Primary School Teachers' Concerns About the Integration of Students With Special Needs in Singapore

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Abstract

Singapore, like industrialized Western nations, faces similar challenges in the public school system in that increasingly, more students at risk, as well as those with special needs attend general education programs. This paper presents the concerns of primary school teachers working with students with disabilities in general education classrooms in Singapore. Based on the teachers' concerns, recommendations for the design of inclusive teacher education programs that would include special needs education in general teacher education programs are made.

Keywords

teachers' concerns, inclusive classrooms, teacher preparation, Singapore

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Singapore was founded as a British colony in 1819 and became independent in 1965. It subsequently became one of the world's most prosperous countries with strong international trading links and with per capita GDP equal to that of the leading countries of Western Europe. Singapore has a population of approximately 4.4 million and its ethnic groups comprise 76.8 % Chinese, 13.9% Malay, 7.9% Indian and 1.4% others (e.g., Euro-Asians). The country's literacy rate is 92.5% and education is highly valued, with Singapore's total expenditure for education taking up the largest share of 21% of expenditure under the Social Development sector (44%), followed by Security and External Relations (37%), Economic Development (13%) and Government Administration (6%) (Education Statistics Digest, 2004). Singapore's education system is that of a "centralized curriculum and system of governance, large class sizes, formal pedagogy, and frequent evaluation" (Gopinathan, 1997, p. 251). Its bilingual education policy requires students to learn both English and their mother tongue (Mandarin, Malay, or Tamil, depending on the ethnicity of the students), although English is the medium of instruction. Major national examinations mark the completion of general education at the primary, secondary, and high school levels.

Like industrialized Western nations, Singapore faces similar challenges in the public school system in that increasingly, more students at risk, as well as those with special needs attend general education classrooms (e.g., "Kids with Special Needs Get Help", 2004; "Schools May Be Unaware of Slow Learners", 2002). The Ministry of Education (MOE), Singapore has indicated that children with learning disabilities constitute at least 5% of the entire student population (Ministry of Education, 2004). Among the student population, MOE estimates that there is between 3% to 5% of students with dyslexia, and that there is another 0.5% of students with autism.

From 2005 to 2008, MOE is allocating $55 million a year to improve education for children with disabilities, which not only includes children in special education schools, but also those who are placed in general education schools. In terms of support to general education schools, about 20 primary and 30 secondary schools have been designated to provide enhanced support for students with dyslexia and autism spectrum disorders. In September 2004, with the announcement of the MOE Training in Special Needs (TSN) policy initiative, 10% of teachers in general education schools will be trained to identify and work with children with mild learning disabilities ("School Aid for Disabled Kids", 2004). The 10% of trained teachers across all general education schools, comprising four to five trained teachers per school will provide the school-based expertise in special needs for each school.

Purpose of Study

In June 2005, under the MOE Training in Special Needs (TSN) policy initiative that mandates special needs training for 10% of teachers in general education schools, the first of a series of modules (see Table 1) was offered to a pioneer group of 104 senior teachers from 22 MOE-designated pilot schools. The module, *Introduction to Understanding Pupils with Special Learning and Behavioural Needs* was taught by a small international team of highly qualified and experienced senior faculty with expertise in the field of special education. The module was taught over three full days during the school holidays and required tremendous commitment

Table 1. A specially designed in-service training program to help general education teachers work with students with special needs in primary and secondary schools in Singapore

Module 1: Introduction to Understanding Pupils with Special Learning and Behavioral Needs This module provides participants with the knowledge fundamental to the education of pupils with special learning and behavioral needs in mainstream classroom settings. Teachers will learn about the academic, psychological, and social needs of these pupils.
Module 2: Assessment, Instructional Planning, and Curriculum Adaptation for Pupils with Special Learning and Behavioral Needs This module has been designed to provide an overview of assessment in general education and special needs education. Participants will learn about basic measurement concepts, formal and informal assessment procedures, and the use of curriculum-based assessment as a major focus for ongoing instructional planning. Participants will learn how to adapt the curriculum and implement a learner-oriented program of instruction for pupils with learning and behavioral problems.
Module 3: Learning Disabilities: Characteristics and Classroom Intervention This module provides an overview of specific learning disabilities, including dyslexia and ADHD. Educational remediation and treatment approaches will be examined, including strategies for managing behaviors and improving attention, as well as developing reading, writing, mathematics, study, and social skills of pupils with learning disabilities.
Module 4: Autism Spectrum Disorders: Characteristics and Classroom Intervention This module provides an overview of Autism Spectrum Disorders (ASD), with a primary focus on Asperger's syndrome. Definitions and characteristics of learners with ASD, as well as possible causes, prevalence, assessment, and intervention approaches will be examined. Related conditions such as pervasive developmental disorder and Rett's syndrome will also be discussed.
Module 5: Teaching Language and Literacy to Pupils with Learning Problems This module will focus on identification and assessment techniques for pupils experiencing difficulties in language and literacy skills. Instructional/program planning using curriculum adaptation and differentiation techniques will be outlined. Methods to evaluate the effectiveness of the teaching and learning of language and literacy skills will be demonstrated.
Module 6: Helping Children with Problems in Mathematics This module will focus on factors affecting children with mathematical difficulties and techniques for identifying these children. Diagnosis and remediation in mathematics and strategies for improving pupils' understanding in mathematical concepts and problem-solving strategies will be examined.
Module 7: Understanding and Working with Pupils in the Lower Primary Years This module aims to extend participants' breadth and depth of understanding about the developmental learning needs of young children. Current programs that adopt a more holistic approach to learning will be introduced and evaluated for use in the lower primary setting. Practical on-site workshops and visits to preschool centers will be conducted in order to identify the skills necessary for working constructively and creatively with young children in mainstream settings.
Module 8: Understanding and Providing for Pupils with High Ability in Mainstream Classrooms This module seeks to help participants understand and provide for the needs of highly able pupils in mainstream classrooms. Participants will be given a broad overview of the nature and needs of highly able children and learn how to modify the curriculum for these learners. Participants will also explore the use of appropriate teaching methods and materials for instructing the highly able.

and effort on the part of the teaching team in planning and teaching the course, as well as in assessing learning through well-conceived group and individual assessments.

To understand and address the needs of the course participants, the teaching team required course participants to put into writing for submission to the team, their greatest concern regarding the integration of students with disabilities in their classrooms. This paper presents the concerns of primary school teachers in working with students with disabilities in general education classrooms in Singapore. Based on the teachers' concerns, recommendations for the design of inclusive teacher education programs that would include special needs education in general teacher education programs are made.

Procedures

During the first day of training, teacher participants in the TSN initiative were given time to think about and write down one critical concern with regard to including students with disabilities in their classrooms. Despite the direction to write only one concern, a few teachers wrote multiple concerns. 109 concerns were raised by the 104 primary school teachers. The written concerns were compiled and organized by a research assistant. The first and fourth author independently reviewed and categorized all the concerns raised by the teachers. Relevant themes were developed and individual responses were grouped under each theme. Discrepancies concerning categorization under relevant themes were discussed and a consensus reached. In addition to the themes, the frequency of teachers' concerns, as given in the written statements, was converted into percentages, and rank ordered. The teachers' concerns provided important needs assessment data and also served as topics that were used by the course instructors for class discussions during the training.

Findings

The categories derived from the teachers' concerns are: (a) instructional and classroom management strategies (46.8%), (b) structure and demands of the current system (20.2%), (c) teachers' perceived weaknesses (12.8%), (d) social issues (11.1%), (e) identification and placement (9.2%), (f) support from school and external stakeholders (10.1%), (g) seeking solutions for a specific situation (4.6%), and (h) need for further training (1.8%).

Instructional and Classroom Management Strategies

A major concern of almost half of the teacher participants was that of including students with special needs in an already large class, averaging 35 to 40 students, and providing these children the attention, extra support, and time needed. Teachers were worried about the well-being of students with special needs in the general education classroom. One teacher wrote, "How do we ensure that the special child does not lose out in both academics and related skills as compared to the other children in the class?" Another teacher used a specific example to describe her concern: "Dyslexic children have difficulties with print, yet we put them in school where reading and writing are of great importance. Pupils experience failure after failure. My concern is how they are to go through education without having their self-esteem crushed over and over again." Concerns were also about challenging the regular students to achieve their best and not shortchanging these

students in terms of the instructional time and attention due to them.

Teachers asked about the use of effective strategies to help students with special needs in their classes. The typical questions relating to effective practices stem largely from a lack of knowledge about learning disabilities, what to expect from a child with learning disabilities, and how to help such a child integrate effectively into a mainstream classroom: What are the strategies required to include children with disabilities in the same activities as the regular children in my class? How do we adapt the curriculum to meet the learning needs of children with special needs? What do you do when children with special needs become defiant and undermine your authority in the classroom?

Structure and Demands of the Current System

There are three sub-categories under this category: Time constraints, class size, and assessment and examination issues.

Time constraints. Given the demands of the school syllabus and of meeting competitive academic standards, a number of teachers were concerned about the multiple challenges of completing the syllabus within a tight curriculum time frame while juggling time to deal with discipline issues and to provide special attention to children with specific learning needs in the regular education classroom.

Class size. In Singapore, a typical class size in primary school is about 35 to 40 students. Hence, some teachers asked about the availability of studies that offer some guidelines to the number of children with disabilities one can have in a regular class.

Assessment and examination issues. A key question raised by some teachers was whether students with special needs should be required to meet the same expectations in assessment and examination standards as other regular students. One teacher asked about specific advice to help teachers cope with completing the school syllabus and preparing children with special needs for major examinations, particularly when little, if any, exception is made for these children apart from an extension of between 15 to 30 minutes to enable these children to complete an examination paper.

Teachers' Perceived Weaknesses

Some of the teacher participants were concerned that they might not be able to handle students with special needs in their classes, despite the in-service training they were receiving. Concerns included that of a lack of patience with children with special needs and of the difficulty in handling both children with special needs children and mainstream children together in <u>one</u> class. One teacher noted: "At the present moment, this is really new. We have not really begun the journey of applying to work. I see possibilities in ways to help my pupils, not necessarily pupils with special needs. There may be more concerns when we are truly involved in handling special needs pupils."

Social Issues

Two categories are derived from this category: working with parents and social acceptance.

Working with parents. Acknowledging parents as important stakeholders and partners in a child's education, teachers raised several concerns about working with parents to support children's learning at home. Teachers were also concerned about parents who were

non-supportive, over-protective, or who lacked knowledge and were in denial about their child's needs, insisting instead that there is nothing wrong with their child.

Social acceptance. The attitude of school personnel, regular students, and that of parents of regular students towards students with special needs was a main concern of some teachers. Others were concerned about the attitude of teachers who do not deal with children with special needs and wondered whether these teachers would "look down" on such children.

Identification and Placement

Teacher participants raised concerns and reflected limited knowledge in ways of identifying children with special needs. Concerns included how soon a diagnosis of special needs should be conducted, as well as uncertainty about what can be done if the special needs problem is not identified and addressed until very late in a child's academic schooling, that is, when a child is already in Primary 6, the final year in primary school in Singapore. Other teachers were concerned about grouping issues related to the appropriateness and effectiveness of homogeneous or heterogeneous grouping of different disability types in one class. Two teachers asked about placements in special schools. They noted, "If mainstream teachers are unable to handle the needs of children with special needs, would it be more fair and effective for these children to have more specialized and individualized attention in a special school? If the child with special needs can't cope with the heavy academic load in the mainstream school, will it be better for the child to go to a school for special needs children rather than to stay in a mainstream school? The school for special needs will be more specific in its training for the children."

Support from School and External Stakeholders

A number of teachers wrote about the need for support from their schools. Teachers highlighted the need for a reduced workload that will free time for teachers to work individually with the child with special needs, plan for appropriate curriculum modification, and develop suitable instructional resources. Others wrote about more general support structures that could be provided by schools to better integrate children with special needs in general classroom settings.

Some teachers were concerned about what would happen if a child with special needs has not been making progress, despite the teacher's best efforts in school. One teacher asked: "If a pupil who is diagnosed with severe ASD does not show much improvement academically, how do we help the child?" Teachers sought advice about the availability and extent of support that could be sought from external service providers outside school.

Seeking Solutions for a Specific Situation

Some teachers had previous experience working with students with special needs. They presented real case examples and asked about possible solutions. One teacher wrote: "I have a student in my class this year who is always walking about and hitting other children. I wish to help him but his attention span is short. My concern is how to keep him purposefully occupied. He does not have good family support." Another noted: "I have three children with special needs (one autistic, two dyslexic) in my class of 37. I tend to give the three children lots of support during and outside of curriculum time, so much so that I worry my other students might think I am practicing favoritism of some sort. Do I let the other children know why? If I do, should I

do it openly in the presence of the three children with special needs?"

Need for Further Training

A few teachers asked about the availability of advanced level degree qualifications in special needs education at the university.

Discussion and Implications

The Training in Special Needs (TSN) policy initiative of the Ministry of Education, Singapore represents a significant national-level milestone in bridging the special needs gap in general education classrooms. When compared to literature on research that has been conducted on the concerns of general education teachers in the U.S. regarding inclusion, the concerns raised by the teacher participants in the TSN program are remarkably similar. For instance, many general education teachers in the U.S. are not optimistic, are uncertain of, or disagree with the benefits of inclusion (D'Alonzo, Giordano, & Vanleeuwen, 1997; Hammond & Ingalls, 2003), and do not feel as confident in their ability to manage tasks needed to support inclusive education (Buell, Hallam, Gamel-McCormick, & Scheer, 1999). Furthermore, many general educators have expressed the concern that meeting the needs of students with disabilities imposes additional demands on teachers' time and attention. Thus, the quality of education for students with and without disabilities may be compromised due to a lack of time, increased teacher stress and difficulties in classroom management, and rigid requirements associated with the general education curriculum (Biddle, 2006; D'Alonzo et al., 1997; Downing, Eichinger, & Williams, 1997; York & Tundidor, 1995). Other common concerns raised by general education teachers in the U.S. include lack of training, expertise, or resources to implement inclusion effectively (Scruggs & Mastropieri, 1996); the inability to address severe health and medical needs (York & Tundidor, 1995); limited access to necessary curricular materials; and insufficient preparation in planning and implementing instructional adaptations for students with disabilities (Biddle, 2006; Cook, Tankersley, Cook, & Landrum, 2000; Schumm & Vaughn, 1995). Other concerns included limited amount of time for collaborative planning and communication among staff members and/or special educators (Biddle, 2006; Buell et al., 1999; Hammond & Ingalls, 2003; Schumm & Vaughn, 1995; Scruggs & Mastropieri, 1996; York & Tundidor, 1995), larger class sizes (Biddle, 2006; Buell et al., 1999; Scruggs & Mastropieri, 1996; Soodak, Podell, & Lehman, 1998), and inadequate school commitment and support (Biddle, 2006; Buell et al., 1999; Hammond & Ingalls, 2003).

Unlike their U.S. counterparts, the primary school teachers in the TSN program were concerned about the identification and placement of students with disabilities. This concern shows that many general education teachers in Singapore are not equipped with the knowledge and skills to identify students with special needs in their classrooms. In addition, many general educators in the U.S. have reported few opportunities for collaborative planning with special educators (e.g., Hammond & Ingalls, 2003; Schumm & Vaughn, 1995). It is interesting to note that the TSN teachers did not raise the concern regarding the issue of collaboration with special educators as a means to implement inclusive education. One possible reason is that these primary school teachers were the first cohort of teachers in Singapore under the TSN initiative and that the teachers had little or no experience working with students with

disabilities and had not been introduced to the idea of working with special educators in general education settings.

The concerns raised by TSN participants are crucial, important issues worth serious examination and follow-up as the participants are the first cohort of teachers who will be teaching students with special needs in general education classes in Singapore. Through our work on the TSN program, several issues have emerged that are critical to the design and development of in-service teacher education programs in special needs education, both for Singapore and elsewhere.

Misperceptions and New Learning

The White Paper of the American Association of Colleges for Teacher Education (2002) asserts that for general educators to work effectively with children with and without special needs in general education schools, there is a need for significant shifts in teacher education programs. To do this, teachers must conceptualize their practice and develop their pedagogy with a vision that all students, including those with special learning needs, will learn to high standards in the classroom. Since beginning teachers in general education are unlikely to be experts, systematic support is needed for their continued learning, especially during the first two or three years of teaching.

The role of effective special needs teachers therefore demands not only an increased understanding of various types of disabilities, types of appropriate curricular and instructional modifications, as well as relevant field experience with students with special needs in the classroom, but more fundamentally, a well-grounded understanding that with knowledge, skills and positive dispositions, teachers can make a significant difference to help children with special needs succeed in the general education classroom. In the TSN program, some of the concerns of the teachers reflect individual misperceptions toward children with special needs. For example, there is a misperception that when a child with special needs is in the classroom, other children may be physically abused by the child with special needs. Another disturbing misperception written was that a child with ADHD is possessed by a fox's spirit and needs spiritual mediation. A review of studies of attitudes of general education teachers in the U.S. also revealed that a lack of knowledge of disabling conditions affected the ability of these teachers to accept students with disabilities, and that this increased teachers' anxiety and fear of individuals with differences (Avramidis, Bayliss, & Burden, 2000; Cook et al., 2000). Therefore, a better understanding of disabilities through well-conceptualized professional development courses would do much to dispel teachers' misperceptions about children with special needs.

Teacher Education and Empowerment

All teachers are committed to the education of all students, including children with special needs; however, the basis for their commitments vary greatly depending on their experience with this student population. Teachers may feel effective in inclusive classrooms if they have had opportunities to experience some success in these settings through training and education. The concerns of the majority of teachers in the TSN program are related to instructional and classroom management strategies. The central focus of a special needs teacher training program should therefore be on the day-to-day practicalities of helping teachers work effectively with children with special needs in the general education classroom. Important training needs

include collaborative consultation, cooperative teaching, teaming, strategies in dealing with behavior and discipline issues, differentiated instruction, and curriculum adaptation. Teacher education programs should also incorporate other key elements such as leadership, public relations, teacher as a change agent, collaboration, communication, and time management skills. In the more fundamental and long-term scheme of things, for teachers to effect sustained learning outcomes for students in any setting requires more than training; it requires that teachers feel empowered to apply new skills and competencies (Buell et al., 1999). Efforts to increase teachers' understanding of inclusive education and related issues are also likely to enhance confidence in teachers' ability to effect positive change in their students.

Support and Resources

In the TSN program, teachers highlighted a need for support and resources from schools and the larger community. In terms of challenges to resources, many teachers highlighted a large class size as a cause for concern as teachers often find it a tremendous challenge to work with a huge class comprising both students with and without special needs. One key consideration would be the use of technology in inclusive classrooms to help tackle the hurdles imposed by class ratios. Assistive educational technology is the theory and practice of design, development, utilization, management, and evaluation of processes and resources that are used to increase, maintain, or improve functional capabilities of individuals, with or without disabilities, for learning (Cavanaugh, 2002). Assistive technology has the capacity for increasing student independence, increasing participation in classroom activities, and simultaneously advancing academic standing for students with special needs, providing them with equal access to their school environment (Cavanaugh, 2002).

To help teachers understand why instructional reform is so important, it is important for schools to include teachers in decision-making issues, as far as it is feasible to do so. These include issues concerning classroom policies, allocation of school resources, student instructional planning, student grouping of one or more disability types in a class, as well as views about the nature and scope of specific in-service professional development that is needed.

Extending beyond the school, there is a need for close collaboration with the stakeholders and professionals in the field, for example, parent organizations and in this instance, the Ministry of Education (MOE), and designated schools under the TSN initiative to develop, evaluate, refine, and share best instructional practices. Moreover, collaborative research studies such as action research projects conducted between academic faculty in the university, MOE colleagues, and teachers in schools could serve to examine different inclusion models and instructional practices for teaching students with special needs in general education settings. In other words, closer university-stakeholder partnerships are critical in providing theory- and field-grounded, evidence-based practice that would contribute to, as well as shape, national policies on the effective inclusion of children with special needs in general education classrooms.

Worldwide, there is also a push for general educators to learn from special educators and vice versa so as to achieve greater understanding of what might be accomplished together that cannot otherwise be accomplished (e.g., American Association of Colleges for Teacher Education, 2002; deCourcy Hinds,

2002; Katsiyannis, Ellenburg, & Action, 2000; Wenglinsky, 2000). What this means is that special education teachers could be invited to engage in instructional co-planning and dialogue with general education teachers. In the U.S., there is increasing use of a collaborative teaching model in many inclusive classrooms wherein both a general education teacher and special education teacher share responsibility for planning lessons, providing instruction, and assessing student progress (Boudah, Schumaker, & Deshler, 1997; Dynak, Whitten, & Dynak, 1997; Pace, 2003). Particular attention, however, needs to be paid to identify the skills needed for positive collaboration experiences. A successful collaborative effort would help make teaching a generative process. Hence, the building of shared partnerships and commitment draw from both general and special education teacher preparation, and is grounded in the belief that children with special needs are to be found in every classroom.

Conclusion

This paper has presented and examined key concerns of individual in-service teachers in their quest to seek knowledge and understanding of theory and practice into inclusive education. These teachers' concerns serve as important guideposts in continued efforts to refine and develop programs and practices to meet the challenges and ideals of inclusive education.

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