Teachers' experience with inclusive education in Singapore

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Teachers' positive attitude is most critically and consistently associated with successful inclusion. However, little is known about teachers' first-hand encounters with inclusive education in Singapore. We present findings from a qualitative study on inclusion based on focus group interviews with 202 teachers from 41 resourced primary schools. The data were transcribed and coded using Interpretive Phenomenological Analysis and NVIVO software. Two broad clusters identified were teachers' positive and negative experiences in implementing inclusion. More reference was made to negative than positive experiences. The most dominant negative experience was stress from challenging behaviours and instructional difficulties of catering adequately for diverse needs in the same classroom. The most salient positive experience was satisfaction with pupils' progress and new learning for teachers. Classroom practices that facilitated inclusion and the value of training in shaping teachers' attitudes towards inclusion were highlighted.

Keywords: children with special needs; special education; inclusion; Singapore primary schools

Introduction

Internationally, a trend towards inclusive educational practices has gained in strength and momentum since the development of the Salamanca Statement in 1994 (UNESCO, 1994), which ignited an ethical imperative for countries to embrace diversity and grant individuals with disability equal opportunities to be educated in regular schools. Inclusion is compelling because it is borne out of values of equality, non-discrimination, and fairness (Avramidis, Bayliss, & Burden, 2000; Thomazet, 2009). The fundamental principle of inclusion is the right of every child to be educated in a general education school. It is not surprising therefore that many countries worldwide have implemented or refined legislation to support educational inclusion. Early starters for inclusive legislation are the US (the Education for All Handicapped Children Act, PL 94-142, 1975; Individuals with Disabilities Education Act, PL 105-17, 1990, revised1997, and amended 2004) and the UK (1981 Education Act) (Norwich, 2008). Since 2000, more countries have instituted legislation for inclusion. For example, Hong Kong introduced the Code of Practice of Education under the Disability Discrimination Act in 2001; Ireland enacted the Education for Persons with Special Educational Needs Act in 2004 (Phadraig, 2007); and Australia established the Disability Standards for Education in 2004 (Forlin, Keen, & Barrett, 2008). However, in Singapore, there is no legislation yet for inclusion although primary schools have adopted inclusive educational practices since 2005.

The literature abounds with copious evidence of the challenges in translating the ideals of inclusion into practice even for countries that are pioneers in inclusion and have the

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benefit of legislative support. Singapore is an interesting departure given the history of segregated special needs education for children dating from the 1960s, and a sophisticated legal system for which a mandate for inclusion is absent. Arguably, the success of inclusion cannot hope to rest on legislation alone. What is stipulated in legislation is not necessarily translated adequately into practice (Curcic, 2009). In reality, it is teachers who play the most pivotal role in making inclusion work (Sharma, Forlin, Loreman, & Earle, 2006). A study on inclusion in Singapore seems timely given recent developments in special education locally and the limited research on inclusion in Southeast Asia.

History of inclusion in Singapore

A brief history of inclusion in Singapore provides the background for this paper. Details are available in Poon, Musti-Rao, and Wettasinghe (2013) and Yeo, Neihart, Tang, Chong, and Huan (2011). In the early 1960s, children with disabilities attended separate special schools. This practice persisted until 2004 despite calls in the late 1980s for inclusion. In 2004, the government's vision of Singapore becoming an inclusive society spurred phenomenal effort towards providing funding, school infrastructures, and teacher training catering for students with special needs. From 2005 until the present, training in interventions for children with special education needs (SEN) is being provided for Allied Educators for Learning and Behaviour Support (AEDs[LBS]) and Teachers of Students with Special Needs (TSNs) to support children with mild to moderate disabilities in mainstream schools (Lim & Tan, 2004). As of 2012, all primary schools have been staffed with at least one AED(LBS). The Ministry of Education (MOE) plans to recruit additional AEDs(LBS) to extend support for inclusion at the secondary school level (MOE, 2012).

Variations in inclusive educational practices

Inclusion is differentially understood and practised in countries worldwide. In a comprehensive meta-synthesis of inclusive practices in 18 countries from 1996 to 2006, Curcic (2009) concluded that although there is consensus on the philosophy and spirit of inclusion, it is impossible to standardize inclusive practices across countries given the wide ranging diversity of history, levels of economic, social, and educational development, and uniqueness of cultures represented.

Educational inclusion can be broadly defined as the practice of educating students with SEN in mainstream schools (Wilde & Avramidis, 2011). All children are regarded as full-time participants of their school. Built on the premise that all learners have a basic right to being educated in a general education setting, inclusion begs a paradigmatic shift in beliefs about disability. Disability is to be viewed no longer as an abnormality inherent in the individual person, but as the lack of fit between the environment and the individual's needs. Inclusion necessitates a radical transformation of school (Thomazet, 2009) which must assume complete responsibility for all learners irrespective of their disabilities. In practice, this necessitates rethinking the curriculum (Phadraig, 2007), reorganizing curriculum content, and modifying modes of instruction to teach all students. The demands are daunting as these reforms impact every teacher and call for mammoth adjustments.

Levels of educational inclusiveness vary on a continuum in actual practice. Wilde and Avramidis (2011) presented a continuum of approaches to inclusive pedagogies. Integration represents a type of continuum to address learner diversity. The pull-out integration model is applied in some countries, such as Israel and Hong Kong. Children

with SEN may receive a modified curriculum but need to fit into existing structures. In Israel, options range from special school attendance to partial or full inclusion in a general education classroom. The general education teacher is supported by a special needs teacher and a teacher aide; the latter works with children who are included either within or outside the classroom (Ronen, 2007). In Hong Kong, students with mild SEN attend mainstream school but are withdrawn for additional support by a resource teacher and/or learning support assistant (Wong, Pearson, & Lo, 2004). Under a School Partnership Scheme which empowers general education schools to support students with SEN, the Hong Kong Education Bureau avails on-site support, training and consultation to 13 Resource Schools that implement a Whole School Approach to cater for diverse educational needs. In addition, short-term attachment programmes in 12 Special Schools cum Resources Centres are available to students with intellectual disability and severe adjustment difficulties on a needs basis (Education Bureau, 2011).

However, according to Ainscow (2000), fitting a student with special needs into a general education classroom with support from a teacher aide, working on separate assignments, and providing individual or group instruction should not be regarded as inclusion. Such practices skirt on the boundaries of exclusion despite good intentions to improve learning for individuals with SEN. Inclusion has a social dimension too. Children cannot be said to be included if they are only "in" (i.e., included) but not "of" (i.e., socially excluded) the classroom. Inclusion goes beyond physical placement to social acceptance and a sense of belonging to a community (Booth & Ainscow, 2002; Warnock, 2005). Conceivably, true inclusion is hard to achieve.

Nonetheless, over time some countries such as Ireland have fine-tuned their educational provisions for children with disabilities and moved closer to the inclusion ideal. Tracing the development of inclusion in Ireland from 1991 to 2004, Phadraig (2007) reported that Irish children with SEN access a continuum of services with full time placement in a general education classroom as priority but with additional support as needed. By 2000, the regular classroom teacher assumes major responsibility for the needs of all children. Teaching is differentiated for children with dyslexia or autism through close collaboration between the class teachers and learning-support teachers and parents. Withdrawing a child for individual or group instruction is ostensibly not considered appropriate inclusive practice.

Another variation in inclusive practices is a separate system of special education tracks within mainstream schools, such as is practised in the Netherlands (Imants, 2002). In an interesting permutation of inclusive practices, Koutrouba, Vamvakari, and Steliou (2006) reported that in Cyprus, a small percentage of children with mild disabilities receive adapted instruction in special classes within general education. Students with severe disabilities attend special schools, strategically built within the compounds of the general education school buildings, whereas the vast majority of students with mild SEN are fully included in general education schools. In these instances, inclusion is a placement concept in which all children are schooled under one roof albeit in different tracks.

In Southeast Asian countries such as Hong Kong, Korea, and Singapore, special educational provisions typify a dual system. Children with severe disabilities are served in separate special schools; children with mild disabilities within general education schools.

Teachers' concerns about inclusion

The extent to which inclusion successfully meets the needs of all children in the classroom is dependent to a very significant degree on the attitudes of the teachers and special

educators towards inclusion and their willingness to create optimal learning environments (Avramidis & Norwich, 2002; Sharma, et al., 2006). Internationally, the research strongly suggests that most general education teachers hold favourable attitudes towards inclusion, but have concerns about its implementation (Hwang & Evans, 2011). Forlin et al. (2008) summed up three categories of concerns: administration, classroom-based, and personal.

First, administrative concerns include additional time in preparing and modifying curriculum materials, identifying suitable teaching aides, and collaborating with other staff members and paraprofessionals. Teachers have insufficient time to attend case management meetings, update students' progress on their Individual Education Plans (IEPs), complete paperwork, and meet parents.

Second and probably the greatest concern relates to the minutiae of day-to-day classroom practices (Forlin et al., 2008). Concerns include large class sizes, managing difficult behaviours (e.g., aggression), and insufficient material and manpower resources. A Canadian study showed that 65% of elementary school teachers in the Prince Edward Island Elementary Schools expressed concerns about individualizing instruction for a diverse class of pupils and instructing a wide range of learners all in one class (Horne & Timmons, 2009).

A related classroom-based concern is teaching children with severe SEN (Avramidis & Norwich, 2002; Ferguson, 2008; Wong et al., 2004). Teachers from Canada, Australia, Hong Kong, and Singapore are least positive about including students who are verbally or physically aggressive, or disruptive (Loreman, Forlin, & Sharma, 2007). Students with emotional and behavioural disturbances (Wilde & Avramidis, 2011) are least tolerated. However, teachers are more willing to include students with learning disabilities, physical or sensory disabilities, and those who require little teacher assistance (Ferguson, 2008; Wong, et al., 2004).

Third, teachers have personal concerns about their professional knowledge, competence, and level of training in special needs to successfully include atypical children (Sharma et al., 2006). Teachers in Western Australia reported concerns in identifying children's capabilities and effectively teaching both typically developing children and those with disabilities (Forlin et al., 2008). Teachers tend to be more open towards inclusion when they have stronger perceptions of their competence, training, and experience in teaching students with SEN. Primary and secondary teachers in the UK who have had experience with inclusion held more positive attitudes towards it (Avramidis et al., 2000). The lack of training opportunities is also consistently associated with negative reception of inclusion across different school systems. Teachers in Cyprus experience mistrust towards inclusion largely due to a lack of graduate training in special education (Koutrouba, Vamvakari, & Steliou, 2006).

Singapore is a newcomer to inclusion. Very few research studies on educational inclusion have been published locally. Tan, Nonis, and Chow (2011) conducted a single-subject research study that examined the effects of a Balance Programme on the balance control of a seven-year-old child with hearing impairment and a peer who had no hearing impairment, both of whom attend a mainstream school. Results were mixed with improvement in balance control observed on only some of the static and dynamic balance tasks. In one of the earliest qualitative studies on inclusion in Singapore, Yeo et al. (2011) explored the facilitators of and barriers to inclusion in two childcare centres where young children with mild special needs were supported by a therapy outreach team from a local hospital. Support from specialist teachers and occupational therapists included pull-out individual instruction for children with special needs that eventually transitioned to in-class support, and consultation to the preschool teachers in their respective classrooms.

The outcomes were very encouraging with all the stakeholders recognizing that inclusion was facilitated by communication, collaboration, and the availability of training and resources. The preschool teachers reported a sense of inadequacy and anxiety related to large class sizes, absence of teacher aides, insufficient training and resources in special needs. However, their attitude towards inclusion improved when the outreach team modelled classroom management techniques, provided in-class support, and shared useful skills and teaching tools.

There is currently no published empirical data on inclusion in Singapore primary schools. The purpose of the study is to investigate teachers' experience with inclusion. Qualitative research on inclusion in the literature tended to employ small sample sizes, usually in the range of 10 to 30, and provide little information on coding procedures and data analysis. This is a fairly large qualitative study involving 202 primary school teachers. It hopes to give the teachers a voice in identifying the factors that influence the practice of inclusion and to highlight practices that can strengthen inclusive education irrespective of national boundaries. According to international research, teacher training is often acknowledged as a cornerstone of inclusion and the lack of training as a monumental barrier to inclusion. However, little is known about what truly empowers teachers in inclusive classrooms.

Method

Procedure and participants

Ethics clearance and approval for this study were obtained from the Nanyang Technological University Institutional Review Board and MOE, Singapore. A list of resourced primary schools was obtained from the MOE's Psychological Services Branch. These resourced schools are essentially primary schools with one difference, that is, they have additional funding and trained special needs personnel on staff to provide support for pupils with SEN who attend general education primary schools. At the time of this study, only 108 out of 177 primary schools are resourced schools. Letters describing the study and inviting participation were sent via email to the principals of all resourced primary schools. In each participating school, an AED(LBS), a TSN and three mainstream teachers who teach children with SEN in their classrooms were identified by their principals to be interviewed.

The total sample consisted of 202 teachers from 41 resourced primary schools. They comprised three groups of teachers: (1) 28.6% (n = 42) AEDs(LBS), (2) 32.0% (n = 47) TSNs and (3) 39.4% (n = 58) mainstream teachers. Fifty-five (27.2%) teachers did not indicate their designation.

The AED(LBS) is a special needs personnel who has completed a one-year full time diploma programme in special education. The training, which included a supervised practicum in special needs, encompassed knowledge and skills in identifying special needs, assessing learner strengths and weaknesses, developing, implementing, and evaluating IEPs. The AED(LBS) is a teacher aide who provides in-class or pull-out support for children with SEN, assists teachers, and coordinates transitions. He or she takes responsibility only for children with SEN in the general education classrooms. Most AEDs(LBS) have GCE "A" level qualifications or a polytechnic diploma; a few have a basic university degree. The TSN, on the other hand, is a qualified mainstream teacher who has completed a one-year part time basic certificate programme in special needs support and is knowledgeable about diverse learners and adaptations for classroom instruction. He or she assumes responsibility for all pupils in the class and may have

additional duties serving on case management teams and mentoring other teachers on special needs.

In terms of special needs training, the AEDs(LBS) received the most training compared to the other teachers. The one-year diploma in special needs for AEDs(LBS) is a full-time 36-credit training programme which consists of 10 courses and a 10-week practicum. Seventy-four percent of the AEDs(LBS) had attended at least two training programmes. Almost all of the TSNs (93%, n = 50) had received one training programme in special needs. The one year part-time certificate in special needs for TSNs is a nine-credit programme that consists of three courses. The mainstream teachers were the least well trained in special needs, as 91% (n = 95) had no training in it. In terms of years of teaching experience, the TSNs were the most experienced teachers ($M = 14.19$, $SD = 9.16$, range from three to 43 years), followed by mainstream teachers ($M = 11.13$, $SD = 10.03$, range from one to 41 years), and AEDs(LBS) ($M = 5.00$, $SD = 2.39$; range from two to eight years).

Research design

The present study is part of a larger, mixed method research study funded by the Office of Educational Research, National Institute of Education. Owing to the extensive amount of data obtained, this paper focused only on the qualitative data from focus group interviews with teachers on their experiences with inclusion.

Interviews

Focus group interviews were conducted with the teachers of the 41 participating schools in groups of five. Each group generally comprised one AED(LBS), one TSN, and three general education teachers. Forty focus group interviews were conducted. As this was an exploratory study, interview questions were broadly framed to obtain an understanding of the state of inclusive education in the primary schools. The questions were not piloted prior to the study. A semi-structured schedule guided the interviews, which consisted of open-ended questions on the teachers' understanding of inclusion, classroom practices and personal experiences. For this paper, data from the following four interview questions were used to provide information about the teachers' experiences with inclusion:

- How are SEN students included as full participants in your classroom/school?
- How are activities planned and adapted to meet the SEN students' needs?
- What are the ways in which the SEN students' needs are accommodated within the curriculum?
- Can you describe your personal experience of including a student with special needs in your classroom?

Qualitative data collection and analysis

A sheet with a copy of the interview questions was distributed to all participants for reference and collected at the end of the interview. The interviews were conducted by all four members of the research team and two graduate research assistants (RAs). The interviews were audio-recorded with the consent of participants who were assured of confidentiality and anonymity. The participants were requested to identify their teaching role before they spoke. Each interview lasted around 90 minutes and was conducted at the school sites.

The audiotapes were transcribed by two RAs. The data were coded and analysed using Interpretive Phenomenological Analysis (IPA). IPA is widely used in research when there is a need to understand how people perceive, experience, and make sense of events in their lives (Lyons & Coyle, 2007). All the research team members first read through two transcripts individually to obtain an appreciation of the intricacies of inclusion as encountered by the participants. Please refer to Table 1 for the steps to data analysis and examples.

At the first step, data were organized and assembled on the basis of meaning units. A meaning unit was an item in the transcripts that reflected a specific response to inclusion. Altogether 659 meaning units were generated. The following is an example of a meaning unit: "Initially I felt a lot of frustration because I did not know how to reach that particular child. I really did not know how to reach him." At the second step, the team members read each meaning unit to determine its general theme(s) and to assign a code or codes. For the above-mentioned meaning unit, two themes were identified. The first theme was coded as "frustration", the second theme as "insufficient knowledge in special needs". In total, 54 codes were generated and served as guidelines for coding the transcripts.

Team members coded the transcripts in pairs. Where there was disagreement, we worked towards achieving consensus, and when that could not be achieved, we agreed to disagree and identified an existing code that provided the best fit. Reliability was calculated by dividing the number of agreements by the sum total of the number of agreements and disagreements and multiplying the quotient by 100. When coding was completed, 25% of the transcripts were checked by a third member for reliability and accuracy of the previous coding. Overall inter-rater reliability was 92%.

At the third step, codes with similar themes were grouped to construct categories. There were seven categories: practice of inclusion; positive feelings; positive experiences; factors contributing to positive experiences; negative feelings; negative experiences; factors contributing to negative experiences. The categories formed two broad clusters that summed up the teachers' experience of implementing inclusion – positive experiences and negative experiences.

Results

The teachers' approaches to inclusion will first be discussed followed by their positive and negative experiences and the contributing factors. Since teachers spoke of their feelings as an integral facet of their experiences, we discussed feelings and experiences jointly as one phenomenon. Quotations were selected based on how well they represented the common experience of the majority interviewed and how distinctly they illustrated a local inclusive practice. Where quotations were used, teachers' responses in Singlish (Singapore English) were edited to Standard English for greater clarity.

Approaches to teaching children with special needs in the mainstream classroom

The interviews indicated several ways in which teachers created a learning environment to cater for children with SEN. First, the mainstream teacher made adjustments to the lesson (e.g., ensuring physical accessibility to a child with limited mobility, or providing one-on-one time for a child with SEN when the rest of the class is given work to do). An art teacher who wanted to conduct an outdoor lesson described bringing her class to an area accessible to a child who has limited mobility so that he can view and draw the same surroundings. A mainstream teacher described individualizing instruction for a pupil with dyslexia:

Table 1.   Steps to data analysis.

Steps	Description	Number	Examples
Step 1. Assembling Meaning Units	A meaning unit is an interviewee's verbatim description that reflected a specific response to inclusion. Meaning units were gathered from the transcripts.	659 meaning units	1. "It is very, very difficult especially when you have a full class with at least a quarter of them with other needs." 2. "When there's more than one [special needs child] in the class, like the first year when I had two ADHDs and one Down's Syndrome in the class. So it's very, very frustrating, especially when you have the syllabus to complete by a certain period of time."
Step 2. Coding	Each meaning unit was reviewed to determine its general theme(s) and to assign a code(s).	54 codes	1. Managing more than one child with special needs in class 2. Teaching experiencing physical harm 3. Teacher receiving complaints from parents 4. Inappropriate management or support provided for pupils with special needs 5. Teacher feeling bad about negative reactions to pupils in class 6. Teacher having to manage her own feelings 7. Discussing with parents the needs of pupils with special needs These seven codes were subsequently grouped to form one category titled "Negative Experiences".
Step 3. Categorizing	Codes with similar themes were grouped to construct categories.	seven categories	Categories 1. Practice of inclusion 2. Negative Feelings 3. Negative Experiences 4. Factors contributing to negative experiences 5. Positive Feelings 6. Positive Experiences 7. Factors contributing to positive experiences
Step 4: Clustering	Categories were grouped to form clusters.	two clusters	Clusters 1. Negative experiences in implementing inclusion 2. Positive experiences in implementing inclusion

> Every time the children are doing their own word cut-outs, and we are working on phonics, I will go letter by letter with this child, and we use task cards to help him pronounce a certain word. After a while, he managed to read.

A TSN mentioned simplifying instructions for a child with autism:

> I give him a separate set of instructions. It's the same instruction but I broke it up, so it's easier for him to understand.

Another TSN shared how she abandoned the curriculum for a child with intellectual impairment:

> I didn't follow the curriculum because I know it is pointless. When we came back from the museum, she spoke and I wrote it out. What I was trying to do through this interaction was to improve her vocabulary in speaking and listening.

These examples suggested that teachers included children with SEN by deliberately creating space within class time to provide additional coaching, breaking down a task, and departing from the curriculum.

Another approach was to withdraw pupils for learning support by the AEDs(LBS). The child with mild special needs is removed from his or her classroom for one or two class periods and given individual coaching and attention by the AED(LBS). One TSN described the support for a child with dyslexia:

> During my lessons, at times he is withdrawn from class where there is specific support given to him. Even spelling is separate for him.

An AED reported,

> My experience with special needs pupils has always been pleasant, especially during the withdrawal lessons. The pupils will just be very excited to learn new strategies, new things, because once they are back in class, they know they can apply some of these skills. They will be very proud and tell their classmates, 'Hey, I have a magic (trick) to learn spelling'.

Finally, teachers created within the class an awareness of the needs of classmates with disability to foster an accepting learning environment. A TSN shared:

> One day when he [child with special needs] was absent, I explained to the class that he is special. Every one of us is special, but he is a little bit more special because he needs more attention than us. So now it is very pleasant.

Another teacher communicated how the class supported a child with special needs:

> Each time he goes to the board to do a sum, they clap for him without being told to do so because they could see it as an achievement, having been with him the previous year.

Teachers and pupils consciously created a classroom that embraced children with special needs.

Positive feelings and experiences

Of the total number of responses coded, 39.6% were on teachers' positive feelings and experiences. The most dominant positive feeling (30%) was a sense of satisfaction. Satisfaction referred to a feeling of gratification, contentment, pride and fulfilment. The feeling of satisfaction stemmed from the progress and success of pupils with SEN. A TSN expressed satisfaction when a child who was extremely shy opened up to her: "The kind of joy you get and satisfaction is really indescribable but it takes a lot, a lot of time." Another TSN was pleased to witness change in the child's aggressive behaviour. A teacher reported satisfaction in observing the support the class gave to her and the child with special needs.

She said, "On many occasions, they helped me when I tried to ask him to do certain things or to behave. They will go up to him and pull him back or guide him along."

The next strongest feeling (28%) was happiness. Happiness referred to expressions of joy, delight, and pleasure. Invariably, happiness was linked to the children's improvement or academic success, new learning gained on the job, and appreciation for the support children render to their atypically developing classmates. One AED said this of her pupils with SEN, "They can really make you smile, make you happy because really every little step they make is big achievement." Another AED echoed the same sentiment, "They made little progress, but this little progress meant a lot to them and their parents."

Other positive experiences included the new learning teachers acquired on account of inclusion. One TSN probably expressed a common sentiment,

> I feel it is very enriching and rewarding but I wouldn't deny that there are lots of challenges along the way and I think we ourselves have not truly been equipped, but it is a job where we really learn. It's really on-the-job training.

Teachers also learned to exercise sensitivity, for example, in the language they used in class. One teacher put it aptly,

> What should we say? What should we not say in front of him to make him feel included in a class? We are not reminding him that he has some disabilities but he is just a bit different from us. So we try to make him feel that actually we are the same.

Factors contributing to positive experiences

The teachers offered insight into factors that contributed to positive experiences with inclusion. First, the most frequently mentioned factor (40%) was having discovered or acquired strategies to make inclusion work in their classrooms. One approach was adapting activities to accommodate the child with SEN. For example, a teacher reported making sure her class did not stomp their feet during Music even though it was an activity the class wanted to do because the girl with autism was "very sensitive to sound". Additionally, teachers encouraged the class in their effort to include their peers with disabilities. One TSN related how she reinforced her class for helping a child with SEN to read:

> One day she read, I turned to the class and I said, 'First term, she was sitting in the Red Group. Thank you Red Group. It's your effort.' And I turned to the Blue Group, 'Term 2, she was with you. It was you people. You all have made it possible.' I credit all of them because I need to build this team up, so that she can learn and they can make a difference.

Thus, teachers demonstrated a positive example of how each child, no matter how different, was valued.

The second factor that contributed to positive experiences was support from school personnel, parents, and the children. Teachers were appreciative of the principal or vice-principal being present during case management meetings, of understanding colleagues, of the AED who was "an extra pair of hands and did a lot of in-class support", and of parents who gave strong home support.

The last supportive factor resided in the nature of the disability for which accommodations were needed. One teacher said, "If the child is high-functioning, it tends to make inclusion a little easier. If the child is low-functioning or unidentified, it makes things a little more challenging." Another teacher alluded to a child with cerebral palsy who "could catch up with all the class work". She added, "The only thing was he was physically handicapped. No problem if the child has the mental capacity."

Negative feelings and experiences

Of all the coded responses, 60.4% referenced negative feelings and experiences about inclusion. The dominant feelings (31%) were stress followed by frustration (20%), fear and anxiety (16%), and exhaustion (14%). These were frequently encountered in the process of teaching and managing behaviour.

The challenge of inclusion seemed to be most intimidating for the general education teachers and the TSNs who were new to their roles. Teachers observed that "no matter what the books tell you, when you meet them, then you know". One teacher said, "I am not trained in special needs. So given children with special needs, of course, I feel apprehensive." A TSN similarly reported,

> My first experience with a special needs child was when I was really clueless. So when I had him, I had a really hard time. It really wasn't the most pleasant experience and it went on for the entire year. So I tried lots of methods. He was just not responding and it was very discouraging.

Thus, insufficient training was a challenge to inclusion.

Teachers also felt daunted by large class sizes and the pressure of meeting curriculum and examination requirements. A TSN said this of a child who has Attention Deficit/Hyperactivity Disorder (ADHD):

> It was really, really challenging. It was ongoing the whole day. And because I was also dealing with 29 other Primary One children who can be very energetic and in need of my attention all the time, I was very drained at the end of the day.

A very common stressor was reflected in this response:

> There's always concern about the lower ability pupils in our class because they take so much of my time and energy. I find that I can't help the lower ability pupils as much as I want to.

Many teachers mentioned examination pressures, such as this teacher who lamented: "I'm just a normal human being with normal patience. Then at Primary 6, you have a lot to cover, you have to be ready for the exams and it's so difficult." The most frequently cited negative experience is managing more than one child with special needs in a class. One teacher reported: "I have an autistic boy and I have another ADHD, serious ADHD boy. It was really challenging and especially during Science period, you are like working with two time bombs."

Teachers experienced fear and anxiety from working with children with challenging behaviours. One TSN raised concerns for the rest of the children in the class as the child with anger management issues might hurt them. Another TSN shared her anxiety about a child with autism: "Every day I worry about what he is going to do tomorrow." Even AEDs, the best trained teachers in special needs, were apprehensive as evident in this response: "I come to school every day feeling very scared, thinking what is he going to do today. Which time? What period? Any time now the teacher is going to call me [for assistance]."

Factors contributing to negative experiences

The foremost factor contributing to negative experiences with inclusion was managing challenging behaviours in the classroom. Children who had autism or ADHD or violent behaviours disrupted teaching and prevented teachers from completing the syllabus. One TSN recalled an aggressive child who acted up the whole day: "We have to stop the lesson most of the time. It really did affect the marks of the rest of the pupils. So for someone who is that extreme, I would not recommend him for inclusion."

The second factor related to instructional challenges. Teachers were cognizant of having to deliver the "normal curriculum" and struggled when they had to accommodate a child who was different and made no progress. Invariably, almost all the teachers never lost sight of national examinations and "trying to get them [children with special needs] to pass the PSLE". (PSLE refers to the Primary School Leaving Examinations.) In an astute observation, one TSN remarked, "What IEP? It's all about PSLE."

Discussion

Teachers were interviewed about their personal experience of inclusion and approaches to including pupils with mild disabilities as full participants in their classrooms. The teachers felt that only children with mild disabilities should be included in the general education classroom. This is consistent with the prevailing concern schools have about including children with severe disabilities in mainstream education (Loreman et al., 2007; Wilde & Avramidis, 2011). At this point in time, we are not yet able to meet what Ferguson (2008) described as the "newest challenge to make inclusive practices available to everybody, everywhere and all the time" (p.109). However, progress has been made. Never before had mainstream teachers and special education teachers worked together to provide support in the general education classroom for pupils with SEN. The learning curve was very steep.

Teachers experimented with various inclusive practices in the general education classroom. They provided as much one-on-one instruction for the pupil with disabilities when the rest of the class was completing seatwork or they built in time for personalized coaching at the end of the school day. Thus, they employed a range of approaches on the continuum (Wilde & Avramidis, 2011) ranging from withdrawal support to within class one-on-one instruction. Most importantly, they created a socially welcoming classroom environment to foster a sense of belonging (Booth & Ainscow, 2002) by setting an example of acceptance and cultivating in their pupils a willingness to embrace differences.

The experiences of teachers in Singapore were very similar to their counterparts internationally, such as Hong Kong (Wong, et al., 2004), Canada (Horne & Timmons, 2009), and Australia (Forlin et al., 2008). Their greatest concern was classroom-based (Forlin et al., 2008) and revolved around the challenges of engaging all students, juggling teacher attention in order not to compromise the progress of any group of pupils, managing disruptive behaviours, and completing the syllabus to prepare pupils for high stakes examinations.

Using focus group interviews provided first-hand accounts of what teachers thought and felt about inclusion, why they experienced inclusion the way they did, and what they perceived supported their work. Important learning points were distilled from the data about what made inclusion work for them.

First, inclusive practices can be achieved through school-wide collaboration. The teachers shared information about working together as teaching teams. They engaged in one of the best practices in inclusive education (i.e., planning, learning, and working together to transform classroom practices) (Ferguson, 2008). In this partnership, the AEDs (LBS) played a key role in providing consultation and direct assistance. There was an attempt at blending specialist knowledge and skills as teachers shared specific strategies that worked for them.

Second, teachers are willing to support inclusion when they have opportunities to experience success. Positive attitudes arose when they had exposure to teaching pupils with SEN and in the process acquired a variety of strategies they could use to good effect in the inclusive classroom. With a growing sense of competence came greater receptivity

to inclusion. This was consistent with Woolfson and Brady's (2009) perception that mastery experiences were instrumental in fostering positive beliefs about inclusion.

Third, children with SEN can be both "in" and "of" the general education classroom when teachers actively teach their pupils how to be supportive of peers who are different from themselves. Horne and Timmons (2009) noted that students were more tolerant and accepting of students with disabilities when they understood the nature of the disability and when teachers communicated this information to them. Similarly, Frederickson, Simmonds, Evans, and Soulsby (2007) attributed social acceptance in the UK for children with SEN to peer preparation workshops which enabled students to perceive strengths of special pupils and develop empathetic support.

The most salient learning point is that training is important but it is not what makes teachers feel adequate. Training in special needs does not necessarily make teachers feel competent about teaching children with disabilities (Woolfson & Brady, 2009). It is not training per se but successful classroom experiences that influence teachers' sense of efficacy and attitude towards inclusion.

One recommendation to enhance the value of training is to provide opportunities for mainstream teachers to co-teach with a colleague trained in special needs and interventions, such as the AEDs(LBS), and to observe effective specialist support in action. Research consistently indicated that teachers learned more and developed self-efficacy when they engaged in deep learning through collaborative learning structures that included guidance by and observation of knowledgeable colleagues who had expertise in a specific content area, feedback from colleagues' observation of their teaching, and reflective discussion (Chong & Kong, 2012; Postholm, 2008).

Another option is to deploy the AED(LBS) as a consulting teacher so that his or her knowledge could filter down to a larger number of teachers. He or she can provide expertise in differentiation of content (what pupils learn), processes (how pupils learn) and product (how pupils show what they have learned) (Ferguson, 2008). Yet another possibility was to make greater use of cooperative teaching. Indeed, Ferguson (2008) found that one of the practices that supported educational inclusion was a new cooperative practice negotiated by special educators and mainstream teachers.

There were limitations to this study. First, data were obtained from less than 40% (41/108) of the resourced primary schools and participating teachers were nominated by their principals. Thus, the findings may not representatively capture the full picture of inclusive education in Singapore. Schools that chose not to participate may have a different experience of inclusion, which cannot be reported in this study. Second, only observational data were collected, which made it difficult to verify the degree to which the interview responses matched the day-to-day activities that took place in the inclusive classrooms. Third, only teachers were interviewed and the status of inclusion was based solely on their perception. At the centre of these discussions were the children with special needs who might have a totally different experience of schooling compared to that of their general education counterparts. Their story would be an interesting area of study for future research.

Future research

For countries such as Singapore which is relatively new to inclusive education, care must be undertaken to build teachers' capacity to accommodate children with special needs in the general education classroom. Our findings suggest that experiences of success in the classroom build capacity, which is vital for sustaining inclusion over the long haul.

A possible area for future research is to explore mentorship or coaching models that will strengthen teachers' practical skills in special education support and enhance their sense of efficacy. Another possible area of research is to examine differentiated support that is being provided for various disabilities in the general education classroom with a view to identifying best practices that will benefit children with special needs.

Conclusion

This study aimed to document teachers' experience of inclusive education in Singapore. As inclusion is new to Singapore schools, it is understandable that the teachers felt greatly challenged. However, there were encouraging accounts of experiences that registered joy and satisfaction from this inclusive learning journey. Whereas they were accustomed to working separately, general education and special education teachers had begun to work collaboratively. Experience will deepen the new connections they have established and make this partnership more commonplace. Needless to say, there is room for ongoing teacher training and collaborative learning that will build teacher-efficacy and further the ideals of inclusion.

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