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Inclusion in High-Achieving Singapore: Challenges of Building an Inclusive Society in Policy and Practice

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Abstract

Building an inclusive society in which all people can participate effectively and live together requires understanding inclusive education and its impact on the social order. As countries of different regions face the vast array of challenges unique to their educational systems, it becomes apparent that inclusive societies are intricately tied to social inclusion policy initiatives and developments in education. Governments are becoming increasingly aware of the need to review their educational systems as they attempt to define what an inclusive society is and how to make inclusion truly effective. Singapore is a unique example of a country that has the resources and the vision, but currently lacks an educational system designed to fully include individuals with special needs. Although Singaporean students consistently score near the top in science, math, and reading achievement on international assessments, many students with special needs still receive their education in schools separated from their mainstream peers. In 2004, Prime Minister Lee Hsien Loong discussed a new vision of Singapore becoming an inclusive society that embraces all individuals with special learning needs. In this manuscript, the authors provide a brief history of Singapore and its education system and explore how PM Lee's vision of an inclusive society has shaped practice and policy in Singapore schools in the last decade. Specific ideas and next steps for creating an inclusive Singapore for individuals with disabilities are discussed.

Keywords

inclusive society, inclusion, Singapore, education, special needs, social inclusion, education policy

Introduction

Building an inclusive society in which all people can participate effectively and live together requires understanding the importance of an inclusive educational system and its impact on development as a key principle to attain and sustain a quality education for all (UNESCO, 2009). As countries of different regions face the

vast array of challenges unique to their educational systems, it becomes apparent that inclusive societies are intricately tied to social

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inclusion policy initiatives and developments in education. Governments are becoming increasingly aware of the need to revisit their educational systems as they attempt to define what an inclusive society is and how to make inclusion truly effective (Opertti et al., 2013). In order to create inclusive educational systems, it is imperative to first acknowledge what *inclusion* means for society and for students in schools. The definition of inclusive education has long been debated (Ainscow, Dyson & Weiner, 2012), and it may be best to think of inclusive education as the foundation for building an inclusive society. In order to establish an inclusive perspective, it is important to also understand what does *not* constitute an inclusive education.

According to Opertti and colleagues (2013), inclusive education is not advocating for resources, basic infrastructure, technology or equipment, nor is it merely adjusting the curriculum to make learning easier, introducing new professional development for teachers, or requiring a class on students with special needs for pre-service teachers. Instead, Opertti, Walker, and Zhang (2013) frame their discussion on inclusive education around four core ideas that were developed and established by international governing bodies. The *first core idea* as indicated in the United Nations Declaration of Human Rights in 1948 views inclusion from a rights-based approach and posits that all individuals have the right to an education. Influenced by the 1994 Salamanca Statement and Framework for Action on Special Needs, the *second core idea* brought attention to creating optimal learning conditions for children categorized with special needs. Six years later at the World Education Forum in Dakar, Senegal, the definition of “Education for All” was expanded to include any individual who was

marginalized by the education system (*third core idea*). Finally, in current literature and policy, inclusive education not only includes improving the capabilities of entire education systems, but also emphasizes that these systems deliver a quality education for all (*fourth core idea*). Therefore, it is helpful to think of inclusive education as a framework that supports the teaching and learning of the skills and attitudes required to support a diverse population of learners. In addition, teachers and learners in inclusive environments have the opportunity to practice those skills and attitudes through interactions with a diverse population including learners with and without disabilities. These four core ideas should assist education leaders and policymakers in creating coherent and comprehensive systems (Halinen & Järvinen, 2008; Savolainen, 2009; Thuneberg et al., 2012).

Unfortunately, inclusive educational policies are often victim to long-standing attitudes and structures that inhibit and delay progress despite well-intentioned plans and public pleas. For example, inclusive policies and practices are often left to departments/divisions of special education and the focus is primarily on educating students with disabilities in mainstream schools (Amadio, 2009; Amadio & Opertti, 2011; Cedillo, Fletcher, & Contreras, 2009; Garcia-Huidobro & Corvalán, 2009; Opertti et al., 2013). In most parts of Asia, inclusive practices have been limited mainly to students identified as having special needs, generally those with physical and/or mental disabilities, as well as refugees (UNESCO-IBE, 2008; Zagoumenov, 2011). The Dakar conference of 2000 promoted the visualization of inclusive education as a dual-part process in which both equity and equality are prioritized.

The fact that more individuals with disabilities are receiving schooling is noteworthy, but it is also important that the schooling they receive is equal to their non-disabled peers and of high quality (Opertti et al., 2013). As the United States learned in the landmark case of *Brown vs. Board of Education* “separate but equal” may be satisfactory in theory but may lead to substandard practice (*Brown vs. Board*, 1954). Although it has been well-documented that exclusive education is rarely equal, equitable, or of high quality, scholars point out that inclusive policy is still not adopted or accepted by many educators and societies (Fuchs & Fuchs, 1994; Brantlinger, 1997; Sebba & Sachdev, 1997). In fact, many “educationalists resist the idea and some disability-focused organizations argue for separate and specialist services” (Opertti et al., 2013, p.166). The decision about what is equitable for students with disabilities is key to creating long-term policies and procedures (Roegiers, 2010; Opertti, 2011).

In this paper, we provide a brief history of Singapore and its education system, specifically the history of special education service delivery. We discuss current issues and challenges that face Singapore in becoming an inclusive society and offer some recommendations on how inclusive education can play a role in making Singapore a more inclusive society. We frame these challenges and opportunities under the umbrella of the five policy priorities that Opertti and colleagues (2013) identified as critical to the development of inclusive societies. These five priorities include (a) creating a common societal understanding of inclusive education, (b) promoting fundamental mindset changes, (c) restructuring schools to provide comprehensive support to all learners, (d) addressing expectations and needs of all learners through

an inclusive curriculum, and (e) empowering inclusive teachers to address the diversity of learners.

Education in Singapore

The global drive to promote inclusive education is progressively spreading across countries in the Asia-Pacific region (Forlin, 2010) and spurring governments to reconsider education policies that discriminate against children with special needs. This is especially true in a young nation like Singapore where the education system is continually evolving to keep up with the rapid globalization of the world (Tan, 2008).

Singapore’s Ministry of Education (MOE) is the governing body responsible for the formulation and implementation of education policies. The leadership in Singapore has constantly and consistently emphasized that the people of Singapore are its only natural resource (Gopinathan, 2012; Lim & Nam, 2000) and that the mission of the MOE is to shape young people who will, in turn, guide the future of the nation (MOE, 2015). As a result of the government’s focus on developing its people, the MOE has responded to the growing demands of a global economy with several initiatives. The “Thinking Schools, Learning Nation” initiative unveiled in 1997 resulted in a heavy focus on teacher training and professional development (Goh, 1997). Subsequent initiatives such as “Teach Less, Learn More” (MOE, 2005) and the current model for professional development, called “Teacher Growth Model” (MOE, 2012) emphasize the need for capacity building at all levels of the educational system. The “Teach Less, Learn More” initiative focused on helping teachers and schools to master the fundamentals of effective teaching so that students are engaged, learn with understanding, and are

developed holistically beyond solely preparing for tests and examinations (MOE, 2010). The Teacher Growth Model places a heavy emphasis on Personal Learning Communities (PLC's) within schools and situated professional development led by teachers themselves.

Singapore currently spends close to USD \$8 billion on education, accounting for more than 20% of total government expenditure (Ministry of Education, 2013). Starting with a focus on providing basic literacy for the masses in 1960's and 1970's, the socio-economic revolution in 1980's led to a focus on efficiency-driven education in which students attended schools based on their perceived aptitudes and abilities (Song Weng, Walker, & Rosenblatt, 2015). The priority placed on education has helped Singapore become one of the world's best performing educational systems (Learning Curve, 2015). Singapore is now recognized as a world leader in education as Singaporean students continually achieve high scores in mathematics, science and language in international comparisons such as the Program for International Student Assessment (PISA), Trends in International Mathematics and Science Study (TIMSS), and Progress in International Reading Literacy Study (PIRLS) according to the Organization for Economic Co-operation and Development (OECD) (OECD, 2011). Despite these rankings Singapore continues to practice a dual education system in which students with special needs are educated in separate environments (Lim & Nam, 2000).

History of Special Education in Singapore

After independence in 1965, the governmental education system in Singapore paid little attention to the education of those with disabilities or special needs. To fill the need, charitable organizations created special schools that provided more intensive instruction and provision for students with disabilities (Lim & Nam, 2000; Poon, Musti-Rao, & Wettasinghe, 2013). As the nation continued to flourish in the 1980's and 1990's, more attention was paid to the academic success Singaporean students were having and an unplanned but ongoing separation occurred between those who learned in traditional ways and those that did not. Slowly, Singapore formed a dual education system that is now divided into two categories: mainstream schools and special schools (Poon et al., 2013). Mainstream schools are traditionally comprised of typically developing students while special schools are responsible for educating students with disabilities. The MOE and National Council of Social Services (NCSS) currently support 13 Volunteer Welfare Organizations (VWO) in the administration of 20 special schools (MOE, 2015a). As shown in Table 1, the special schools differ in programs and curriculum designed to cater to distinct disability groups (e.g., autism, visual impairment, multiple disabilities). In 2012, the MOE released *Living, Learning, and Working in the 21st Century: A Special Education Curriculum Framework* (MOE, 2012) providing special schools with a common curricular framework for service delivery. Use of the framework is not mandated, however, and teachers and schools can use a separate curriculum or plan their own based on student needs.

Table 1
Special Schools in Singapore

Voluntary Welfare Organisation (VWO)	School	Disability Groups	Age Group
Association for Persons with Special Needs (APSN)	Chaoyang School	Mild Intellectual Disability; Mild Autism	7-12 years old
	Delta Senior School		7- 18/21 years old
	Katong School		7 - 18 years old
	Tanglin School		13 - 18 years old
Metta Welfare Association	Metta School	Mild Intellectual Disability; Mild Autism	7 - 18/21 years old
Presbyterian Community Services	Grace Orchard School		7 - 18 years old
Movement for the Intellectually Disabled of Singapore (MINDS)	Fernvale Gardens School	Moderate Intellectual Disability; Autism	7 - 18 years old
	Lee Kong Chian Gardens School		
	Towner Gardens School		
	Woodlands Gardens School		
Asian Women's Welfare Association (AWWA)	AWWA School	Multiple Disabilities; Autism	7 - 18 years old
Rainbow Centre	Rainbow Centre - Margaret Drive School		
	Rainbow Centre - Yishun Park School		
Cerebral Palsy Alliance of Singapore (CPAS)	Cerebral Palsy Alliance Singapore School (CPASS)	Multiple Disabilities	7 - 18 years old
Autism Resource Centre (Singapore)	Pathlight School	Autism	7 - 18/21 years old
Autism Association (Singapore)	Eden School		7 - 18 years old
Saint Andrew's Mission Hospital (SAMH)	St Andrew's Autism School		7 - 18 years old
Canossian Daughters of Charity	Canossian School	Hearing Impairment	7 - 14 years old
Singapore Association of the Visually Handicapped (SAVH)	Lighthouse School	Visual Impairment; Autism; Hearing Impairment	7 - 18 years old
Singapore Association for the Deaf	Singapore School for the Deaf	Hearing Impairment	7 - 18 years old

Table 1

Singapore's Move to Inclusion

The most recent change in Singapore's journey to inclusion can be attributed to two major events in this millennium (Poon et al., 2013). First, Prime Minister Lee Hsien Loong decreed "all communities will progress and no one will be left behind... We must also have a place in our hearts and our lives for the disabled, who are our brothers and sisters too" (Lee, 2004). Although a dual system in Singapore still exists, PM Lee's declaration generated increased discussion about how to accommodate students with special needs in mainstream schools. The MOE responded by focusing on areas such as teacher awareness, compulsory pre-service training on special needs and increasing the number of specialists in schools. The Prime Minister's decree encouraged a shift from the practice of restricted learning environments for students with special needs to a more open and conscientious mainstream system (Nonis, 2006).

The second major event contributing to Singapore's pragmatic move to an inclusive society occurred when the 2007-2011 Enabling Masterplan was released (Steering Committee on the Enabling Masterplan, 2007). The masterplan made six key recommendations for special education. These recommendations included: (a) the MOE taking over both early intervention and special education, (b) a more purposeful and deliberate assimilation of students with special needs into educational settings that integrate the dual education system, (c) the development of better prepared schools and staff, (d) increased funding of support services such as sports groups, volunteer organizations, and other community services, (e) improved delivery of education, support, and training to empower families and caregivers, and (f) a more intentional focus on transition planning and management within schools. In summary, the 2007 Enabling

Masterplan ensured that human and financial resources were better dedicated to early intervention, to support for teachers and caregivers, and to transition planning – all critical areas for creating an inclusive society and ensuring that individuals with disabilities have a productive and beneficial future for both themselves and society.

The move to inclusion resulted in increased support for students identified with disabilities in mainstream schools. The National Institute of Education was contracted to conduct both the Teachers Trained in Special Needs (TSN) and the Allied Educator-Learning and Behavioral Support (AED-LBS) programs. The AED-LBS Program, launched in 2004 is comprised of a one-year training for individuals interested in supporting teachers in the classroom. The TSN program was launched by the Ministry of Education in 2005. The TSN program requires 10% of primary teachers and 20% of secondary teachers from mainstream schools to complete a three-course sequence over an academic year, to help students with learning disabilities (MOE, 2015b). Each course lasts three full days and is fully paid for by the Ministry. However, the dual education system still exists and it is important to acknowledge the issues surrounding this system and the challenges it poses to making Singapore an inclusive society.

Issues and Challenges to Inclusive Education in Singapore

Ainscow and Miles (2008) contended that inclusive education requires mainstream schools to have an inclusive orientation, recognizing that no differentiation should be made among students. The same sentiment resonated at the 2008 International Conference on Education, where over 100 Ministers of Education and 153 countries endorsed inclusive education "as a

general guiding principle to strengthen education for sustainable development, lifelong learning for all and equal access of all levels of society to learning opportunities” (UNESCO-IBE, 2008, p. 3). More recently, the UNESCO Education For All Monitoring Report (UNESCO, 2010) emphasized three broad sets of policies for guiding inclusive education policy including: accessibility and affordability, learning environment, and entitlements and opportunities as benchmarks for integrating inclusive educational policy (UNESCO, 2010). Although these policies are helpful, there are also many issues and challenges when viewing inclusive education as a pathway to inclusive societies. The issues and challenges that are most prevalent in Singapore include: (a) the cultural and institutional barriers that prevent the democratization of educational opportunities, (b) a curricular and pedagogical focus on standardized assessment scores, and (c) a teacher training program that does not provide adequate training on supporting and developing individual learners within the classroom community for pre-service teachers entering the profession. A closer look and understanding of these challenges is important for moving forward.

Cultural and Institutional Barriers

As Lim and Nam (2000) point out, the dual system in Singapore is a significant barrier to the integration of people with disabilities. Although many of the policies and procedures implemented in Singapore were meant to help build a country that could flourish and develop its human capital, these policies minimized opportunities and excluded individuals with disabilities from mainstream education. For example, exempting students from the compulsory mainstream education and allowing them to attend special schools only deepened the divide between mainstream education and special education (Poon et al., 2013). In

addition to these existing institutional barriers, cultural beliefs and attitudes towards individuals with disabilities exacerbated the problem. Singapore prides itself on having a society in which people from four major races – Chinese, Malay, Indian, and Eurasian – live harmoniously. Despite such rich diversity, “the most troublesome barriers to inclusion come from entrenched values, attitudes and behaviors that disdain and/or disregard the idea of a just society; that do not recognize or accept diversity as key foundation of a more inclusive and cohesive society, and that do not consider the scope and implications of glaring social and educational gaps as a priority issue” (Opertti et al., 2013, p. 160).

Lim and Choo (2002) pointed out that disability, in Singapore, is considered by some as a personal tragedy and a private burden to bear. Traditionally, the care of people with disability is considered the responsibility of the family with institutionalization as a secondary alternative (Komardjaja, 2001). Integration of people with disabilities in mainstream society can play a critical role in overcoming these institutional and cultural barriers. For example, Thaver, Lim, and Liao (2014) reported that pre-service teachers with training in special needs and those with the most contact with people with disabilities displayed significantly more positive attitudes towards inclusive education than teachers without training or experience working with people with disabilities.

Inclusive societies are built when institutional barriers, such as the dual education system, and cultural barriers, such as beliefs and attitudes, are overcome by thoughtful, deliberate planning. With gradual changes brought about by the government, Singapore joined 132 other countries in committing to equal rights and dignity for people with disabilities through the United Nations Convention on the Rights of People with Disabilities (Ministry of Social and Family Development, 2013). While this is

certainly progress, in order for attitudes to change it is important to begin exposing children early to those with disabilities through an inclusive school system, and continuing on to vocational, leisure and recreational, and other environments.

Curricular and Supporting Barriers for Students in Inclusive Schools

National exams are part of the compulsory education in Singapore. Singaporeans take great pride in national examination results and there is a sense of overwhelming pressure for the children, teachers, and parents when exams are administered each year (Ang & Huan, 2006). Although mainstream teachers are encouraged and willing to support students with special needs in classes, the emphasis on covering curricular content in preparation for the national exams does not provide adequate support to students with special needs. Whereas mainstream teachers are being trained to work with students with special needs as part of the Teachers Trained in Special Needs (TSN) program, large class sizes (i.e., 1 teacher: 35-40 students) do not provide the academic and learning supports students with disabilities need to succeed in mainstream schools. Progress has been made in the introduction of accommodations for examinations (extra time, larger font, use of keyboards, etc.); however, there is still a stigma associated with using these accommodations as notations are made in the student transcripts that results on the exam were obtained under special conditions (Poon et al., 2013). Even though mainstream schools are thought to be “inclusive”, what “inclusive” means is debatable when students with disabilities are not supported with the daily supports, personnel, and pedagogy needed to succeed in a system based on high-stakes examinations.

Teacher Training

Another way to understand the disparity between the education of mainstream students and students with special needs is to examine teacher preparation and training in Singaporean schools. Admission requirements to the National Institute of Education (NIE), where all teachers are trained, are very high for a mainstream teacher. There are three ways to become a mainstream teacher: (a) receive a 2-3 year diploma, (b) complete the one-year postgraduate diploma in education (PGDE) if already a bachelor's degree holder, or (c) receive a four year bachelor's degree (B.A. or B.S.) in education. All prospective mainstream teachers are strongly encouraged to pursue a bachelor's degree.

Conversely, the path to becoming a special educator is not nearly as difficult or comprehensive. An individual who wants to teach students with special needs can either become a Special School Teacher (SST) working in a special school as a lead teacher or an Allied Educator - Learning and Behavioral Support (AED-LBS) at a mainstream school. Together with mainstream teachers who have been trained in the TSN program, AED-LBSs support students with mild special needs (e.g. dyslexia, autism spectrum disorders, and Attention Deficit Hyperactive Disorder) studying in mainstream schools (MOE, 2014). In either case, a Diploma in Special Education (DISE) via NIE's DISE program is required. The DISE coursework focuses on child development, pedagogy, and understanding high incidence disabilities. Graduates of the DISE program have the skills necessary for identifying disabilities, diagnosing and assessing strengths and weaknesses of students, and planning interventions. However, the DISE is only one year long and is the only qualification MOE requires to teach students with special needs. In essence, for students who need the most support, teachers are required to only complete

one quarter to one third of the training received by their mainstream counterparts.

Another way to examine the level of support offered to students with disabilities in Singapore is to consider resources to support the early identification of a disability. The Child Development Program has increased the number of students in preschools who are identified as having a disability (Ho, 2007), but there is a shortage of trained early childhood educators who are available to work with young children with special needs. In addition, a waiting list to be assessed remains for school age children due to the limited number of MOE educational psychologists available to provide the free diagnostic tests (Poon et al., 2013). Typically, a practicing psychologist from the public or private sector conducts psychoeducational testing and determines disability diagnosis using evidence-based assessments. The availability of professionals to identify and diagnose individuals with special needs in the public or private sector can be limited and a challenge, especially for families who cannot afford to pay for a private sector psychologist. Efforts for earlier screening of students in the early elementary years and timely diagnosis is needed. In order to build inclusive schools, it is important that the training provided for teachers and support personnel for teachers with disabilities is equal to that of mainstream teachers. To ensure equality, the number of qualified special educators must be sufficient and the rigor and quality of the training they receive must be equivalent to mainstream teachers.

Inclusive Solutions and Ideas

Singapore is making progress and is continuing to move forward in its quest for an inclusive society. As the education system continues to evolve, the five policy suggestions by Opertti and colleagues (2013) are important to consider. We will use these five priorities as the starting point

for suggestions on how to create a more inclusive environment in Singapore.

Creating a Common Societal Understanding of Inclusive Education

As Opertti and colleagues (2013) asserted, it is important for countries like Singapore to build a common societal and cultural understanding of inclusive education in order to democratize education. Foreman (2001) stated that inclusion involves educating students with, or who are at-risk for, learning disabilities in the same educational setting as their non-disabled peers. In order to create an inclusive educational system and help society to better understand inclusivity, the first recommendation is to eliminate special schools and, instead, provide a continuum of services within the mainstream school system under the management of MOE. Creating a cohesive system where all students are educated together could include a combination of resources including personnel, funding, and space allocation, among others. It is clear that a dual system of education where students with disabilities are excluded from the mainstream system, delays the formation of an inclusive society. A broadened conceptualization of inclusive education includes a completely different perspective regarding those who learn differently and accepts that the fundamental problems reside in the educational system itself, rather than in children who do not fit into the system (Opertti et al., 2013).

Promoting Fundamental Mindset Changes

As discussed, entrenched values, outlooks, and actions remain the biggest barrier to creating an inclusive environment. Individuals in inclusive societies accept diversity as a key foundation for a unified culture in which social and educational gaps are filled with understanding, contact, and compassion. One step in helping PM Lee and Singapore's inclusive vision to become a reality

is to offer more employment options for those with disabilities. Data are not reported on the employment of individuals with disabilities in Singapore but anecdotal accounts from those in the field report that employment is dismally low and that the only opportunities for individuals with disabilities are in sheltered workspaces. One rarely sees individuals with more severe disabilities in mainstream society including public transport, shopping malls, and public areas. As PM Lee noted, all Singaporeans are brothers and sisters and it is important that individuals with disabilities are given the opportunity to engage in work and play with their fellow Singaporeans.

Restructuring Schools to Provide Comprehensive Support to all Learners

Inclusive education emphasizes the need to support the personalization of education and overhauling the traditional one-size-fits-all approach. Therefore, as schools become inclusive and special schools are eliminated, it is important to offer a continuum of services to meet the needs of all learners- including those with and without disabilities. Specific examples include supports for the following:

Pupils' Welfare

Pupils' welfare includes the physical, psychological, and social well-being of all students. With a high-stakes, exam-driven society, the number of children seeking psychiatric help has risen dramatically (Poon, C.H., 2012). There have been reports of children as young as 10, 11, and 12 years-old committing suicide after the results of the exams. Students who fail the Primary School Leaving Exam, commonly referred to as the PSLE, for two years in a row are routed into a vocational track at the age of ten. However, the number of these students who failed because a disability went undiagnosed, or because of the lack of comprehensive support in mainstream schools is

unclear. Providing more comprehensive support for the physical, psychological, and social well-being of all students may help to create a more inclusive society where all individuals are appreciated for who they are as people beyond their academic performance.

Physical Infrastructure

Inclusive schools have facilities that accommodate children with disabilities and provide barrier-free access in classrooms. Many Singapore schools are in multi-level buildings. It is important that parents and students are informed about the facilities available and teachers are trained in how to create a safe, accessible classroom for all learners.

Early Support

Singapore has recently launched important and impactful initiatives focused on early childhood education, providing early childhood education to all children, and to recognizing high-quality early childhood educators (Early Childhood Development Agency, 2014). One example includes KidSTART, a program designed to proactively identify low-income and vulnerable children and provide them with early access to health, learning and developmental support before they turn the age of six (Early Childhood Development Agency, 2016). Compulsory education begins for children above six years old and is provided by schools managed or funded by the MOE. Schools should provide early intervention supports for young children and for students who begin to face learning challenges as soon as those challenges arise. It is important that Singapore also trains early childhood educators to identify and support students who may have disabilities as early identification is a key to supporting these students academically and socially.

Specialist Provision

All students with special needs should have ready access to highly qualified special education teachers. Specifically, existing special schools could be transformed into inclusive education resource centers to serve mainstream schools in the neighborhood. The transformation of these resources would allow qualified special educators and the resources used in special schools to be available to all learners.

Addressing Expectations and Needs of all Learners Through an Inclusive Curriculum

An inclusive curriculum does not lower standards but it is uncommonly flexible about how students reach those standards and is accommodating to all learners. Inclusive curriculums encourage inclusive pedagogy that creates options for students to choose “how, where, and with whom they learn” (Florian & Black-Hawkins, 2010, p. 821) and respectfully accommodate to a student’s needs. As discussed by Opertti et al. (2013), it is important that standards are not lowered for students, and that a high quality education is offered to all students regardless of their individual differences. Inclusive curriculums focus on providing a framework for learners that does not “track” them, but instead allows an individual and his family to choose a path that will be most beneficial to them. *The Living, Learning, and Working in the 21st Century* currently offered, but not mandated, by the MOE may be most appropriate for any number of students. The mainstream curriculum is very demanding academically and may not be useful to all students. Combining the curricula and extending course offerings so that all students and families can select which courses and supports are most appropriate for the student is critical to establishing an inclusive learning environment.

Empowering Inclusive Teachers to Address the Diversity of Learners

Teachers “make policy” in class as their decisions determine what the class experiences (Fulcher, 1999). It is imperative that policymakers recognize the impact teachers’ perceptions and attitudes can have on student achievement, behavior, and self-esteem (Brophy & Good, 1974). However, teachers cannot deliver a new paradigm of inclusion unless they are informed about and convinced of the rationale, aim, strategies, and content of inclusive education. To enable teachers to make appropriate pedagogical decisions for individuals with disabilities, they need to be more fully prepared before entering the teaching profession. Instead of only focusing on retroactive TSN training for mainstream teachers, mainstream teacher preparation should include substantial and robust coursework on disability and pedagogy.

In addition, special educators must be held to the same standards and have the same opportunities as mainstream teachers. Currently, it is possible to become a special educator in a special school or to become a support teacher in a mainstream school with one year of training. The current one-year preparation program for special educators is only able to provide introductory knowledge at best and the disparity between qualification, pay scale, and in-service training between special educators and mainstream educators reinforces the idea that teachers of students with disabilities are not as valued as mainstream teachers. After serving time in the field, mainstream teachers are provided a range of opportunities for furthering their education and professional development including funding programs for further degrees. Conversely, the options for special educators to receive further training are limited and special educators are only eligible to receive funding upon written request on a case-by-case basis. Highly-

qualified special educators can support students with high needs and offer mainstream teachers support as co-teachers in the classroom. Requiring a bachelor's in special education and including classes about students with special needs for mainstream educators would help to improve the quality of all students in Singapore's schools.

Conclusion

As an educational leader in Southeast Asia, Singapore has the opportunity to lead by example. Due to financial stability, a sterling reputation in education, and the country's small size, Singapore has the potential to expand its role as a world leader in education by prioritizing inclusive education. However, a national, school-wide collaborative approach is necessary in which special education is recognized as a part of the general education framework, with an emphasis on collaboration between professionals and families of students with disabilities or other special educational needs (Brownell, Ross, Colon, & McCallum, 2005). While moving to a fully inclusive school system would be a massive shift and would take time, it is necessary for students with and without disabilities to grow up, play, and learn together if we hope to create an inclusive society. In order for inclusion to become a reality, Moore (2009) stated that individual prejudices against persons with disabilities have to be eradicated. One way to help eradicate these prejudices is for students to learn about each other through the interaction that well-designed school settings can provide.

As Lim, Thaver, and Slee (2008) describe, the inclusive rhetoric used by Singapore provides a strong rationale for schools to be more inclusive of children with disabilities. The challenge is changing the dream into a reality that becomes part of daily practice across all sectors and aspects of Singaporean life (Lim et al., 2008). Progress towards inclusive education

will only take place when policymakers and educators understand the complexity of the four connected core principles of inclusion: that all individuals have a right to education; that optimal learning conditions must be created for learners with special needs; that special needs includes all children marginalized by the educational system; and that school systems should provide quality education for all. These four interwoven principles impact the implementation of policies and strategies. Countries planning to become more inclusive must intentionally help institutional structures, economic policies, and cultural mindsets evolve (Slee, 2008). An inclusive society is difficult to create when the youngest members of society are separated beginning in the earliest years of their education. Therefore, as Singapore continues to build a society in which no one is left behind, an important next step is to begin including all students in the mainstream system and to support both those with and those without disabilities accordingly.

References

- Ainscow, M., Dyson, A., & Weiner, S. (2012). *From Exclusion to Inclusion. A review of international literature on ways of responding to students with special needs in schools*. Berkshire: CfBT.
- Ainscow, M., & Miles, S. (2008). Making education for all inclusive: Where next? *Prospects*, 38(1), 15–34.
- Amadio, M. (2009). Inclusive education in Latin America and the Caribbean: Exploratory analysis of the National Reports presented at the 2008 International Conference on Education. *Prospects*, 39(3), 293–305.
- Amadio, M., & Opertti, R. (2011). Inclusive education, paradigm shifts and renewed agendas in Latin America. In *Interregional and regional perspectives on inclusive education: Follow-up of the 48th session of the International Conference on Education* (pp. 108–123). Geneva, Switzerland: United Nations Educational, Scientific and Cultural Organization & International Bureau of Education: UNESCO IBE. (This article has been adapted from an original Spanish text, published in Davila, P., Naya, L. (Eds.). (2010). *Infancia, Derechos y Educacio ´n en Ame ´rica Latina* [Childhood, Rights and Education in Latin America]. Donostia, EREIN)

- Ang, R. & Huan, V. (2006). Academic Expectations Stress Inventory Development, Factor Analysis, Reliability, and Validity. *Educational and Psychological Measurement*, 66(3), 522-539. Retrieved from <http://epm.sagepub.com.libproxy.nie.edu.sg/content/66/3/522.full.pdf+html>
- Brantlinger, E. (1997). Using ideology: Cases of non-recognition of the politics of research and practice in special education. *Review of Educational Research*, 67(4), 425-459.
- Brophy, J. E., & Good, T. L. (1974). *Teacher-student relationships: Causes and consequences*. New York, NY: Holt, Rinehart & Winston.
- Brown v. Board of Education, 347 U.S. 483 (1954).
- Brownell, M. T., Ross, D. D., Colón, E. P., & McCallum, C. L. (2005). Critical features of special education teacher preparation a comparison with general teacher education. *The Journal of Special Education*, 38(4), 242-252.
- Cedillo, I., Fletcher, T., & Contreras, S. (2009). Avances y retos de la educación inclusiva en Latinoamérica [Advances and challenges in inclusive education in Latin America]. In M. A. Casanova & H. J. Rodríguez (Eds.), *La inclusión educativa, un horizonte de posibilidades* [Inclusive education, a horizon of possibilities]. Madrid, Spain: La Muralla S.A.
- Early Childhood Development Agency. (2014). New initiatives to develop and recognize early childhood professionals at each stage of their careers [Press release]. Retrieved from <https://www.ecda.gov.sg/PressReleases/Pages/New-Initiatives-To-Develop-And-Recognise-Early-Childhood-Professionals-At-Each-Stage-Of-Their-Careers-.aspx>
- Early Childhood Development Agency. (2016). 1,000 low-income and vulnerable children to benefit from pilot scheme that coordinates, strengthens, and monitors support. [Press release]. Retrieved from <https://www.ecda.gov.sg/pages/%E2%80%8Bhttps://www.ecda.gov.sg/PressReleases/Pages/LOW-INCOME-AND-VULNERABLE-CHILDREN-TO-BENEFIT.aspx>
- Florian, L., & Black-Hawkins, K. (2010). Exploring inclusive pedagogy. *British Educational Research Journal*, 37(5), 813-828.
- Forlin, C. (2010). Reframing teacher education for inclusion. In C. Forlin (Ed.), *Teacher education for inclusion: Changing paradigms and innovative approaches* (pp. 3-12). New York, NY: Routledge.
- Fuchs, D., & Fuchs, L. (1994). Inclusive schools movement and the radicalisation of special education reform. *Exceptional Children*, 60(4), 294-309.
- Fulcher, G. (1999). *Disabling policies? A comparative approach to education policy and disability*. Sheffield, UK: Philip Armstrong.
- Garcia-Huidobro, E., & Corvalán, J. (2009). Barriers that prevent the achievement of inclusive democratic education. *Prospects*, 39(3), 239-250.
- Goh, C. T. (1997). Speech by Prime Minister Goh Chok Tong at the opening of the 7th International Conference on Thinking", Monday, June 2, 1997, at 9.00 am at the Suntec City Convention Centre Ballroom. Retrieved from <http://www.moe.gov.sg/media/speeches/1997/020697.htm>.
- Halinen, I., & Järvinen, R. (2008). Towards inclusive education: the case of Finland. *Prospects*, 38(1), 77-97.
- Ho, L.-Y. (2007). The Child Development Program in Singapore 1988-2007. *Annals of the Academy of Medicine*, 36, 898-910.
- Komardjaja, I. (2001). New cultural geographies of disability: Asian values and the accessibility ideal. *Social & Cultural Geography*, 2, 77-86. DOI: 10.1080/14649360020028285.
- Learning Curve. (2015). *Index of cognitive skills and educational attainment*. Retrieved from <http://thelearningcurve.pearson.com/index/index-ranking>
- Lee, H. L. (2004). *Let's Shape Our Future Together*. Swearing in Speech by Prime Minister. Lectured conducted from Singapore. Retrieved from http://www.mfa.gov.sg/content/mfa/overseasmission/tokyo/press_statements_speeches/2004/200408/press_200408_5.html
- Lee, M. N., Abdullah, Y., & Mey, S. C. (2011). Employment of People with Disabilities in Malaysia: Drivers and Inhibitors. *International Journal of Special Education*, 26(1), 112-124.
- Lim, L. & Choo, L. H. (2002). Disability and education in Singapore: What are our implicit theories? In A. G. Tan & L. C. Law (Eds.), *Psychology in contexts: A perspective from the South East Asian societies* (pp. 145-163). Singapore: LIngzi Media Pte Ltd.
- Lim, L., & Nam, S. S. (2000). Special education in Singapore. *The Journal of Special Education*, 34(2), 104-109. Retrieved from <http://search.proquest.com/docview/19470211?accountid=28158>
- Lim, L. Thaver, & Slee, R. (2008). *Exploring disability in Singapore: A personal learning journey*. Singapore: McGraw-Hill.
- Ministry of Education (MOE). (1988). *Report of the Advisory Council on the Disabled* (November, 1988). Opportunities for the disabled. Singapore. Singapore: Ministry of Community Development. Retrieved from https://repository.nie.edu.sg/bitstream/10497/11565/1/ASCD_Review-12-2-27_a.pdf

- Ministry of Education (MOE). (2004). *Enhancing support for children with special needs*. Retrieved from <http://www.moe.gov.sg/media/press/2004/pr20040918.htm>
- Ministry of Education (MOE). (2010). *Parliamentary replies: Teach less, learn more*. Retrieved from <http://www.moe.gov.sg/media/parliamentary-replies/2010/04/teach-less-learn-more.php>
- Ministry of Education (MOE). (2012). *Living, learning, & working in the 21st century: Special education curriculum framework*. Singapore: Ministry of Education.
- Ministry of Education (MOE). (2013). *Parliamentary replies: Government expenditures on education*. Retrieved from <http://www.moe.gov.sg/media/parliamentary-replies/2013/10/government-expenditure-on-education.php>
- Ministry of Education (MOE). (2014). *Support for children with special needs*. Retrieved from <http://www.moe.gov.sg/education/programmes/support-for-children-special-needs/#posted-in-aed>
- Ministry of Education (MOE). (2015a). *List of special education schools*. Retrieved from <http://www.moe.gov.sg/education/special-education/schoollist/>
- Ministry of Education (MOE). (2015b). *Resources to support mainstream students with special needs*. Retrieved from <http://www.moe.gov.sg/education/programmes/support-for-children-special-needs/>
- Ministry of Social and Family Development. (2013). Singapore ratifies UN Convention on the Rights of Persons with Disabilities (UNCRPD). Retrieved from <http://app.msf.gov.sg/Press-Room/Singapore-Ratifies-UNCRPD>
- Musti-Rao, S., Hawkins, R. O., & Tan, C. (2011). A practitioner's guide to consultation and problem solving in inclusive settings. *Teaching Exceptional Children*, 44(1), 18-26. Retrieved from <http://search.proquest.com/docview/887546631?accountid=28158>
- Moore, T. (2009). The inclusion agenda in early childhood services: Evidence, policy and practice. In *Universal Access to Early Childhood Education: Department of Education and Early Childhood Development Shared Learning Forum*. Victoria, Australia: Centre for Community Child Health, The Royal Children's Hospital.
- Nonis, K. P. (2006). Integrating children with special needs: Singapore preschool teachers share their feelings: A preliminary investigation. *The Journal of the International Association of Special Education* 7(1), 4 -10.
- Opertti, R. (2011). Cambiar las miradas y los movimientos en Educación: ventanas de oportunidades para el Uruguay [*Changing the perspectives and the movements in education: window of opportunities for Uruguay*]. Montevideo: UNFPA/Rumbos.
- Opertti, R., Walker, Z., & Zhang, Y. (2013). The current state of inclusive education around the world. In Florian, L. (2013) *SAGE Handbook of Special Education* (2nd ed.). London: SAGE.
- Organization for Economic Co-operation and Development (OECD). (2011). *Strong performers and successful reformers in education: Lessons from PISA for the United States*. Paris: OECD Publishing.
- Poon C.H. (2012, November 8). More children get early help with mental health issues. *The Straits Times*. Retrieved from <http://yourhealth.asiaone.com/content/more-children-get-early-help-mental-health-issues#sthash.ZBQ0Ur2p.dpuf>
- Poon, K., Musti-Rao, S., & Wettasinghe, M., (2013). Special education in singapore: History, trends, and future directions. *Intervention in School and Clinic*, 49(1), 59. Retrieved from <http://search.proquest.com/docview/1419773970?accountid=28158>
- Roegiers, X. (2010). *Pedagogy of integration. Education and training systems at the heart of our societies*. Brussels, Belgium: DeBoeck University.
- Sathisan, V. (2013). Singapore's ratification of the UN convention on the rights of persons with disabilities. *Journal of East Asia & International Law*, 6, 600.
- Savolainen, H. (2009). Responding to diversity and striving for excellence: The case of Finland. *Prospects*, 39(3), 281-292.
- Sebba, J., & Sachdev, D. (1997). *What works in inclusive education*. Ilford, UK: Barnardos.
- Singapore Democrats. (2014, May 6). Why do we do this to our children? Retrieved from http://yoursdp.org/news/why_do_we_do_this_to_our_children/2014-05-06-5810
- Slee, R. (2008). Beyond special and regular schooling? An inclusive education reform agenda. *International Studies in Sociology of Education*, 18(2), 99-116. Retrieved from <http://www.tandfonline.com.libproxy.nie.edu.sg/doi/pdf/10.1080/09620210802351342>
- Song Weng, C., Walker, Z., & Rosenblatt, K. (2015). Special education teachers' attitudes toward including students with SEN in mainstream primary schools in Singapore. *Asia Pacific Journal of Developmental Differences*, 1(2), 190-201. doi: 10.3850/S2345734114000043
- Steering Committee on the Enabling Masterplan (2007). Report on the Enabling Masterplan 2007-2011.

- Retrieved from
<http://www.mcys.gov.sg/enablingmasterplan/mainreport.html>
- Tan, C. (2008). Globalisation, the Singapore state and educational reforms: towards performativity. *Education, Knowledge and Economy*, 2(2), 111-120, DOI: 10.1080/17496890802223619
- Thaver, T., Lim, L., & Liao, A. (2014). Teacher variables as predictors of Singaporean pre-service teachers' attitudes toward inclusive education. *European Journal of Research on Social Studies*, 1(1), 1-8.
- Thuneberg, H., Hautamäki, J., Vainikainen, M., Ahtianen, R., Hilasvuori, T., & Lintuvuori, M. (2012). *Implementation of the special education strategy (2007) and the Basic Education Act (2011) in Finland, a follow-up study*. Rovaniemi, Lapland, Finland: University of Lapland.
- UNESCO. (1994). *The Salamanca Statement and Framework for Action on Special Needs Education*. Paris, France: UNESCO.
- UNESCO-IBE. (2008). *Conclusions and recommendations of the 48th session of the ICE ED/BIE/CONFINTED 48/5*. Geneva, Switzerland: UNESCO. Retrieved from
http://www.ibe.unesco.org/fileadmin/user_upload/Policy_Dialogue/48th_ICE/CONFINTED_48-5_Conclusions_english.pdf
- UNESCO. (2009). Policy guidelines on inclusion in education. Paris: UNESCO.
<http://unesdoc.unesco.org/images/0017/001778/177849e.pdf>.
- UNESCO. (2010). *EFA Global Monitoring Report 2010 Reaching the marginalized*. Paris, France: Oxford University Press.
- Wong-Ratcliff, M., & Ho, K. K. (2011). Can Integrated Education Meet the Needs of Students with SEN?. *New Horizons in Education*, 59(2), 101-115.
- Zagoumenov, I. (2011). Broadening the concept of inclusive education in the Commonwealth of Independent States. In: *Interregional and Regional Perspectives on Inclusive Education: Follow-up of the 48th session of the International Conference on Education* (pp. 85-93). Geneva: UNESCO IBE.

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