a more robust conclusions. Secondly, the research aimed to identify and analyse the attitudes of students in relation to the socio-cultural contexts of the school and classroom only. The complex relationship between the students' attitudes and their contact experience with people with disabilities are not limited to the influence of the school learning environment. The findings, obtained through the questionnaire and the 'real life' focus group discussions, allowed the conclusion that there is a strong link between the attitudes and opinions of students towards people with disabilities

and the family's values and expectations. However, the study did not explore the family context and its effect on the student's attitudes in detail. A more comprehensive study could include an examination of the family as a mediating factor in students' attitudes.

The study allowed the researcher to infer that students of different academic abilities responded differently to integration and to people with disabilities. However, the study considered the attitudes of regular students in general and was not able to account for the response of regular students of varying academic abilities towards peers with different disabilities in the integrated classroom. It would be interesting to explore the differences in the attitudes of regular students of different levels of academic achievement towards people with disabilities as the performance standards for these two groups of students appeared to be quite different.

The findings indicated that regular students respond differently to peers of different types of disabilities. As mentioned in Chapter 1, officially in Singapore, the integration of children with disabilities is restricted. The research focus of this study was limited to attitudes towards students with physical and sensory disabilities as being the most visible and commonly understood disabilities by the participants. However, the study showed that today's classrooms are becoming more diverse and might include children with a wider variety of disabilities. During the pilot study, it was found that some participants had difficulties articulating different labels of disabilities. Thus, the researcher had to include a brief explanation of different labels of disabilities included in the questionnaire to ensure that the students had a common point of reference when answering the question. This could have had an impact on the students' level of awareness of different disabilities, which was a limitation to the study.

Because of the increased diversity of the integrated environments in modern classrooms a further study is needed to address this. For example, a more comprehensive study of regular students' attitudes towards children with autism

spectrum disorder would be beneficial to conduct in the future to cater for the emerging diversity of integrated environments in Singapore. Also, more study should be done on regular students' attitudes towards people with other types of disabilities such as behavioural disorders and various learning disabilities.

More research needs to be done on how schools and teachers negotiate the instructional program to engage all students in integrated settings. Future studies could focus on sampling by contact with specific types of disabilities and needs using the same sequential transformative mixed-methods design. Sampling design could focus on students based on their academic abilities and aspirations for academic excellence. This would enable the policy makers and school personnel to make better-informed decision in planning integration programs so as to achieve the best possible outcomes for all parties.

The study identified one particular group of regular students in an integrated classroom environment who manifested positive attitudes towards peers with disabilities. A number of contextual characteristics associated with positive attitudes were uncovered. Future research may need to investigate more schools with similar contextual characteristics to tease out the factors within schools, teachers and programs that are associated with positive attitudes towards children with disabilities. To further explore the factors which affected the development of such positive attitude might require a longitudinal study. A more extensive investigation would not only profit the regular students and the students with disabilities, it would bring about a more successful integration program, which will lead to a more inclusive society.

6.5 Coda

The study provided empirical evidence about the practice of integration in Singaporean primary schools and the impact of integration on regular children's

attitudes towards people with disabilities. It provided insights into the social and psychological aspects of students' views and values in regard to their attitudes towards others with disabilities in the urban, competitive learning culture in Singapore. It exposed the effects of the integration and identified the socio-cultural factors that challenged the integration program. In addition, it indicated that when society creates socially alienating conditions, the relationship between discordant behaviour and aspirations for academic attainment resulted in negative attitudes towards others students which could be detrimental to their success, including those with disabilities.

The findings strongly validate currently held assumptions that the inclusion of children with disabilities into integrated environments needs multi-level support structures. Mere placement without effective strategies to create a positive contact experience can lead to the development of negative attitudes towards students with disabilities. In the study, even though the integrated class teachers were highly committed to inclusion, they were inadequately prepared to cope with the demands of a class of students with diverse needs. It was observed that the needs of these students overwhelmed the class teachers. At the same time, the need to manage the disruptions caused by the tension overshadowed the needs of the regular students.

The outcomes of the study add to the information available on integration and the context of contact theory. The study showed that today's classrooms are complex and positive contact experience requires comprehensive support systems that include effective teachers, inclusive classroom practice and an inclusive school ethos that transcends the challenges of present day cultures, social mores and values that are exclusive in nature. When regular students lack sufficient knowledge about their peers with disabilities, the system must provide support to help the regular students understand the concept of sharing a learning environment. Teachers in integrated classrooms require sound knowledge of effective inclusive teaching strategies to reduce tensions and misgivings about accommodating the needs of a diverse group of students with disabilities. In view of the challenges of the societal focus on

meritocracy, the pressure of accountability, vigorous curriculum demands and the academic aspirations of the community at large, it is necessary to ensure that the integrated learning experience is positive and does not work against the philosophy of inclusion.

The integration experience in Singapore as a placement program has achieved some substantial benefits but these are limited under the inclusion philosophy. As this study suggests, the integration program must consider the prevailing social values and address the specific concerns of regular students. To achieve the goal of inclusiveness, there is a need for the integration ideals to be better-articulated and all major stakeholders, especially teachers, school leaders and families of all students, to be involved in a continuing dialogue.

REFERENCES

- Abrams, D., Jackson, D., & St Claire, L. (1990). Social identity and the handicapping functions of stereotypes: children's understanding of mental and physical handicap. *Human Relations*, 43(11), 1085-1098.
- Allport, G. W. (1954). *The nature of prejudice*. Cambridge, MA: Addison-Welsey.
- Allport, G. W. (1979). *The nature of prejudice (25th anniversary edition)*. Cambridge, MA: Perseus.
- Angelides, P., & Aravi, C. (2006). A comparative perspective on the experiences of deaf and hard of hearing individuals as students at mainstream and special schools. *American Annals of the Deaf*, 151(5), 476-487.
- Antonak, R. F., & Livneh, H. (2000). Measurement of attitudes towards persons with disabilities. *Disability and Rehabilitation*, 22(5), 211-224.
- Baker, E. T., Wang, M. C., & Walberg, H. J. (1995). The effects of inclusion on learning. *Educational Leadership*, 52(4), 33-35.
- Barrow, R. (2001). Inclusion vs. fairness. *Journal of Moral Education*, 30(3), 235-242.
- Beatty, P. (1995). Understanding the standardized / non-standardized interviewing controversy. *Journal of Official Statistics*, 11(2), 147-160.
- Bellows, T. J. (2009). Meritocracy and the Singapore Political System. *Asia Journal of Political Science*, 17(1), 24-44.
- Berg, B. (2004). *Qualitative research methods for the social sciences* (5 ed.). London: Allyn & Bacon.
- Berk, L. E. (2000). *Child Development* (5 ed.): Allyn & Bacon.
- Biklen, D., Corrigan, C., & Quick, D. (1989). Beyond obligation: Students' relations with each other in integrated classes. In D. Lipsky & A. Gartner (Eds.), *Beyond Separate Education: Quality education for all* (pp. 207-277): Baltimore: Paul H. Brookes.

- Bokhorst-Heng, W. D. (2007). Multiculturalism's narratives in Singapore and Canada: Exploring a model for comparative multiculturalism and multicultural education. *Journal of Curriculum Studies*, 39(6), 629-658.
- Bradshaw, K., Tennant, L., & Lydiatt, S. (2004). Special education in the United Arab Emirates : Anxieties, attitudes and aspirations. *International Journal of Special Education*, 19(1), 49-55.
- Bricker, D. (1995). The challenge of inclusion. *Journal of Early Intervention*, 19, 179-194.
- Bronfenbrenner, U. (1979). *The Ecology of Human Development: Experiments by Nature and Design*. Cambridge, MA: Harvard University Press.
- Bronfenbrenner, U. (1986). Alienation and the four worlds of childhood. *Phi Delta Kappan*, 67(6), 430-436.
- Bronfenbrenner, U. (1989). Ecological systems theory. In R. Vasta (Ed.), *Annals of child development* (Vol. 6, pp. 187-251). Greenwich, CT: JAI Press.
- Bronfenbrenner, U. (Ed.). (2004). *Making Human Beings Human: Bioecological Perspectives on Human Development* CA: Sage Publications.
- Brown, R., & Gaertner, S. L. (Eds.). (2000). *Blackwell handbook of social psychology: Intergroup processes*: Wiley-Blackwell
- Bunch, G., & Valeo, A. (2004). Student attitudes toward peers with disabilities in inclusive and special education schools. *Disability & Society*, 19(1), 61-76.
- Bunck, A. P., & Gibbons, F. X. (2007). Social comparison: The end of a theory and the emergence of a field. *Organizational behavior and human decision processes*, 102, 3-21.
- Bunck, A. P., Zurriaga, R., Gonzalez-Roma, V., & Subirats, M. (2003). Engaging in upward and downward comparisons as a determinant of relative deprivation at work : A longitudinal study. *Journal of Vocational Behavior*, 62, 370-388.
- Burns, R. B. (1994). *Introduction to Research Methods* (2nd ed.): Longman Cheshire.
- Caulkins, D. D., Trosset, C., Painter, A., & Good, M. (2000). Using scenarios to construct models of identity in multiethnic settings. *Field Methods*, 12(4), 267-281.

- Chang, W. C., & Wong, K. (2008). Socially oriented achievement goals of Chinese university students in Singapore: Structure and relationships with achievement motives, goals and affective outcomes. *International Journal of Psychology, 1*(1), 1-6.
- Chen, K., & Tan, C. S. (2006). Education and services for children and youths with emotional and behavioural disorders in Singapore. *Preventing School Failure, 50*(2), 37-42.
- Cohen, L., & Manion, L. (1994). *Research Methods in Education* (4th ed.): London:Routledge.
- Cole, P. G. (1999). The structure of arguments used to support or oppose inclusion policies for students with disabilities. *Journal of Intellectual & Developmental Disability, 24*(3), 215-225.
- Collins, K. M. T., Onwuegbuzie, A. J., & Jiao, Q. G. (2007). A mixed methods investigation of mixed methods sampling designs in social and health science research. *Journal of Mixed Methods Research, 1*(3), 267-294.
- Connelly, F. M., & Clandinin, D. J. (1990). Stories of experience and narrative inquiry. *Educational Researcher, 19*(5), 2-14.
- Cox, J. (1996). *Your opinion, please! How to build the best questionnaires in the field of education*: Corwin Press, Inc.
- Cramer, D. (2003). *Advanced Quantitative Data Analysis*: Open University Press.
- Creswell, J. W. (2009). *Research design: Qualitative, quantitative, mixed method approaches* (3 ed.). Thousand Oaks, CA: Sage Publications, Inc.
- Crisci, P. E. (1986). The Quest National Center: A focus on prevention of alienation. *Phi Delta Kappan, 67*(6), 440-441.
- Dagnan, D., & Sandhu, S. (1999). Social comparison, self-esteem and depression in people with intellectual disability. *Journal of Intellectual Disability Research, 43*(5), 372-379.
- Daniels, H. (2006). The dangers of corruption in special needs education. *British Journal of Special Education, 33*(1), 4-9.
- Daniels, H., & Garner, P. (Eds.). (1999). *Inclusive education: Supporting inclusion in education systems*: Kogan Page.

- Diamond, K. E., Hestenes, L. L., Carpener, E. S., & Innes, F. K. (1997). Relationships between enrollment in an inclusive class and preschool children's ideas about people with disabilities. *Topics in Early Childhood Special Education, 17*(4), 520-537.
- Diamond, K. E. (2001). Relationships among young children's ideas, emotional understanding and social contact with classmates with disabilities. *Topics in Early Childhood Special Education, 21*(2), 104-113.
- Dixon, R., & Verenikina, I. (2007, 19 Feb 2007). *Towards inclusive schools: An examination of socio-cultural theory and inclusive practices and policy in New South Wales DET Schools*. Paper presented at the Learning and Socio-cultural theory : exploring modern Vygotskian perspectives Workshop, 19th-20th February, 2007., University of Wollongong, Wollongong.
- Dixon, S. (2005). Inclusion-not segregation or integration is where a student with special needs belongs. *The Journal of Educational Thought, 39*(1), 33-53.
- Duignan, P. A. (2005). Socially responsible leadership: Schools for a more just and democratic society. *Leading & Managing, 11*(1 Autumn/Winter), 1-13.
- Dunn, L. M. (1968). Special education for the mildly retarded -- Is much of it justifiable? . *Exceptional Children, 23*, 5-21.
- Dyson, L. L. (2005). Kindergarten children's understanding of and attitudes toward people with disabilities. *Topics in Early Childhood Special Education, 25*(2), 95-105.
- Dziuban, C. D., & Shirkey, E. C. (1974). When is a correlation matrix appropriate for factor analysis? Some decision rules. *Psychological Bulletin, 81*(6), 358-361.
- Elkins, J., Van Kraayenoord, C. E., & Jobling, A. (2003). Parents' attitudes to inclusion of their children with special needs. *Journal of Research in Special Educational Needs, 3*(2), 122-129.
- Emerson, J. (2007). *Community service-learning in Catholic schools and its relationship to empathy in elementary school children*. Tennessee State University.

- Entwistle, N. (1997). Introduction: Phenomenography in Higher Education. *Higher Education Research & Development*, 16(2), 127-134.
- Ericsson, K. (1985). *The principle of normalization: History and experiences in Scandinavian countries*. Paper presented at the ILSMH Congress, Hamburg.
- Esposito, B. G., & Reed, T. M. (1986). The effects of contact with handicapped persons on young children's attitudes. *Exceptional Children*, 53(3), 224-229.
- Favazza, P. C., Phillipsen, L., & Kumar, P. (2000). Measuring and promoting acceptance of young children with disabilities. *Exceptional Children*, 66(4), 491-508.
- Flick, U., von Kardorff, E., & Steinke, I. (Eds.). (2004). *A Companion to Qualitative Research*: Sage Publications.
- Florian, L. (2005). 'Inclusion', 'Special Needs' and the search for new understandings. *Support for Learning*, 20(2), 96-98.
- Forbes, J. (2006). For social justice and inclusion: engaging with the other. *Journal of Research in Special Educational Needs*, 6(2), 99-107.
- Foreman, P. (Ed.). (2007). *Inclusion in action* (2 ed.): Thomson Learning Australia.
- Frolin, C. (2007). Educators' beliefs about inclusive practices in Western Australia. *British Journal of Special Education*, 22(4), 179-185.
- Fuchs, D., & Fuchs, L. S. (1998). Competing visions for educating students with disabilities: Inclusion versus full inclusion. *Childhood Education*, 74(5), 309-316.
- Gindis, B. (2004). Remediation through education: Sociocultural theory and children with special needs. In A. Kozulin, B. Gindis, V. S. Ageyev & S. M. Miller (Eds.), *Vygotsky's Educational Theory in Cultural Context* (2nd ed., pp. 200-222). Cambridge: Cambridge University Press.
- Glenda, F. (2007). *Introduction to SPSS for Windows* (5 ed.): Pearson Education Australia.
- Gopinathan, S., Wong, B., & Tang, N. (2008). The evolution of school leadership policy and practice in Singapore: Response to changing socio-economic and political contexts (insurgents, implementers, innovators). *Journal of Educational Administration and History*, 40(3), 235-249.

- Gow, L. (1998). Integration in Australia. *European Journal of Special Needs Education*, 3(1), 1-12.
- Graham, L. J., & Slee, R. (2005, 27 Nov - 1 Dec 2005). *Inclusion?* Paper presented at the Australian Association for Research in Education Annual Conference, Sydney.
- Graham, L. J., & Slee, R. (2008). An illusory interiority: Interrogating the discourse/s of inclusion. *Educational Philosophy and Theory*, 40(2), 277-293.
- Gumpel, T. P., & Awartani, S. (2003). A comparison of special education in Israel and Palestine: Surface and deep structures. *The Journal of Special Education*, 37(1), 33-48.
- Guralnick, M. J. (2000). An agenda for change in early childhood inclusion. *Journal of Early Intervention*, 23(4), 213-222.
- Halpin, D. (1998, 27/08/05). *Democracy, inclusive schooling and the government of education*. Paper presented at the British Educational Research Association Annual Conference, Belfast.
- Head, G., & Pirrie, A. (2007). The place of special schools in a policy climate of inclusion. *Journal of Research in Special Educational Needs*, 7(2), 90-96.
- Hegarty, S. (2001). Inclusive education - a case to answer. *Journal of Moral Education*, 30(3), 243-249.
- Heng, M. A., & Tam, K. Y. (2006). Special education in general teacher education programs in Singapore. *Teacher Education and Special Education*, 29(3), 149 - 156.
- Howell, D. C. (2002). *Statistical methods for psychology* (5 ed.): Duxbury, Thomson Learning.
- Huck, S. W. (2008). *Reading statistics and research* (5 ed.): Pearson Education Inc.
- Hunter, J., & O'Connor, U. (2006). In search of inclusion. *Support for Learning*, 21(2), 53-56.
- Idol, L. (2006). Toward inclusion of special education students in general education. *Remedial and Special Education*, 27(2), 77-94.

- Jill, S. K. (2003). *Promoting inclusive schooling and reducing antisocial disruptive behaviours - theory to practice*. Paper presented at the British Educational Research Association Annual Conference, Heriot-Watt University.
- Katsiyannis, A., Yell, M. L., & Bradley, R. (2001). Reflections on the 25th anniversary of the Individuals with Disabilities Education Act. *Remedial and Special Education*, 22(6), 324-334.
- Kenworthy, J., & Whittaker, J. (2000). Anything to declare? The struggle for inclusive education and children's rights. *Disability & Society*, 15(2), 219-231.
- Kitzinger, J., & Barbour, R. S. (1999). Introduction: the challenge and promise of focus groups. In R. S. Barbour & J. Kitzinger (Eds.), *Developing focus group research: Politics, theory and practice* (pp. 1-20). London: Sage.
- Kivirauma, J., Kiemela, K., & Rinne, R. (2006). Segregation, integration, inclusion-the ideology and reality in Finland. *European Journal of Special Needs Education*, 21(2), 117-133.
- Knight, T. (1999, 2-5 Sept 1999). *Inclusive education and educational theory: Inclusive for what?* Paper presented at the British Educational Research Association Conference, University of Sussex.
- Koh, C., & Galloway, D. (2006). Assessing motivational styles of students in the South-East Asian context of Singapore. *Asia Pacific Education Review*, 7(2), 184-194.
- Kong, L. (2004, 18-19 Nov 2004). *Science and education in an Asian Tiger*. Paper presented at the Teaching and Research Conference, Queensland, Australia.
- Kozulin, A. (2004). Psychological Tools and Mediated Learning. In A. Kozulin, B. Gindis, V. S. Ageyev & S. M. Miller (Eds.), *Vygotsky's Educational Theory in Cultural Context* (pp. 15-38). Cambridge: Cambridge University Press.
- Kozulin, A., & Gindis, B. (2007). Sociocultural Theory and Education of Children with Special Needs. In H. Daniels, M. Cole & J. V. Wertsch (Eds.), *The Cambridge Companion to Vygotsky* (pp. 332-362). Cambridge: Cambridge University Press.

- Kozulin, A., Gindis, B., Ageyev, V. S., & Miller, S. M. (Eds.). (2004). *Vygotsky's Educational Theory in Cultural Context* (2nd ed.). Cambridge: Cambridge University Press.
- Lee, H. L. (2004, 18/09/2005). Speech by Singapore Prime Minister Lee at the opening of the Spastic Children's Association of Singapore's Cerebral Palsy Centre. from <http://app.sprinter.gov.sg/data/pr/>
- Liesenner, J. J., & Mills, J. (1999). An experimental study of disability spread: Talking to an adult in a wheelchair like a child. *Journal of Applied Social Psychology*, 29(10), 2083-2092.
- Lim, E., & Tan, A. (1999). Educational Assessment in Singapore. *Assessment in Education*, 6(3), 391-404.
- Lim, L., & Tan, J. (1999b). The marketization of education in Singapore prospects for inclusive education. *International Journal of Inclusive Education*, 3(4), 339-351.
- Lim, L., & Sang, S. N. (2000). Special Education in Singapore. *The Journal of Special Education*, 34(2), 104-120.
- Lim, L., Tan, A. G., & Quah, M. M. (2000). Singaporean parents' curriculum priorities for their children with disabilities. *International Journal of Disability, Development and Education*, 47(1), 77-87.
- Lindsay, M. (2008). Background paper 2 1996-96: Commonwealth Disability Policy 1983-1995 (Publication. Retrieved 11/11/2008, from Parliamentary Library: http://www.aph.gov.au/library/pubs/bp/1995-1998/96bp06_h.htm
- Lipsky, D. (2005). Are we there yet? *Learning Disability Quarterly*, 28(2), 156-158.
- Lipsky, D. K., & Gartner, A. (1996). Inclusion, school restructuring and the remaking of American society. *Harvard Educational Review*, 66(4), 762-796.
- Loh, C. K. (2005, 15 Nov 2005). Closing the gap: Big steps have been made for the disabled but schools here are not yet truly inclusive. *Today*, p. 1&4,
- Loi, B. L. (2007). Concerted effort the key. In T. News (Ed.) (pp. Letter by Director of Community Partnerships for the Society for the physically disabled). Singapore: MediaCorp Press.

- Low, C. (2006). Some ideologies of disability. *Journal of Research in Special Educational Needs*, 6(2), 108-111.
- Maras, P., & Brown, R. (2000). Effects of different forms of school contact on children's attitudes toward disabled and non-disabled peers. *British Journal of Educational Psychology*(70), 337-351.
- Marchesi, A. (1986). Project for integration of pupils with special needs in Spain. *European Journal of Special Needs Education*, 1(2), 125-133.
- Martin, E. W., Martin, R., & Terman, D. L. (1996). The legislative and litigation history of special education. *Special Education for Students with Disabilities*, 6(1), 15.
- Marton, F., & Booth, S. (1997). *Learning and Awareness*: Routledge.
- Mathison, S. (1998). Why triangulate? . *Educational Researcher*, 17(2), 13-17.
- Maxwell, J. A. (1992). Understanding and validity in qualitative research. *Harvard Educational Review*, 62(3), 279-300.
- Mertens, D. M. (2005). *Research and Evaluation in Education and Psychology: integrating diversity with quantitative, qualitative, and mixed methods*: SAGE Publications.
- Miles, M. B., & Huberman, A. M. (1994). *An Expanded Sourcebook: Qualitative Data Analysis* (2nd ed.).
- Ministry of Education Singapore. (2000, July 2000). Report of the committee on compulsory education in Singapore. from <http://www.moe.gov.sg/ce/>
- Ministry of Education Singapore. (2005). Greater support for students with special needs in selected schools in 2006. Retrieved 29/9/2005, from <http://www.moe.gov.sg/press/2005/>
- Ministry of Education Singapore. (2007). *Levelling up opportunities: Raising the quality of education for children with special educational needs*. Retrieved 20/4/2009. from <http://www.moe.gov.sg/media/press/2007/pr20070307b.htm>.
- Ministry of Education Singapore. (2009a). Desired outcomes of education. from <http://www.moe.gov.sg/education/desired-outcomes/>
- Ministry of Education Singapore. (2009b). FY 2009 Committee of Supply Debate: First reply by Minister Dr Ng Eng Hen on seizing opportunities to build a

- world class education system. *Speeches*, 2009, from [/www.moe.gov.sg/media/speeches/2009/02/10/fy-2009-committee-of-supply-de.php](http://www.moe.gov.sg/media/speeches/2009/02/10/fy-2009-committee-of-supply-de.php)
- Ministry of Education Singapore. (2009c, 21 March 2009). Special education in Singapore. from <http://www.moe.gov.sg/education/special-education/>
- Moore, R. Q. (2000). Multiracialism and meritocracy: Singapore's approach to race and inequality. *Review of social economy*, LVIII(3), 339-360.
- Nikolarazi, M., Kumar, P., Favazza, P. C., Sideridis, G., Koulousiou, D., & Riall, A. (2005). A cross-cultural examination of typically developing children's attitudes toward individuals with special needs. *International Journal of Disability, Development and Education*, 52(2), 101-119.
- Nirje, B. (1994). The Normalization Principle and its human management implications. *The International Social Role Valorization Journal*, 1(2), 19-23.
- Nowicki, E. A. (2006). A cross-sectional multivariate analysis of children's attitudes towards disabilities. *Journal of Intellectual Disability Research*, 50(5), 335-348.
- Ofsted. (2004, 12 Oct 2004). Special educational needs and disability. Towards inclusive schools. from <http://www.ofsted.gov.uk/publications/>
- Oliveira, S. (2003, 17-20 Sept 2003). *An inclusive approach for the deaf: a fallacy?* Paper presented at the European Conference on Educational Research, University of Hamburg.
- Ow, C. C., & Chua, M. (2005, 07/10/2005). Hold the bus, is someone being left behind? *Today*.
- Peck, C., Donaldson, J., & Pezzoli, M. (1990). Some benefits non-handicapped adolescents perceive for themselves from their social relationships with peers who have severe handicaps. *Journal of the association for persons with severe handicaps*, 15(4), 214-249.
- Peetsma, T., Vergeer, M., Roeleveld, J., & Karsten, S. (2001). Inclusion in education: Comparing pupils' development in special and regular education. *Educational Review*, 53(2), 125-135.

-
- Pettigrew, T. F., & Tropp, L. R. (2006). A meta-analytic test of intergroup contact theory. *Journal of Personality and Social Psychology*, 90(5), 751-783.
- Pettigrew, T. F., & Tropp, L. R. (2008). How does intergroup contact reduce prejudice? Meta-analytic tests of three mediators. *European Journal of Social Psychology*, 38(6), 922-934.
- Pfeiffer, D. (1993). Overview of the disability movement: History, legislative record, and political implications. *Policy Studies Journal*, 21(4), 724-734.
- Plotnik, R. (2005). *Introduction to psychology* (7th ed.). Australia: Thomson Wadsworth.
- Poon-McBrayer, K. F. (2004). To integrate or not to integrated: systemic dilemmas in Hong Kong. *The Journal of Special Education*, 37(4), 249-259.
- Posner, G. J., & Gertzog, W. A. (1982). The clinical interview and the measurement of conceptual change. *Science and Education*, 66, 195-209.
- Quine, S., & Cameron, I. (1995). The use of focus groups with disabled elderly. *Qualitative Health Research*, 5(4), 454-462.
- Rafferty, Y., Boettcher, C., & Griffin, K. W. (2001). Benefits and risks of reverse inclusion for preschoolers with and without disabilities: Parents' perspectives. *Journal of Early Intervention*, 24(4), 266-286.
- Rillotta, F., & Nettelbeck, T. (2007). Effects of an awareness program on attitudes of students without an intellectual disability towards persons with an intellectual disability. *Journal of Intellectual & Developmental Disability*, 32(1), 19-27.
- Ring, E., & Travers, J. (2005). Barriers to inclusion: a case study of a pupil with severe learning difficulties in Ireland. *European Journal of Special Needs Education*, 20(1), 41-56.
- Ryan, G. W., & Bernard, H. R. (2003). Techniques to identify themes. *Field Methods*, 15(1), 85-109.
- Scruggs, T. E., & Mastropieri, M. A. (1996). Teacher perceptions of mainstreaming/inclusion, 1958-1995: A research synthesis. *Exceptional Children*, 63(1), 59-74.
- Sharpe, L., & Gopinathan, S. (2002). After effectiveness: new directions in the Singapore school system. *Journal of Education Policy*, 17(2), 151-166.

- Shelvin, M. (2003). Preparing for contact between mainstream pupils and their counterparts who have severe and profound and multiple learning disabilities. *British Journal of Special Education*, 30(2), 93-99.
- Siperstein, G. N., Parker, R. C., Bardon, J. N., & Widaman, K. F. (2007). A national study of youth attitudes toward the inclusion of students with intellectual disabilities. *Exceptional Children*, 73(4), 435-455.
- Sirkin, R. M. (2006). *Statistics for the social sciences* (3 ed.): Sage Publications.
- Skidmore, D. (1996). Towards an integrated theoretical framework for research into special needs. *European Journal of Special Needs Education*, 11(1), 33-47.
- Slee, R. (1997). Imported or important theory? Sociological interrogations of disablement and special education. *British Journal of Sociology of Education*, 18(3), 407-420.
- Stiles, D. A. (2005). *Societal influences on children's psychology: The schools in Iceland and Singapore promote prosocial values, positive self-concepts and achievement in young adolescents*. Paper presented at the Psychological Influences on Today's Children.
- Svensson, L. (1997). Theoretical foundations of phenomenography. *Higher Education Research & Development*, 16(2), 159-171.
- Tan, C. (2006). Creating thinking schools through 'Knowledge and Inquiry' : the curriculum challenges for Singapore. *Curriculum Journal*, 17(1), 89-105.
- Tan, J. (1998). The marketisation of education in Singapore: Policies and implications. *International Review of Education*, 44(1), 47-63.
- Truscott, S. D., Cohen, C. E., Sams, D. P., Sanborn, K. J., & Frank, A. J. (2005). Two current state(s) of prereferral intervention teams: A report from two national surveys. *Remedial and Special Education*, 26(3), 130-141.
- UNESCO. (1994a). *Provision for children with Special Educational Needs in the Asia Region (1994)* o. Document Number)
- UNESCO. (1994b). The UNESCO Salamanca Statement. from <http://inclusion.uwe.ac.uk/csie/>
- UNICEF. (2000, March 2000). The convention on the rights of the child. from <http://www.unicef.org/crc/>

- University of Wollongong. (2005). Human Research Ethics Committee. from <http://www.uow.edu.au/research/>
- Viktorija, P., & Gediminas, M. (2004, 20-25 Sept 2004). *Integration of L.S. Vygotsky's psycho-pedagogical theory and methodology to a pupil who has AD/HD syndrome, to educational intervention process*. Paper presented at the ECER Conference, Crete.
- Vygotsky, L. (1993). *Volume 2: The Fundamentals of Defectology (Abnormal Psychology and Learning Disabilities)* (J. E. Knox & C. B. Stevens, Trans. Vol. 2). New York: Plenum Press.
- Ward, J., Center, Y., & Bochner, S. (2007). A question of attitudes: Integrating children with disabilities into regular classrooms? *British Journal of Special Education*, 21(1), 34-39.
- West, J., Houghton, S., Taylor, M., & Phua, K. L. (2004). The perspectives of Singapore secondary school students with vision impairments towards their inclusion in mainstream education. *The Australian Journal of Special Education*, 28(1), 18-27.
- Whitaker, P. (1994). Mainstream students talk about integration. *British Journal of Special Education*, 21(1), 13-16.
- Wilhite, B., Devine, M. A., & Goldenberg, L. (1999). Perceptions of youth with and without disabilities: Implications for leisure programs and services. *Therapeutic Recreation Journal*, 33(1), 15-28.
- Will, T. A. (1981). Downward comparison principles in social psychology. *Psychological Bulletin*, 90, 245-271.
- Winzer, M. A. (1993). *The History of Special Education : From Isolation to Integration*: Gallaudet University Press.
- Wolfensberger, W. (1972). *The Principle of Normalization in Human Services*. Toronto, Canada: National Institute on Mental Retardation.
- Wong, A. F. L., Goh, S. C., Gopinathan, S., & D'Rozario, V. (1998). Singapore's primary schools. Social context, teacher preparation and classroom processes involved in high academic achievement. *International Journal of Primary, Elementary and Early Years Education*, 26(2), 33-41.

- Woodring, J. C., Foley, S. M., Rado, G. S., Brown, K. R., & Hamner, D. M. (2006). Focus groups and methodological reflections: Conscientious flexibility in the field. *Journal of Disability Policy Studies*, 16(4), 248-258.
- Woolnough, R. (2004). How Special? Should children with special educational needs be educated in mainstream or special schools? *Community Care*, Sutton: Nov 11-Nov 17(1545), 28-30.
- Wragg, E. C. (2002). *Introduction to Classroom Observation* (2 ed.): Taylor & Francis e-Library.
- Wright, B. (1983). *Physical disability: A psychosocial approach* (2nd ed.). New York: Harper & Row.
- Wright, B. A. (1988). Attitudes and the fundamental negative bias: Conditions and corrections. In H. E. Yuker (Ed.), *Attitudes toward persons with disabilities* (pp. 3-21). New York: Springer.
- Yaroshevsky, M. (1989). Lev Vygotsky. In (pp. 107). Moscow: Progress Press.
- Yell, M. L. (2004). Placing students with disabilities in inclusive settings: Legal guidelines and preferred practices. *Preventing School Failure*, 49(1), 28 -35.
- Zajonc, R. B. (2001). Mere exposure: A gateway to the subliminal. *Current Directions in Psychological Science*, 10(6), 224-228.

University of Wollongong



Research Questionnaire

There are two parts to this survey. Please read each question carefully and answer to the best of your ability. There are no correct or incorrect responses; we are merely interested in your personal point of view. All responses to this survey are completely confidential. The school will not see your responses. All identifying information will be removed from this questionnaire and destroyed as soon as all data has been collected. Please be assured that the information you provide in this study will have **no effect on your school grade.**

Thank you for your participation in this study.

Name of participant: _____

School : _____

Class : _____

Date of Birth : _____

Instructions

Part 1

Please answer the following questions with a tick in the appropriate box.

1. Do you have a physical disability? Yes ☐ No ☐
2. Do you have a learning disability? Yes ☐ No ☐
3. Do you know any person who has a disability? Yes ☐ No ☐ How many? ☐
4. Do you know what his or her disability is?

ADHD	Autistic	Diabetic	Visually Impaired	Hearing Impaired	Other Conditions
Brittle Bones	Polio	Dyslexic	Behavioural Disabilities	Learning Disabilities	Not Sure

3. How is this person related to you? Do you spend time with him/her? Please tick at the appropriate box. If your answer is C or D, please state your reason.

	A. We talk frequently	B. We talk at times	C. We don't talk at all because.....	D. I avoid her/him because
Siblings				
Parents				
Grandparents				
Neighbours				
School mates				
Classmates				
Others (friends etc.)				

Part 2

The following are scenarios that happen in school. Please read each of the descriptions very carefully and consider yourself in the position of the character stated. Respond to each item independently of the others. Choose your response by circling the appropriate number. There are no right or wrong answers, or trick questions.

<p>1. John has a hearing impairment. He is cheerful and clever. He understands through lip reading and does sign language. He is able to do his work on his own without extra help. He is a new student in Xin Yi's class and it is his first day in school. (Circle the number that best describes Xin Yi's feelings towards John.)</p>				
<p>A. I would play with John during recess.</p>				
1	2	3	4	5
Strongly Agree	Agree	Not Sure	Disagree	Strongly Disagree
<p>B. John could be the top student in class if he works hard.</p>				
1	2	3	4	5
Strongly Agree	Agree	Not Sure	Disagree	Strongly Disagree
<p>C. I think John is awfully smart because it is tough to communicate through sign language and lip read.</p>				
1	2	3	4	5
Strongly Agree	Agree	Not Sure	Disagree	Strongly Disagree
<p>D. I would like to see if I can 'talk' to John. It would be fun.</p>				
1	2	3	4	5
Strongly Agree	Agree	Not Sure	Disagree	Strongly Disagree

2. David often trips in class. Some students laugh whenever it happens. David's mum has told the teacher that David has weak muscles and poor coordination. (Circle the number that best describes his classmates' feelings towards David.)

A. David is a clown in class.

1	2	3	4	5
Strongly Agree	Agree	Not Sure	Disagree	Strongly Disagree

B. It is fun to see David tripping in class.

1	2	3	4	5
Strongly Agree	Agree	Not Sure	Disagree	Strongly Disagree

C. David should not have PE lesson, as he is not healthy.

1	2	3	4	5
Strongly Agree	Agree	Not Sure	Disagree	Strongly Disagree

D. It must be painful to have weak knees that make one trip.

1	2	3	4	5
Strongly Agree	Agree	Not Sure	Disagree	Strongly Disagree

3. May is very impulsive and often interrupts the teachers in class. The teacher has to remind her to concentrate on her work often and spend more time on Math. May likes art and language lesson. She always volunteers to present group work. (Circle the number that best describes her teammates' feelings towards May.)

A. We would play with May during recess.

1	2	3	4	5
Strongly Agree	Agree	Not Sure	Disagree	Strongly Disagree

B. May could not be our group leader because she is not very clever.

1	2	3	4	5
Strongly Agree	Agree	Not Sure	Disagree	Strongly Disagree

C. We would like to work with May in a Science project because she is fun.

1	2	3	4	5
Strongly Agree	Agree	Not Sure	Disagree	Strongly Disagree

D. Our parents think that May should not be in our class because she wastes teacher's time.

1	2	3	4	5
Strongly Agree	Agree	Not Sure	Disagree	Strongly Disagree

4. Farus is in a wheelchair because he is suffering from an illness that affects his nervous system. His teacher has appointed Jim and Bing to help to move him around in the school, such as during assembly and recess time. (Circle the number that best describes Jim and Bing's feelings towards their duties.)

A. We would have helped Farus even if teacher hadn't asked.

1	2	3	4	5
Strongly Agree	Agree	Not Sure	Disagree	Strongly Disagree

B. Farus is our buddy.

1	2	3	4	5
Strongly Agree	Agree	Not Sure	Disagree	Strongly Disagree

C. It is rather troublesome taking care of Farus. We would rather play with our friend.

1	2	3	4	5
Strongly Agree	Agree	Not Sure	Disagree	Strongly Disagree

D. Our parents are glad that we are helping Farus in school.

1	2	3	4	5
Strongly Agree	Agree	Not Sure	Disagree	Strongly Disagree

5. Angela sits next to Preethi in class. Angela notices that Preethi is very quiet. She discovers that Preethi has trouble pronouncing many words. She seems very nervous whenever the teacher calls on her to answer questions. During group work, everyone in the group knows that Preethi will just keep quiet. (Circle the number that best describes Angela's feelings towards Preethi.)

A. Preethi is shy because she cannot pronounce words clearly.

1	2	3	4	5
Strongly Agree	Agree	Not Sure	Disagree	Strongly Disagree

B. Having Preethi in the group would result in lower grade.

1	2	3	4	5
Strongly Agree	Agree	Not Sure	Disagree	Strongly Disagree

C. Preethi is not going to do well in the examination.

1	2	3	4	5
Strongly Agree	Agree	Not Sure	Disagree	Strongly Disagree

D. I would like to help Preethi whenever possible.

1	2	3	4	5
Strongly Agree	Agree	Not Sure	Disagree	Strongly Disagree

6. Junming broke his leg and it is in a cast. Teacher announces that the class would be moved to a classroom on the ground floor, nearer to the canteen, to enable Junming to move around. The class would spend one afternoon helping the teacher to move. (Circle the number that best describes his classmate's feelings towards the move.)

A. It is rather troublesome to move.

1	2	3	4	5
Strongly Agree	Agree	Not Sure	Disagree	Strongly Disagree

B. Junming should stay at home instead of inconveniencing everyone.

1	2	3	4	5
Strongly Agree	Agree	Not Sure	Disagree	Strongly Disagree

C. I would check with Junming if he needs me to help him to buy food during recess.

1	2	3	4	5
Strongly Agree	Agree	Not Sure	Disagree	Strongly Disagree

D. Junming may not be able to play soccer again even when he has recovered.

1	2	3	4	5
Strongly Agree	Agree	Not Sure	Disagree	Strongly Disagree

7. Sithi is one of the top students in Yanping's class. The class knows that Sithi is diabetic and therefore she is exempted from certain duties in class. She also needs to take medication regularly. (Circle the number that best describes Yanping's feelings towards Sithi.)

A. Sithi is not likely to continue to do well in her studies because of her condition.

1	2	3	4	5
Strongly Agree	Agree	Not Sure	Disagree	Strongly Disagree

B. I am not too friendly with Sithi as I am afraid of her condition.

1	2	3	4	5
Strongly Agree	Agree	Not Sure	Disagree	Strongly Disagree

C. I think that Sithi is brave because despite her condition, she still comes to school and does her work.

1	2	3	4	5
Strongly Agree	Agree	Not Sure	Disagree	Strongly Disagree

D. Sithi is good in her studies because she has extra help from the teachers.

1	2	3	4	5
Strongly Agree	Agree	Not Sure	Disagree	Strongly Disagree

8. There is a new Primary 5 student who has a condition of brittle bones in school. Mr Lee, the principal, appeals to everyone to be friendly to him and be careful around him. For Mark, a Primary 5 student, it is the first time he meets a person with such a condition. (Circle the number that best describes Mark's feelings towards this announcement.)

A. I hope he will not be in my class.

1	2	3	4	5
Strongly Agree	Agree	Not Sure	Disagree	Strongly Disagree

B. I will look out for him and befriend him.

1	2	3	4	5
Strongly Agree	Agree	Not Sure	Disagree	Strongly Disagree

C. It is dangerous for such a person to be in our school as he may be hurt accidentally. He should be in another school.

1	2	3	4	5
Strongly Agree	Agree	Not Sure	Disagree	Strongly Disagree

D. The boy must be sad and unhappy.

1	2	3	4	5
Strongly Agree	Agree	Not Sure	Disagree	Strongly Disagree

9. Kok Leong is often angry, and throw things out of the window. He is also rude to the teacher. However, the teacher has explained that Kok Leong is suffering from a condition and needs to be on medication. He is always in trouble for not completing his homework. (Circle the number that best describes his classmate's feelings towards Kok Leong.)

A. Kok Leong needs a friend to help him with his work.

1	2	3	4	5
Strongly Agree	Agree	Not Sure	Disagree	Strongly Disagree

B. Teacher needs to be strict with Kok Leong so that he behaves himself.

1	2	3	4	5
Strongly Agree	Agree	Not Sure	Disagree	Strongly Disagree

C. I have no problem playing with Kok Leong after school.

1	2	3	4	5
Strongly Agree	Agree	Not Sure	Disagree	Strongly Disagree

D. Kok Leong should be in a different school.

1	2	3	4	5
Strongly Agree	Agree	Not Sure	Disagree	Strongly Disagree

10. Edward has a classmate Peter. Most of the time Peter does not seem to know that the teacher is talking to him. Edward notices that Peter likes to talk about dinosaurs and always read about them in class. Whenever the teacher tells him to behave himself, Peter just smile and continues with his reading. Edward observes Peter has dropped his sandwich on the floor and Peter is not bothered at all. Some of the classmates think that Peter is strange. (Circle the number that best describes Edward's feelings towards Peter.)

A. I would share my sandwiches with him.

1	2	3	4	5
Strongly Agree	Agree	Not Sure	Disagree	Strongly Disagree

B. Teacher is not fair to let Peter misbehave.

1	2	3	4	5
Strongly Agree	Agree	Not Sure	Disagree	Strongly Disagree

C. I would like to get to know Peter better.

1	2	3	4	5
Strongly Agree	Agree	Not Sure	Disagree	Strongly Disagree

D. I think Peter is an expert in dinosaurs.

1	2	3	4	5
Strongly Agree	Agree	Not Sure	Disagree	Strongly Disagree

APPENDIX B

Guiding Topics For Focus Group Interview Sessions

1. A person in a wheelchair can hold high public office.
<ul style="list-style-type: none"> Do you think a person in a wheelchair could be the prime minister? Why?
2. A blind person would find it hard to study in the university and get good results.
<ul style="list-style-type: none"> Do you think a blind person would be able to go to the university? Do you think he or she would face any problems? Would be befriend a blind person in your class/school/neighbourhood?
3. People in with disabilities should avoid shopping centres as there are too many people.
<ul style="list-style-type: none"> Do you think a person in a wheelchair /disabilities should be going to a shopping mall? Why or why not? Do you think he or she would face any problems moving around? Do you think he or she could travel to the shopping mall by bus or train without any companion?
4. It is fun to be able to do sign language.
<ul style="list-style-type: none"> Do you know of anybody who uses sign language? Would you like to learn to sign? Do you think those who could do sign language are smart/ clever?
5. People with disabilities can be just as clever as those without disabilities.
<ul style="list-style-type: none"> Would you consider a person who is hearing impaired/visually impaired/ with disabilities could be just as clever as anyone else? Would this person would be able to get a good paying job?
6. Spending time with people with disabilities makes me feel uneasy.
<ul style="list-style-type: none"> If your teacher would to tell you to accompany a person who is in a wheelchair to the shops, would you do it? How would you feel if you are seen in the public with them? What do you think others would think of you?
7. Disabled people can look beautiful too.
<ul style="list-style-type: none"> Do you think they are different from others? How? Do you think people would avoid being seen with them? Do you think a person with disability can be described a beautiful?
8. Those who cannot do well in your school/class should go to a different school/class.
<ul style="list-style-type: none"> What do you think the school should do for those who cannot study as well as the rest? Do you think these people can earn a good living later? Do you think it is possible for these people to go to university? Do you have friends of such description? Why are they your friends? Would you like to have students in your class? In your study group?
9. A person with disabilities can do sports.
<ul style="list-style-type: none"> Do you think a person with disabilities should participate in Physical Education? Can a person with disabilities take part in sports competition? Have you seen any one with disabilities taking part in some sports competitions?

