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Source	*Asia Pacific Journal of Education, 31(2)*, 143-158
Published by	Taylor & Francis

An inclusion initiative in Singapore for preschool children with special needs

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(Received 21 June 2010; final version received 9 November 2010)

This paper describes a preschool inclusion initiative in Singapore, which currently has no mandate for integrating children with special needs in mainstream schools. This very small-scale qualitative study involving children with mild learning disabilities discusses a therapy outreach programme by a local children's hospital. It explores the supports and challenges of this experience based on interviews with therapists, teachers, principals, and parents. Facilitators of inclusion included communication, collaboration, availability of training and resources, and a readiness for inclusion. Barriers to inclusion included person-related hindrances, structural obstacles, gaps in program delivery, and limited specialized training and resources. We learned that in the absence of mandatory provisions for inclusion, children with special needs can be supported in regular education when there is "buy in" for early inclusion and intervention amongst key stakeholders. Practical strategies toward this end are discussed.

Keywords: special education; inclusion; early intervention; children with special needs

Introduction

Inclusion is a priority on the education agenda internationally. The major impetus for inclusion can be traced to 1994, when 92 countries and 25 international organizations signed the Salamanca Statement on Principles, Policy and Practice in Special Needs Education (UNESCO, 1994) that pledged recognition of diversity and adoption of inclusive education for all children. This declaration advocated mainstream schools as "the most effective means of combating discriminatory attitudes, creating welcoming communities, building an inclusive society and achieving education for all" (p. ix). Over the last 15 to 20 years, inclusion for children with special needs has been embraced worldwide. The Countries in the West, notably the United States (US) and

the United Kingdom (UK), provided leadership in defining and shaping inclusion, giving it substantial and definitive features distinct from what used to be called integration or mainstreaming.

Apart from the US and the UK, inclusion is supported by legislature and practiced in Europe (e.g., Italy, Norway, Sweden, Spain, Portugal) and several Asian countries (e.g., Brunei Darussalam, China, Korea, and Japan). Examples include the 1981 Education Act in the UK (Norwich, 2008) and the 1975 Public Law 94-142 (Education of All Handicapped Children Act) in the US, enacted in 1997 as IDEA (Individuals with Disabilities Education Act), and amended in 2004. In the last 5 years, Singapore, a city-state in South East Asia, has begun taking fledgling steps toward inclusion albeit without mandatory provisions. This article introduces the early experience of preschool inclusion in Singapore, from the perspectives of community-based mental health professionals, preschool educators, and parents of children with special needs. It describes the features of an early intervention program within a community preschool setting and examines factors that facilitated or frustrated the process of inclusion. Lessons from this learning journey will, we hope, contribute to the literature on inclusion in the Asia-Pacific region, where countries are still grappling with how best to make inclusion work for all.

Inclusion is defined as the practice of educating most children in the same classroom, including children with intellectual, emotional, or physical disabilities. Definitions and practices of inclusion vary across countries but two concepts of inclusion apply: placement concept and learning concept. The placement concept, traditionally called “mainstreaming” or “integration”, places children with mild or moderate disabilities in the same educational setting (i.e., mainstream or regular classroom) as typically developing children in the hope that all children would benefit

from the experience (Anderson, Klassen, & Georgiou, 2007). In other countries, such as the US, this mainstream placement includes also children with more severe disabilities. In the *placement concept*, students "can be 'in' but not 'of' the class in terms of social and learning membership" (Ferguson, 2008, p.111). Inclusion, however, has shifted toward a greater emphasis on the quality of learning. The *learning concept* is the extent to which a school or community welcomes students with disabilities as full members of the group and values their contributions (Anderson et al., 2007). It includes all children in learning, wherever they learn best (Warnock, 2005). This may mean a pull-out system with individualized instruction in the mainstream setting or the provision of a teacher-aide in the classroom to accommodate special learning needs.

In Asia, there is statutory support for inclusion practices in China, South Korea, and Japan. In China, the 1994 "Learning in Regular Classrooms" (LRC) national movement on inclusive education mandated compulsory education for children with disabilities (Deng & Holdsworth, 2007). In Brunei Darussalam, inclusion became an instrumental part of curriculum reform in about 1996 (Koay & Sim, 2004). In South Korea, the 1977 Special Education Promotion Act (SEPA) and its re-authorization in 1997 laid the foundation for reforms in special education which placed students with disabilities in regular classrooms (Kwon, 2005). In Japan, statutory provisions regarding special education were enacted since 1979, and all students with special needs have come to receive special education in public schools (Abe, 1998).

In contrast, there is presently no legislation in Singapore that mandates mainstreaming or the provision of the least restrictive learning environment for children with special needs. Inclusion emerged in the last few years in response to

plummeting birth rates and the economic imperative to nurture every citizen to maximize our limited human resources. A brief background to special education and inclusion in Singapore is warranted to provide the context for this study.

Special education in Singapore began in the late 1940s with specific disability groups (e.g., the visually impaired) being served by social service organizations and supported by the public hospitals. The first special school for cognitively delayed children was established in 1963. Prior to 1988, disability services were provided by voluntary welfare organizations in 11 special education schools (Lim & Tan, 1999). 1988 was a watershed for the history of special education in Singapore with the Advisory Council for the Disabled taking the lead to help integrate people with disabilities. From 1990, the Ministry of Education had begun to assume educational supervision of the special schools in addition to the responsibility of co-funding special education with the Community Chest of Singapore, National Council of Social Service (Quah, 1993). The earliest intimations of inclusion can be traced to one of the recommendations in the 1988 report by the Advisory Council for the Disabled, which advocated for special education to be provided within the regular education system wherever appropriate and feasible. The report also recommended special school placement for a child only if he or she cannot be educated well within a regular school. However, children with disabilities continued to receive services outside the mainstream (Quah, 1993) despite government rhetoric that advocated valuing diversity. Similar to Hong Kong post the Disability Discrimination Ordinance enactment in 1995, where only children with mild intellectual disability, visual/hearing/physical impairment, and autism with average intelligence were placed in mainstream schools (Chong, Forlin, & Au, 2007), attempts at inclusion in Singapore in the early 1990s were limited to students who had higher intellectual

abilities (Lim & Tan, 1999). Prospects for inclusion remained poor until 1994 when the prime minister crafted a vision of an inclusive society in his inaugural speech calling for greater effort to integrate people with disabilities in mainstream society. At the turn of the 21st century, government departments began to provide greater support for children with special needs within the regular education system. In 2003, the Integrated Childcare Programme was initiated for young children who would benefit from placement in mainstream environments. Between 2004 and 2008, Allied Educators and Teachers of students with special needs (TSNs) were trained and deployed to support children with mild to moderate disabilities in mainstream schools (Lim & Tan, 2004).

Provisions for inclusion are currently limited to only the primary and secondary school systems. Preschool children in Singapore with special needs typically access services provided by voluntary welfare organizations, family community services, moral charities, public hospitals, and private organizations. Modes of service delivery are usually based in the home, centres, or hospitals. The limited direct government involvement in preschool education meant that preschoolers with special needs have fewer opportunities to learn alongside their typically developing peers. In recent years, the KK Women's and Children's Hospital (KKH) introduced a community-based early intervention programme called TOP (Therapy Outreach Programme) that would enable young children with mild disabilities to concurrently receive services and be included in a regular preschool setting.

Inclusion takes on many guises relative to the cultural context of the respective countries that implement it. However, the literature consistently highlights a few salient elements of successful inclusion. Successful inclusion is dependent on these

key players: the therapists, early childhood special education teachers, and the early childhood education teachers of the inclusive setting (Buysse, Wesley, & Keyes, 1998; Odom & Bailey, 2001). First, it is well-established that a positive attitude toward students with impairments is a predictor of successful inclusion (Baron & Schultz, 1991; Coates, 1989). Research conducted among pre-service teachers in Singapore and Australia suggested that training in special education and confidence in teaching students with disabilities have a favourable impact on teachers' attitude toward inclusion (Sharma, Ee, & Desai, 2003). This phenomenon was also observed in Hong Kong where preservice teachers reported greater willingness to include students with diverse needs in their regular classes and increased confidence in interacting with individuals with disabilities after completing an inclusive education course (Chong et al., 2007). Second, an active partnership between parents and school helps to strengthen children's development and functional skills. Third, all special needs specialists and regular staff members need to assume individual and team responsibility for ensuring that children met their Individual Education Plan goals and outcomes. Therapeutic interventions usually comprise individualized support during class routines, consultative therapy with feedback from teachers, pull-out, one-on-one teaching, co-treatment, and communication (Cross, Traub, Hutter-Pishgahi, & Shelton, 2004). Fourth, adaptations for play and learning need to be child-specific within the context of the physical, learning, and social environment of which he or she is a part. It is clear from the above that programs, not children, have to be ready for inclusion.

Along the same vein, inclusive education succeeds or fails as a function of the support structures available and barriers that impede implementation. In the literature, one of the most critical support factors consistently cited for successful inclusion is

teachers' positive attitude (Anderson et al., 2007; Koutrouba, Vamvakari, & Theodoropoulos, 2008). Paige (2004) in Anderson et al. (2007) stated that inclusion and the accompanying restructuring of general education will not be possible without teacher buy in and involvement and without adequate support. Specific training in various disabilities is another essential facilitator. In China, for instance, teacher training has been seen as one of the decisive factors contributing to successful learning in regular classrooms (Deng & McBrayer, 2004). Australian teachers cited teacher aides, the provision of resources, external agencies (e.g., specialist teachers and psychologists), and in-school factors (e.g., smaller classroom size, peer and administration support) as essential for successful inclusion (Anderson et al., 2007).

On the flip side, regular teachers express concern about making appropriate accommodations for students with special needs. The demand for expertise within regular education for specialist knowledge is a pressing and real issue that if unmet creates considerable stress for teachers who often feel unprepared to teach students with disabilities. Other barriers to successful inclusion often cited are: infrastructure limitations, curricular inflexibility, decline in performance of non special education students, and cultural values (e.g., unfavourable social climate) antithetical to inclusion, which champions equity and pluralism (Deng & Holdsworth, 2007; Koutrouba et al., 2008).

Although inclusion is a much valued and established educational practice in most parts of the developed world, it is a new and untested educational initiative in Singapore. The present study is a first step in exploring how a culture of inclusion can be established in the absence of a legal statute. The purpose of this study is to identify the factors that facilitate and hinder the process of inclusion of children with special

needs in the regular preschool setting in Singapore, with a view to examining implications for schools.

Method

Participants were the parents (n = 9), teachers (n = 12), principals (n = 3), and therapists (n = 3), significant adults related to the 9 children receiving therapy based in 2 childcare centres. All the 12 teachers were females aged 21 to 58 years (M = 39.00, SD = 14.79) with either a certificate or diploma in early childhood education. Their professional experience ranged from 2 to 16 years in early childhood education (M = 6.71; SD = 4.75). They had not received formal training in special needs, but had attended two full-day weekend workshops conducted by psychologists from KKH on special needs topics such as Attention Deficit Hyperactivity Disorder (ADHD). Two teachers were placed on attachment at the hospital's Department of Child Development. One day per week for about 6 weeks, the teachers observed and obtained on-the-job training from the Learning support teacher on literacy strategies to support children with special needs. They also observed the intervention work provided by the psychologists, speech and language therapists, and occupational therapists. The three therapists in this study were hospital employees and included a psychologist, a senior occupational therapist and a senior Learning support teacher, all of whom had Master's level training in their respective areas of specialization.

The children in this study were enrolled in two PAP Community Foundation Childcare Centres, which are regular preschool settings that cater to typically developing children aged between 30 months and 6 years. The teacher-child ratios for Nursery (ages 3–4) and Kindergarten (ages 5–6) are 1:15 and 1:20, respectively. These two centres participated in the TOP programme run by KKH. Twelve children

(10 boys and 2 girls) were identified as having special needs; parents of 10 children (9 boys and 1 girl) gave consent for their children to participate in this therapy program. However, the parents of the female child declined to be interviewed. Thus, the final children's sample consisted of 9 boys. They were between the ages of 34 to 76 months (M = 61.22; SD = 12.92). Seven (78%) of the children were Chinese; two (22%) were Malays. They were identified through the collaborative effort of the childcare centres and the hospital. The teachers identified children who were lagging behind their peers and obtained parental consent for assessment by the hospital therapists. Hospital therapists conducted an initial screening of the identified children via classroom observations, consultation with teachers and parents, and a review of the children's developmental and learning progress. Paediatricians reviewed each child's profile to confirm his or her suitability for inclusion in the community-based intervention at the childcare centres (i.e., ruling out other medical conditions for which clinic intervention is warranted). A summary of the participants and their referral problems is presented in Table 1.

(Table 1)

Brief mention of preschool educational placement practices in Singapore is warranted for readers who are unfamiliar with our local context. Most countries in the West make placement decisions for a preschool child with special needs *after* knowledge about the disability is available to the teachers. In Singapore, however, most preschool children are enrolled in regular kindergarten or childcare centres. Should they be identified as being educationally at-risk and assessed as having special needs because of learning and/or behaviour difficulties in school, options for alternative placement and intervention support are then made available to parents.

Until very recently, the educational options are either enrolment in a special school or continuation in a mainstream preschool. Prior to this inclusion initiative, the vast majority of preschool children with special needs would access services only at government-subsidized, public hospitals that run child development clinics. In the last 3 years, parents have the added benefit of assessing support for children who have special needs *within* the few regular childcare centres that are served by the KKH's TOP programme. Instead of the children making the trip to the clinic for interventions or defaulting due to transportation or other reasons, the clinic comes to them.

This "mobile" clinic consists of a multi-disciplinary team comprising a paediatrician, a psychologist, a speech and language therapist, an occupational therapist, and a learning support teacher. The team's psychologist, occupational therapist, and learning support teacher visit the childcare centres to provide individual intervention for affected children and to work closely with the teachers on classroom support. Although two thirds of preschool children with special needs are referred to the hospital for early intervention to receive therapy in the clinics, default rates are high. TOP improves service delivery in two ways: (1) direct intervention for the target children, (2) training and in-class support for teachers. Teachers benefit from workshops (e.g., sensory processing), brief attachments to the Department of Child Development, and in-class modelling of behaviour management instructional strategies, and are better able to support the children long after intervention has ended.

The clinic therapists visit the preschools regularly to provide interventions for the target children. The therapy package comprises six intervention sessions (average of 50 minutes) and four maintenance sessions. An Individual Education Plan for the child guides the delivery of the intervention plan (i.e., selection of therapist, strategies and activities to teach skills the child needs to learn, the frequency and intensity of

pull-out sessions, and the point of integration with the child's regular classroom). The learning support teacher provides individual instruction for children who have pre-literacy difficulties (e.g., number/letter or word recognition), whereas the occupational therapist assists children referred for gross or fine motor difficulties (e.g., pencil grip, handwriting). In all cases, intervention is specific to the child's needs. Intervention starts with pull out intervention by the therapists and graduates to in-class support. When the intervention is completed, the learning support teacher continues to monitor the child's progress for a month and supports the teacher who now assumes responsibility for reinforcing skills the child has acquired during therapy.

Ethics clearance and approval for this study was obtained from the KKH Institutional Review Board. All participants for this study were recruited on a voluntary basis and could choose to opt out of the TOP programme or discontinue participation at any time without penalty. At appropriate times, the purpose of the study was explained to the principals, teachers, and parents, and consent for participation in the study and interview audiotapes were obtained. Parents of the target children were informed that the latter would receive intervention once a week at the preschool, a treatment package equivalent to that offered at the hospital clinics. All 9 children identified in the two centres had parental consent to receive centre-based therapy and to participate in the study.

The present study employed a qualitative design to derive a rich description of the factors perceived to be instrumental in sustaining or hindering an inclusive educational initiative at the community level. Data were obtained via interviews. Fifteen interviews in total were conducted by one of the four university authors available during the appointed interview times. Eleven were individual interviews

with each of the parents (or parent pairs), one therapist, three teachers, and one principal. The average duration of the individual interviews was 60 to 90 minutes. Four were group interviews (1 for principals, 1 for therapists, and 2 for teachers) with an average duration of 90 to 120 minutes. (See Appendix A for the list of interview questions for parents, teachers, and therapists.) The same set of questions for teachers was used with the principals who were interviewed separately. The interviews were conducted in English (the dominant language of administration, commerce, and education in Singapore), audio-recorded, and transcribed for subsequent coding.

The interview data were analysed in four steps based on an adapted version of the psychological phenomenological approach (Giorgi, 1985). In Step 1, we read each transcript carefully to categorize responses, each as a specific "meaning unit". A meaning unit is defined as an encounter that influenced the interviewee and held personal relevance. In Step 2, we each worked independently to assign a code that captured the essence of each unit. Meaning units that described similar phenomena or carried the same theme were grouped under the same code. In Step 3, we synthesized the codes into succinct statements of the participants' experiences. Similar codes were grouped and the salient features for each group were used to derive eight categories: (a) communication, (b) collaboration, (c) training and resources, (d) readiness for inclusion, (e) person-related hindrances, (f) structural barriers, (g) gaps in TOP, and (h) limited specialized training and resources. In Step 4, we examined the eight categories and identified two broad themes or clusters: facilitators, and barriers. Two sets of authors coded the data in pairs. To determine the consistency of the researchers' interpretation of the meaning units and the coding process, we randomly selected about 30% of the transcripts and compared them for similarity of codes

assigned by each of the researchers. Any disagreements were discussed until both coders agreed 100% on the coding or classification.

Results

The purpose of the study was to obtain the perspectives of various stakeholders toward inclusion that was implemented for the first time in a regular preschool setting. It should be noted that unlike therapists, teachers, and principals, the parents in this study were unfamiliar with the terminology of inclusion as utilized in special education research. Hence, during the interview, they were not asked to define inclusion but to respond to an experience of inclusion. Parents' interview data therefore ought to be regarded more accurately as personal responses to an inclusive education opportunity for their children who had special needs, rather than responses to inclusion per se. Nevertheless, what parents took away from the TOP programme provided valuable insider reflections of what inclusion, as it was experienced, meant to them. The following section will first present definitions of inclusion from the perspectives of the therapists, teachers, and principals. It will then present the facilitators and barriers for inclusion as they were perceived by all parties, as corroboration of perceptions was thought to be important for a qualitative study of this nature.

Definitions of inclusion

Most of the teachers and all the principals essentially defined inclusion as placement of all children in the mainstream or general education setting irrespective of individual differences. One teacher stated, "Inclusive education is (for) children who need help (to be) included in a normal mainstream school, learning together with the mainstream children." A similar perspective was articulated by a principal who

defined inclusion as “integrating children with special needs in the mainstream classroom and the underlying philosophy would be that all children belong, should be learning together, regardless of their ability.” In their definitions, the teachers also alluded to reasons they perceived were important for including children with special needs in mainstream; for example, “they’re included in the class so that they can learn social skills, interaction, and they can pick up language. Because if you isolate them, they might not be able to.” One of the psychologists also mentioned the importance of placing children regardless of “level of learning and capabilities” in an environment where “they interact with other members of society”.

However, the therapists additionally factored into the definition of inclusion the principle of equal access to the right to learn and to learn adequately in the mainstream educational environment. For example, inclusion was defined as “support for every child despite differences, that they may not be discriminated against in any classroom context of learning” and “all children despite whether they are typical or not so typical have the right of access to any school in the community…like mainstream integration”. It was not sufficient simply to grant children with disabilities a place in regular education; for the therapists, an inclusive setting should provide adequate support so that children with special needs can be meaningfully engaged. This was evident in one of the therapist’s responses: “Firstly the school must be open to having such children and perhaps the school will need certain support and resources like qualified teachers and also curriculum that would suit these children.”

Through the analysis of the interviews, four facilitators and four barriers for inclusion were identified.

Facilitators of inclusion

The four facilitators of inclusion identified by the interviewees were: communication, collaboration, training and resources, and readiness for inclusion. First, the two childcare centres had in place a communication system where teachers and therapists could give parents almost immediate and regular feedback. The learning support teacher shared that she "meet up with parents every evening…and tell them this is what I've done with the kids…the goals I've planned for them, (and to) practice at home." Similarly, the psychologist reported, "At mid review we invite the parent down with the teacher to discuss how the child is progressing." Besides reviews at mid-term, therapists also conducted end of intervention (wrap-up session) with both teachers and parents. Additionally, all the therapists reported informing the teachers about work accomplished with the target child and providing parents with a written report on the child's progress after every therapy session. This communication was confirmed by all parents who made reference to daily updates on the children via the "communication book" and informal verbal feedback when they dropped off or picked up their children. The immediacy and regularity of communication amongst all key individuals in the child's learning environment supported inclusion efforts.

Second, the transcripts indicated multiple two-way collaborations as instrumental in facilitating inclusion. The therapists and teachers worked very closely together in planning and monitoring interventions for target children. For example, the psychologist reported that she worked with the teacher to "identify the relevant concerns in the classroom context and together with the teacher identify the priority needs and skills we felt the child needed and from there how to translate that to therapy goals in our interventions." It was obvious from reading the transcripts that no one felt he or she had the monopoly of expertise in helping the target children. The psychologist also stated: "Collaboration is about being aware that the teachers know

the child best." Indeed, this was corroborated by one of the teachers who stated: "The therapist finds out certain things from me that she needs, then I feedback to her certain things that we see. Then we try to analyse what is going on." Hence, in delivering interventions, the therapists consulted with the teachers to identify problems, prioritize needs, and develop strategies for use with the target child. The parents also cooperated with the therapists and teachers. For example, one parent shared, "I suppose by sharing with me, she (the therapist) is giving me ideas of how I can continue to work with her at home as well, so we can work jointly and we don't contradict our ways of managing him (child)." Collaboration thus facilitated inclusion.

Third, closely related to collaboration, a support factor that energized inclusion was the availability of training and resources. Teachers cited training and clinical attachment as facilitators of inclusion. One teacher reported looking forward to being at KKH's Department of Child Development for a brief attachment to gain knowledge and skills for helping children with special needs. The therapists modelled and demonstrated skills and strategies that could be used in the classroom. One of the therapists reported, "Teachers need to see something. It's easy to talk but talking is not as concrete as doing the classroom teaching itself. So when teachers watch me, they begin to see…this idea is workable. It's not as difficult as I thought." Thus, learning made concrete and practical effectively changed the teachers' mindset from the initial "I can't" to "I can". The teachers in 3 out of 5 interviews reflected on the benefits of observing and learning directly from the therapists. One of the teachers articulated gaining new insights: "When I sit in, I get the chance to hear how the OT teach the children about listening skills… I never thought to teach the children to listen with their eye…looking at the teacher is one of the listening skills." One of the

principals gave credit to the TOP therapists: “Yes, TOP has contributed to teachers becoming more receptive. There is someone to ask things…to fall back on, and if I’ve got any problem, I know who can help me.”

The teachers reported usefulness of having materials to work with the children. One of the teachers stated, “The OT photocopies the hand-outs for parents. So parents can follow up at home doing the activities she has prepared for the child.” Indeed, one parent alluded to being provided with “homework for him (the child) and also therapy items that can help him at home.”

Fourth, readiness for inclusion was another factor that facilitated inclusion. This was evident in various stakeholders acknowledging the problems children were facing and being open to ways of providing appropriate support. Principals recognized the at-risk children needed additional specialist support. A principal stated, “After seeing more and more children struggling with learning difficulties and teachers having problems handling them in class, we have actually been sourcing for a partner to work with to provide early intervention.” Parents interviewed acknowledged mild deficits in their children and that teachers were rightly concerned about the latter’s need for community-based intervention. For example, one parent reported, “The teacher says that my child has some learning problems; maybe he is a bit slow…I also observe my child learning; concentration very short.” By far the most encouraging response suggesting readiness for inclusion came from a teacher who set aside her own anxiety and focused on simply wanting the child to succeed: “At first, I (teacher) feel threatened (to have the therapist come into class), I think anyone in my position will feel so, but… I want to learn and I want this child to progress.” One of the therapists articulated the need for a school culture that was ready for change as a crucial factor for inclusion to flourish: “I think most school may expect the child to

change more than the school to change. So the…school culture plays a big part." Therefore, even though inclusion was a new initiative, it was propelled and sustained by a "child-ready school" culture (Brostrom, 2000), one that considered the child's perspective and created an appropriate environment in response to his or her needs.

Barriers of inclusion

Four barriers of inclusion identified by the interviewees were: person-related hindrances, structural obstacles, gaps in TOP, and limited specialized training and resources. First, one barrier stemmed from person-related factors, such as family problems and negative perceptions of special needs and inclusion. A barrier that defied all good intentions to help was dysfunction within the family. A principal reported on one of the children: "I should call it a broken home. Because…actually the parents give up and he's under the care of his grandaunt. So it's quite a sad case, because there's no help which you can do for him." A related barrier was negative perceptions of children with special needs. There was slight resistance from teachers who had views antithetical to inclusion. For example, a teacher interviewed gave the following as her reason for not applying a strategy suggested by the therapist: "I didn't use that strategy for the child because I did not want the child to be identified by friends as very special." The learning support teacher commented that "it is a bit sad, but I think society is not very inclusive in Singapore. They (parents) have this interesting mentality that this (disability) is infectious. You get it from them (children with special needs)." Thus, implementation of inclusion can be very challenging when society regards inclusion as an infringement on individual rights to normality.

Second, structural obstacles linked to systems, for which there were no easy solutions, make inclusion extremely difficult to implement in ways that would truly be helpful to the target children. Cited most frequently by all principals and alluded to

by both parents and teachers was the large class size (by teacher report, about 30 children per class at the kindergarten level). Also, manpower constraints translated into one teacher per classroom with no teacher aide. One teacher reflected on the pressures she encountered on the job: “You’re talking about childcare. The child is here from morning until evening with you. You are like a mother; you are the caregiver; you’re the teacher. So we are humans.” Thus, human resource constraints impede efforts at inclusion.

Third, gaps or programme limitations in TOP constituted a barrier to effective inclusion. There was unanimous agreement that the 6-week intervention programme was too brief for change to take effect. One principal reflected that perhaps the intervention duration should take into consideration the “seriousness” of a child’s condition. There were consistent requests for the intervention to be strengthened simply by increasing the number of therapy sessions. In addition, TOP did not offer training workshops for parents on special needs or skills to provide good home support for the children. It is therefore difficult to ascertain how appropriately parents supported the therapists’ and teachers’ efforts in school.

Fourth, both teachers and the principals felt that teacher training was insufficient and requested more specialized training and resources. As one principal observed, “A workshop alone is not enough to equip them (teachers) with the skills because of the lack of experience…the (lack of) contact with the (special needs) children.” One teacher probably expressed a view shared but not articulated by her colleagues: “We go attend this course. It’s quite tiring after work and Saturday you see… And then we have our own family.” Training aside, the pressure of accommodating special needs in a classroom where the majority are typically developing children meant that teachers were hard pressed to develop resources for

children with special needs. One teacher probably summed up the desperation often encountered by all regular classroom teachers when implementing inclusion for the first time: “Give us something we can really work with, not to wait until we make it (ourselves).” Hence, despite the provision of training and resources, they were perceived as insufficient to allay teachers’ anxieties about their competence to help children with special needs.

Discussion

The present study explored the perspectives of various stakeholders about a new inclusion initiative implemented in a regular preschool setting in Singapore, and used the interview data to identify supports and barriers in the inclusion process. In this discussion, we summarize important findings and also distil lessons from this learning journey.

Although inclusion is embraced as normative practice and backed by legislation in many countries worldwide, it is a relatively new experience in Singapore. As it is currently practiced in this initial preschool inclusion study, inclusion refers to the integration of children with special needs into a regular mainstream classroom environment, with pull-out support for a portion of the school day in order to individualize learning support that meets the specific needs of children with mild disabilities. Our findings suggest it is possible to take small steps toward building a culture of inclusion. The facilitators and barriers identified by the participants have provided some insights into what might be needed for inclusion to work, principles that would be relevant for countries in Asia and other parts of the world that do not yet have legislation currently in place for inclusion of children with

special needs and also countries where inclusion is faltering even though educational policies favouring inclusion have been implemented.

Our findings reveal that perhaps the strongest support for inclusion is a “can do” attitude that positively engages the will and energy of all stakeholders toward improving outcomes for children with special needs. A positive attitude began with acknowledgement that the target child had special needs that can be met, albeit with difficulties, in regular education and a willingness to concede that although no one has all the answers, everyone is an expert on some aspects of the child. The wealth of expert insights, when shared, culminated in practical support for each child. Parents were willing to let their children try out intervention in the school setting; principals and teachers were willing to set aside their anxieties; therapists were willing to model and share relevant tools with teachers. The therapists, in particular, were the powerful agents of change in this process. They worked alongside the teachers and unstintingly imparted skills, which the teachers could immediately use in the classroom to good effect. The findings were reminiscent of the study by Cross et al. (2004) which delineated attitudes, relationships between service provider and parents, and therapeutic interventions as essential factors for successful inclusion. The reality is that not every teacher involved in this study began this new inclusion journey with enthusiasm; however their experience of working alongside the therapists to support a child with special needs gradually fostered a more receptive and positive attitude. Hence, attitude change can emanate from behaviour change (Giangreco, Dennis, Cloninger, Edelman, & Scattman, 1993) and contact with persons with disabilities (Bender, Vail, & Scott, 1995), which can further energize efforts at inclusion.

The study identified barriers as person- and family-related factors (e.g., family dysfunction), social stigma associated with disabilities, shortage of trained personnel,

and the lack of specialized training and resources. Although they work with older children, British and Israeli middle school teachers were also concerned about insufficient teacher training, lack of additional help in the classroom, and large classes (Heiman, 2004). Few individuals would argue against the humanitarian values that undergird an inclusive education culture; however, well-intentioned school personnel and therapists remain daunted by practical constraints that frustrate service delivery.

What lessons did we learn from this inclusion experience? Consistent with the literature on inclusion, one of the most important lessons we learned was that buy in and involvement are critical to the success of inclusion (Anderson et al., 2007). This, however, is difficult to achieve when the prevailing educational and larger social culture is unfamiliar with the concept and value of inclusion and educators do not have the pre-requisite specialist training to take on new roles. Teacher resistance fuelled by a sense of inadequacy and anxiety is a real challenge, but we discovered it can be managed with attention to two guidelines for empowerment: focusing on realities and giving away usable knowledge and skills.

First, the shift toward a growing positive teacher attitude stemmed largely from the external support teachers received from the therapists who extended therapy beyond the clinic walls. These professionals were the catalysts for change in how inclusion is perceived in Singapore. The therapists gave thoughtful consideration to the classroom context and constraints under which the teachers operated. For example, they provided feedback and consultation to teachers during the children's nap time. They shared hand-outs and therapy materials that teachers could use immediately in the classroom without further modification. Thus, by bearing in mind the "reality principle" (Gersten, Woodward, & Morvant, 1992) – the classroom

context and the current needs of the teachers – the therapists helped to effect an attitudinal change that was crucial for teacher support of inclusion.

Second, the teacher's initial fears about supporting children with special needs were allayed by the therapists' sharing of usable knowledge (Rosenfield, 2000). As attested by many of the teachers, the experiential training via demonstrations and modelling of intervention strategies and classroom management was highly valued and convinced teachers of their usability. The teachers did not read a book about a skill or a strategy, instead they learned directly from observing a good model and also from receiving feedback and supervision in their classrooms. Quite evidently, "buy in" came about when teachers began experiencing first hand through practice what worked for them in their own classrooms. Interestingly, this phenomenon was also observed in Hong Kong which has an educational policy of integration. Luk (2005) in Sharma and Chow (2008) found that attitudes of school principals and teachers in a small rural school became gradually positive as they implemented an integrated policy.

We also learned the importance of collaboration. In a small way, this study also illustrates the widely acknowledged fact that risk and resilience are characteristics of a process involving the interaction of systems (Pianta & Walsh, 1998), in this case the interactions among the child, family, school, and community. The conscious effort to establish consultation with reference to the children's needs and treatment plan, albeit not hassle-free, is a step in the right direction toward successful intervention. Early childhood research in Singapore suggested that social competence and pre-requisite academic skills in the early years contribute to good adjustment in first grade (Yeo & Clarke, 2006). It is hoped that the Therapy Outreach

Programme's early intervention programme has steered the children a step closer toward greater preparedness for and successful transition to first grade.

Finally, it is fitting that we briefly discuss what was accomplished in inclusion. Anecdotally, parents reported improvement in the children. One parent stated, "He has actually improved a lot. He would not knock his head now. He actually calms down and listens. When you explain to him, he would actually listen." Another encouraging outcome was its impact on normally developing children, who "became more understanding and they learn to compromise and work together, get along with other children." This finding echoed that of a study by Peck, Carlson and Helmstetter (1992) who reported that typically developing children benefited from becoming more compassionate toward people with disabilities. Lastly, whereas teachers benefited from acquiring new strategies, therapists gained experience of classroom realities that further informed their practice and increased awareness of how best to "give psychology away" (Sarason, 1974) to educators who are entrusted with the task of carrying on the intervention they have begun with the children.

This study had several limitations. First, as the study is based on a very small sample of preschool children with mild learning difficulties, the findings may not be generalized to large and more diverse samples of children with special needs. Second, interviews were the only data collection procedure and the data was purely qualitative. There was also no prolonged engagement with the setting and the participants. Third, as with most kinds of interview data, it is difficult to ascertain authenticity of responses and control for impression management and socially desirable responses. Fourth, no objective quantitative measures were simultaneously used to assess participants' perceptions or student behaviour. Classroom observations in particular should be considered in future research to verify objectively the

collaboration and communication that exists amongst the therapists, parents and teachers.

A large number of studies have investigated views regarding the inclusion process for students in elementary and secondary school settings. Fewer have examined inclusion in the preschool setting, and far fewer have looked at inclusion that involved close collaboration at the community level to bring support directly to young children with special needs. The present study contributes to the literature in Singapore and Asia-Pacific region on inclusion and illustrates how inclusion can be implemented in the absence of mandatory provisions. We learned that many willing hands, well supported, can make a difference in the lives of preschool children with special needs. In the context of Singapore, future studies should investigate the practice of inclusion that is presently underway in the primary and secondary schools. The findings of the present study particularly with regard to elements that contribute to a positive inclusion experience, albeit with a preschool population, may well resonate with mainstream schools in Singapore and countries in the Asia-Pacific region for whom inclusion is a relatively less established but valuable educational approach.

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Appendix A

Interview questions for parents

1) Can you tell us why your child's teacher encouraged you to bring your child into KKH for a check-up?
2) What do you think about what the teacher said about your child?
3) After seeing the doctor at KKH, what did the doctor say? What do you think about what he says about your child?
4) Bearing in mind what the doctor has said about your child, how is the preschool helping to address the needs of your child?
5) How has your child benefited from the KKH-Therapy Outreach Programme (TOP)?
6) What other kinds of help or support you think your child needs from the preschool?
7) How do you know what is happening to your child in preschool?
8) Are there things the teacher said that you and your family need to do in order to further help your child at home? What do you think?
9) Now that your child is in TOP, do you have any other concerns relating to your child's learning in this programme?
10) Would you recommend TOP in this preschool to other parents who have children with needs similar to your child?

Interview questions for teachers

1) Can you tell us more about the problems you have with this child in your class?
2) What do you understand by "inclusive education" or having the special needs child learn alongside other children in the same class?
3) Are there particular activities and routines that the special needs child would require teacher or peer support to facilitate his inclusion? If there are, what are they and how do you usually facilitate that?
4) Who, in your opinion, are the main people critical in helping the child integrate successfully into the program?
5) How do you work hand-in-hand with the therapist to help the special needs child integrate successfully into the program? Can you cite some specific examples?
6) In your opinion, what are some of the ways in which you think could further enhance your collaboration with the therapist?
7) How are the parents involved in helping their child succeed in this placement? How else would you like them to be involved?
8) What kind of training and resources are provided to support your work with the child? Are they sufficient? What other supports are important to help you succeed with the inclusion programme?
9) What do you see as issues or challenges related to ensuring that children are full participants in the programme?

Interview questions for therapists

1) What do you understand by "inclusive education", what does it involve?
2) How do you work hand-in-hand with the classroom teacher to help the special needs child integrate successfully into the programme? Can you cite some specific examples?
3) Who, in your opinion, are the main people critical in helping the child integrate successfully into the programme?

4) In your opinion, what are some of the ways in which you think could further enhance your collaboration with the classroom teacher?
5) How are the parents involved in helping their child succeed in this placement? How else would you like them to be involved?
6) What kind of training and resources are provided to support your work with the child? Are they sufficient? What other supports are important to help you succeed with the inclusion programme?
7) What do you see as issues or challenges related to ensuring that children are full participants in the programme?

Table 1. Description of pupils.

Age in months	Class year group	Referral issues
70	K2	Poor letter and word recognition; difficulty following instructions; short attention span
62	K1	Walking about in class; rough play; fighting with peers
34	N1	Difficulty in responding to own name, following routines, turn-taking, and sharing; poor anger control
70	K2	Poor letter recognition; difficulty in retaining learning and slow in completing work; short attention span
70	K2	Poor word recognition; slow in learning; poor concentration and required frequent redirection; physically aggressive
76	K2	Repeating K2; very slow in learning; no letter recognition; little receptive and expressive English
57	K1	Very short attention span; fidgety and had difficulty remaining seated; disruptive; touching and pulling peers' hair
62	K1	Poor fine motor skills; unable to write own name or form letters; little eye contact; refusing to speak
50	N2	Very short attention span; fidgety when seated; disruptive; impulsively touching and hitting peers

Note: N1 = Nursery Year 1; N2 = Nursery Year 2; K1 = Kindergarten Year 1; K2 = Kindergarten Year 2