

Special Education Personnel Preparation in Singapore

AUTHORS

Levan Lim

Thana Thaver

Pek Ru Loh

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ABSTRACT

Special education in Singapore has evolved considerably during the past two decades with greater enrollments of students with special educational needs in regular mainstream schools. This progressive transformation in Singapore's education towards the inclusion of students with special needs in mainstream classes has been accompanied by concomitant changes in teacher preparation programs for both general and special education teachers and professionals. This article situates and describes special education in Singapore and its increasing role in partnering with mainstream education within Singapore's socio-historical context and evolution as a nation since independence. Current issues related to special education and its expanding role in preparing teachers and related professionals for working with students with special educational needs in both mainstream and special schools are discussed with implications raised for future directions.

KEYWORDS

Disabilities, personnel preparation, Singapore, special education, teacher education

Singapore is a small island country in Southeast Asia located on the north of the equator at the southern tip of the Malayan peninsula between Malaysia and Indonesia. Described as “the world’s only fully functioning city-state” (The Economist, 2015) with full sovereignty since its independence in 1965, Singapore is one of the most densely populated countries in the world with 6 million people in a total land area of about 734 square kilometers (285 square miles), which is almost a quarter of Rhode Island, the smallest state in America or less than half the size of London, England. Its favorable position at the crossroads for trade and commerce between the West and the East has drawn people from near and far to settle into what is now one of the world’s most peaceful, harmonious, and tolerant multiethnic, multicultural, multilingual, and multireligious societies (Global Finance, 2024; Miner, 2023). Singapore’s diverse citizenry is comprised of four main ethnic groups: Chinese, Malay, Indian and Eurasian, and there are four official languages that represent them and Singapore’s colonial British heritage, namely, Mandarin, Malay, Tamil, and English, with English being the lingua franca in society and medium of instruction in schools (SG101, 2024).

Singapore’s ascent from third world to first world status over a period of four decades (Lee, 2000), from its fledging years as a new nation beset with socio-political and economic unrest, high unemployment, housing shortage and racial tensions, to a highly advanced and influential global economic powerhouse, has won much international recognition and acclaim (Marine & Oceans, 2023; World Bank, 2019). Under the leadership of Mr. Lee Kuan Yew, Singapore’s first prime minister after independence, and his pioneering team members, the foundations for Singapore’s economic growth were laid by his government’s key priority to attract foreign investments and capital investment flows into industries that would provide job creation and employment for its populace living in a land lacking in natural resources, including sufficient water. Singapore’s people were the only natural resource for growing its economy during its formative years and have remained crucial to Singapore’s success. Education and training for a growing

workforce continues to be imperative for Singapore's economic development (SG101, 2024).

In its 58th year as a nation as of August 9, 2023, Singapore has become one of the richest, most prosperous, globally competitive, and economically successful countries in the world with a stellar reputation as a global hub for finance, commerce, shipping, aviation, technology, innovation startups, and education. Singapore's excellent attainments in education are known the world over with student performances, from primary to tertiary education, being consistently ranked among the top globally as reflected in the Performance for International Student Assessment (PISA) international exercises conducted by the Organization for Economic Cooperation and Development (OECD) and the International Baccalaureate (IB) diploma examinations conducted by the Swiss-based IB organization. Besides its economic and educational achievements, there have also been many impressive social developments and accomplishments in Singapore that are very highly ranked in the world such as its healthcare, personal safety, quality of urban living, modern infrastructure, home ownership (a rate of 89 percent), life expectancy (86.6 years), low corruption, and human development.

Singapore has a unitary parliamentary republic structure based on a multi-party democracy and free elections with a prime minister as the head of the government. The People's Action Party (PAP), which has governed Singapore since independence, is one of the longest continuing governing party among multi-party parliamentary democracies in the world to oversee the development trajectory of a country from its beginning as an independent nation (Jayakumar, 2022). Singapore subscribes to a merit-based ethos that has been long championed by the

PAP as a fundamental principle that is highly relevant in a multiracial society and has focused on developing individuals based on the values of diligence, self-effort, and self-reliance as key to success and a better life (Bellows, 2009; Lee, 2000; Choo, 2019). In Mathew's (2016) study on the views of ethnically diverse Singaporeans on meritocracy, the majority of participants indicated strong consensus and support for attributing hard work, independent of race, as contributing to economic success. There is a meritocratic ethic, prevalent in education and society, that pairs economic success that is marked by a better life of highly sought after material possessions with competitiveness and social esteem; this provides the motivation and incentive to persevere and excel, and has been explained as the driving force for Singapore's global competitiveness and economic prosperity (Cheang & Choy, 2023).

Evolution of Special Education in Singapore

The historical development of special education in Singapore can be categorized into two time periods – pre and post 2004. The turbulence and scarcity of Singapore's early years as a nation and the urgent priorities then to efficiently educate and develop a workforce for economic survival led to the responsibility of the education of students with disabilities falling primarily upon the social welfare sector. Services for children with various disabilities were started and provided by welfare organizations, religious bodies and concerned philanthropists, or were part of follow-up rehabilitation services delivered by health authorities after medical diagnoses of disabilities (Quah, 2004). Over the decades, more voluntary welfare organizations were established to cater for the education of growing numbers of students with

various types of disabilities, resulting in the building of more special schools that evolved into a special education system.

Prior to 2004, students without disabilities were perceived as belonging to the regular mainstream education under the purview of the Ministry of Education, while students with disabilities were seen as belonging to the special education system. Special Education services were therefore primarily provided via special schools run by voluntary welfare organizations, now known as social service agencies (SSAs), many of which also operate adult disability services. A few of the voluntary welfare organizations also assisted in providing services to integrate and support students with disabilities (e.g., those with physical disabilities and autism) within mainstream school settings (Lim & Nam, 2000; Lim, Nomanbhoy & Vasudev, 1999; Nomanbhoy, Lim & Vasudev, 2000). A dual system of education where special schools operated apart from mainstream schools was clearly in place (Lim & Nam, 2000) prior to 2004, which largely influenced public and societal notions about special education.

For students with special education needs that were in the mainstream education system, the focus was on integration, rather than inclusion, in the pre-2004 period (Lim & Nam, 2000; Lim & Quah, 2004; Lim & Wong, 2021; Quah, 2004). The onus of responsibility was on the students to cope and keep up with the academic rigor and performance expected of all mainstream education students and, especially, to pass national examinations. "Opportunities for the Disabled" by the Advisory Council of the Disabled (1988), the most significant special education-related report existing at that time emphasized this integration, by stating that "whenever appropriate and

feasible, special education should be provided within the regular educational system. A child should only be placed in a special school if he cannot be well educated in a regular school” (p. 37–38). A recommendation of this report also stated that: “integration should fit the disabled child to the most suitable educational environment” (p. 38).

In reality, however, special education services were generally provided outside the mainstream education system during this period (Quah, 1993), which meant that an appropriate education for students with disabilities with the requisite special education support and intervention within mainstream schools was untenable. Mainstream schools also had the prerogative to decide whether to admit students with disabilities based on the school’s interpretation of the Advisory Council of the Disabled’s recommendation (Lim & Thaver, 2018). Unlike countries like the United States, Singapore does not have any legislation nor laws regarding the provision of special education services within mainstream education.

The year 2004 has been described as the watershed year for special education in Singapore (Lim & Thaver, 2018). Prime Minister Lee Hsien Loong, in his inauguration speech, explicitly mentioned persons with disabilities as part of his envisioning of Singapore as an inclusive society (Ibrahim, 2004). A month after his inauguration, Prime Minister Lee called for better efforts to integrate students with disabilities into mainstream schools (Teo, 2004). Since then, there has been an unprecedented progression of developments in the fields of special education and disability that have continued to evolve till the present [please refer to Lim & Thaver (2018) for a detailed description of these developments].

The government supported the creation of a series of comprehensive 5-year national roadmaps for persons

with disabilities known as Enabling Masterplans. These were designed to create an inclusive society where persons with disabilities can be supported and empowered to maximize their potential and be embraced as equal citizens. The first from 2007-2011 was followed by a second from 2012-2016, and a third from 2017-2021. The current Enabling Masterplan, which has a longer period for envisioning, the setting of goals, and implementation to achieve a more inclusive society, will be enacted from 2022-2030 (Ministry of Social & Family Development, 2021). Singapore also signed the United Nations Convention on the Rights of Persons with Disabilities (UNCRPD) in 2012 and ratified it the following year in 2013 (Ministry of Social and Family Development, 2016). By ratifying the UNCRPD, which contains Article 24 on the right to inclusive education, Singapore recognized its role and responsibility to make progressive realizations towards inclusive education.

Special Education Preparation of Teachers and Professionals

While the number of special schools has grown to 22, with a further six to become operational in the 2030s (Elangovan, 2023), the current educational stance has been to view them not in terms of a dual system of education like the pre-2004 period, but as part of the continuum of educational services within one national system (Enabling Masterplan Steering Committee, 2016). The Compulsory Education Act of 2019 emphasized this by including the requirement that all students with Special Educational Needs (SEN) attend either mainstream primary schools or government-funded special schools (Ministry of Education, 2020a).

Over the past two decades, the number of students with disabilities attending mainstream schools has risen dramatically from 2500 students

in 2005 (Chan, 2005) to 13,000 in 2013, to 24,000 in 2018 (Toh, 2018), and to the current reported figure of 35,500 (Elangovan, 2023). About 80% of all students with special needs are served in mainstream schools with the remaining 20% with higher support needs attending special schools (Ang, 2020b). This exponential increase in the number of students with special needs attending mainstream schools spurred on by developments following the watershed year of 2004 has progressively redefined public notions about special education in Singapore and its status as a viable and important field across the national education system and within teacher education (Wong & Lim, 2021).

In the aftermath of PM Lee’s 2004 key speeches advocating for persons with disabilities, a flurry of developments concerning the preparation of school personnel to support students with special educational needs soon followed. At the National Institute of Education (NIE), Singapore’s sole teacher accreditation body, training began in 2005 for a new cadre of personnel, initially called Special Needs Officers. These were renamed in 2009 as Allied Educators (Learning & Behavioral Support) and again in 2022 and after as Special Educational Needs Officers (SENOs) (Lim & Thaver, 2023). In the early years of this scheme, training at NIE for the Special Needs Officers focused on preparing them to support students with dyslexia and autism (in the mild range) in mainstream schools (Chan, 2005). The types of students with disabilities supported by these support personnel subsequently expanded to students with other disabilities, including attention deficit hyperactive disorder, physical impairment and sensory disabilities. Services included in-class support or individual and/or small group interventions (MOE, 2023b). To become SENOs, candidates attend a one-year

full-time Diploma in Special Education (for SENOs program), which equips them with the skills to identify special educational needs, diagnose and assess learning and behavioral difficulties, and plan interventions (NTU, 2023c).

Another milestone development for special education preparation in the mainstream teacher education space that was launched in 2005 was a new in-service professional development program in special education. This program provides mainstream primary and secondary school teachers with the understanding, knowledge, and skills to work with and support students with special needs in their classrooms. Known as the Certificate in Special Needs Support, this professional development program is comprised of a foundational course introducing existing school frameworks and systems in supporting students with special educational needs followed by a selection of three electives among courses on learning disabilities, attention deficit hyperactivity disorder, autism spectrum disorder, physical and sensory difficulties, and emotional and behavioral difficulties (NTU, 2023b). The objective of the initiative was to have 10% of teachers in all primary schools and 20% in all secondary schools take the Certificate in Special Needs Support training in order for the knowledge and skills acquired by these teachers to spread through the system. In-service teachers who successfully complete this certificate, known as “Teachers Trained in Special Needs” (TSNs), contribute to building the capacity of their schools to include students with special needs in their own classrooms and by collaborating with other school personnel such as SENOs (Lim, Poon & Thaver, 2022; Lim & Thaver, 2023).

In March 2020, the Ministry of Education launched a professional development roadmap for all mainstream educators to gain basic knowledge and

skills in the area of special educational needs for the aim of better supporting students with disabilities in mainstream schools. This roadmap delineates core competencies that all mainstream teachers are expected to attain in pre-service (i.e., ‘emergent level’) and in-service (i.e., ‘proficient’ level) through bite-size online learning and professional development courses (Ang, 2020a; Ministry of Education, 2020b, 2020c). Currently, all teachers in mainstream schools can access up to six hours of online bite-size modules on supporting students with special needs across a range of topics such as common special needs conditions and working with parents (Ministry of Education, 2022b). Within the mainstream teacher education programs at NIE, it is now compulsory for all pre-service trainee teachers at NIE to take some coursework to develop their foundational understanding of the needs of diverse students including students with special educational needs for the purpose of supporting them in mainstream classrooms (Ministry of Education, 2022b).

The earliest teacher preparation program in special education began in 1984 at the then the recently established Department of Education for Children with Special Needs in 1982 and was led by its founding head, Dr Marilyn Mayling Quah. This Certificate in Special Education (CISE) program, offered at the Institute of Education (later renamed as the National Institute of Education), was a three-year part-time program for teachers who were teaching in special schools (Quah, 2004).

To this day, in Singapore’s special schools, teachers, including untrained ones, are recruited by the social service agencies to work with students and then sent to NIE for training and accreditation as formally trained special education teachers (Fu, 2008 NTU, 2023c). Admission into the CISE required three credit passes in the Cambridge-Singapore

General Certificate in Education Ordinary Level (GCE ‘O’ in English – equivalent to high school diploma in the US) and six months of teaching experience in a special school (Quah, 2004).

In 1991, when the Institute of Education became NIE and an institute of the Nanyang Technological University, and after it was observed that many of the candidates admitted into the CISE had higher educational qualifications beyond secondary schooling (i.e., ‘A’ levels from junior colleges or polytechnic diploma or even university graduates), the CISE was replaced by the Diploma in Special Education (DISE) for teachers in special schools, a two-year part-time shortened and upgraded program with minimum entry requirements at the ‘A’ level or polytechnic equivalent with at least six months teaching or related experience in a special school (Quah, 2004). In both the CISE and DISE, teachers taught in their special schools for half a day for five days of the week while attending these programs. The current version of the DISE program for special schoolteachers (SSTs) and SENOs is a full-time one-year program of coursework and teaching practicum co-developed with the Ministry of Education (NTU, 2023c).

After completing the DISE program, SSTs and SENOs can proceed to enroll in the Advanced Diploma in Special Education (ADISE) program with the recommendation of their school principals along with at least two years of teaching experience in special education. The emphasis in the ADISE is on deepening the ‘reflective-practitioner’ capacities and skills in evidence-based classroom-based and school-level practices in either mainstream or special schools. Five courses comprise the ADISE program conducted over two semesters with course participants being exposed to evidence-based research

literature in special education to inform their translation of research into practice to meeting concerns within their classroom and school contexts (NTU, 2023a).

The ADISE can also be used as consideration for entry into NIE's full-time Bachelor of Arts (Education) / Bachelor of Science (Education) or part-time Bachelor of Education programs – which are pre-service undergraduate programs for becoming mainstream teachers (NTU, 2023a). Beyond the ADISE program is the master's in education (Special Education) which requires applicants to have the prerequisite background in education and field experience in special education. The master's in education can be taken full-time or part-time and completed within four semesters or two years (NTU, 2023d). Students aspiring to proceed to a doctoral program can focus on a piece of special education research at NIE [through the doctorate in philosophy (PhD in Education) or doctor in education (EdD)].

Contextual Influences: On Policy Implementation, Partnerships and Practice

Impressive strides have been made within mainstream education in the past two decades to support the inclusion of students with special needs within mainstream settings. In the pre-2004 period, it was common for mainstream schools to reject the admission of students with special educational needs based on limited resources such as manpower to support these students. Students were also rejected based on perceived difficulties in their coping with mainstream school environments, the readiness for mainstream schools to accept them, and perceptions of how successful these students would be able to integrate or fit within a school environment primarily meant for stu-

dents without disabilities. With many educators themselves having grown up and studied in the mainstream education system, which separated them from students with disabilities and which prioritized academic learning and performance over other types of learning, special education in the pre-2004 mindset seemed a distant field that did not relate nor pertain to their role and responsibilities as a mainstream teacher (Lim & Tan, 1999; Quah, Lui, Tan & Yip, 1982; Thaver, 2013).

The progressive penetration of special education into mainstream education was made possible top-down from Prime Minister Lee in his envisioning of Singapore as an inclusive society. His call for better supports for students with special needs in mainstream schools led to the development of new teacher preparation programs and courses as well as personnel schemes (such as the SENOs) in special education for mainstream schools; and with supports found in mainstream schools, more students with special needs have enrolled. In this sense, the *integration* of students with special needs within mainstream schools has shifted towards their *inclusion* due to these schools reforming their beliefs and practices to create a more accommodating and inclusive learning environment for them (Lim & Thaver, 2023).

The Ministry of Education's policy direction over the past few years has been for mainstream schools to develop their own school-wide systemic response through the tiered system of support in supporting student with special needs (Aljunied, 2021). This policy initiative has shifted the responsibility and accountability to support special needs from special education-related personnel like SENOs to collaborative school teams involving teachers, SENOs and relevant school personnel such as counsellors and psychologists.

Through the tiered system of support implemented in mainstream schools, the partnership between special education and mainstream education has also grown closer based on their mutual benefits on enhancing the school organizational and structural delivery of manpower for all students including those with special needs (Dutt, Lim & Thaver, 2019; Lim et al., 2022; Lim & Thaver, 2023).

The developments in special education and teacher preparation discussed in this paper have been instrumental in the evolution of special education as a field in Singapore, which, in turn, is situated within the larger context of Singaporean society with its own unique socio-historical and socio-political legacies, influences and national priorities (Lim, Thaver & Strogilos, 2019; Walker, 2016). The reforms of mainstream education towards greater inclusivity of students of special needs and partnership with special education have been made possible through the influence of Singapore's unique feature of tripartism in its education system. Tripartism in Singapore is a hallmark approach adopted by employers, unions and the government towards achieving shared economic and social goals (Ministry of Manpower, 2024). Over the decades, a close tripartite relationship has been built between the Ministry of Education (MOE), its sole teacher certification body (i.e., the National Institute of Education) and all government schools, which facilitates and enables systemic changes to be more effectively rolled out and reinforced (Kwek, Ho & Wong, 2023). Another contributing feature to Singapore's education system is how the government, through MOE, centralizes policy control and infrastructure while simultaneously decentralizing the system to schools to develop their own capacities and capabilities as learning organizations with the autonomy to

self-appraise for continuous improvement (Kwek et al., 2023), an apparent paradox in the education system (Ng, 2017).

The series of developments in the fields of special education and disability as well as mainstream education has included continuous building upon prior efforts over the past twenty years. This is a rarity among many countries and education systems, where discontinuities are often experienced due to changing governments (Kwek, Teng, Lee & Chan, 2020). The uninterrupted rule of the PAP government has also built an education system that has evolved continuously without facing a change of government in its fifty-eight years. Current efforts of educational leaders (i.e., education ministers) are built upon the work of previous leaders that have permitted long-term educational policy planning to occur accompanied with a longer, wider and deeper expansion and impact in implementing educational policies (Lim & Thayer, 2021; Ng, 2017). This relatively stable and predictable modus operandi for change has heavily influenced special education in Singapore and its current issues.

Salient Issues in Special Education and Teacher Preparation

Although the significance and relevance of special education in Singapore has advanced tremendously since independence and especially during the past twenty years, there are several salient issues, as influenced by the local context, that can affect the development of special education and the preparation of its teachers and personnel. These issues are as discussed in the following themes:

Purview Matters

While special schools are described now as part of the national education

system and are government funded, they are still run and operated by social service agencies. The recruitment and hiring of untrained special education teachers for the special schools followed by their enrolment in the DISE (SST) program after a few years of teaching service means that schools need to have their own eco-systems of coaching and support for these untrained teachers when they begin. As aforementioned, special education teachers from special schools are recruited by the social service agencies running the special schools unlike their mainstream counterparts who are under the purview of the Ministry of Education. Compared with mainstream teachers, special education teachers from special schools generally receive lower salaries.

This matter of special schools and their teachers coming under the purview of the Ministry of Education has been repeatedly raised by concerned stakeholders. A recent reply by the Minister of Education, Mr. Chan Chun Sing, to a nominated member of parliament, indicated that the Ministry of Education is prepared to explore new models in working with SSAs and the community that would deliver better outcomes for (i) children with special needs, (ii) their families, (iii) the professional development of special education teachers, (iv) engaging the community, and (v) continuum of support from pre-school to post-school life. The minister also cited the ensuing plan from the Enabling Masterplan 2030 for the Ministry of Education to partner with SSAs to establish five new special schools by 2030, in addition to the current 22 special schools (Ng, 2022). If special schools and their teachers were to come under MOE's umbrella, the status and identity of special education in Singapore would reflect the common practice in many developed countries

of housing special education under the education body.

Continuum of Special Education Options and the Interaction between Students with and without Disabilities

With more students with milder disabilities included within mainstream schools, opportunities for them to interact with diverse others have greatly opened up. For students with moderate to severe disabilities or higher support needs who attend special schools that are physically separate from mainstream schools, various initiatives have provided opportunities for students in special schools to interact with students from mainstream schools. The co-location of several special schools next to or near mainstream schools has been a strategy deployed to increase the interaction of their respective students with each other. The Satellite Partnerships initiative (Ministry of Education, 2022a) provides opportunities for students from both special schools and mainstream schools to interact meaningfully through joint activities with each other to develop an appreciation for differences and develop values such as patience, kindness and empathy. This initiative, which has existed since 2008, is currently being enhanced by MOE, to expand and deepen these partnerships, under the renamed School Partnership (General Education-Special Education) model. This revision of the partnership model between mainstream/general education and special education emerged from MOE's recent "Learn for Life" movement to nurture diverse talents, expand pathways, strengthening support for lifelong learning, and build strong partnerships in education (Ministry of Education, 2023a).

Lim and Quah (2004) noted the lack of a continuum of special education options beyond special schools, such

as special classrooms within mainstream school, resource classrooms for students with special needs, and the provision of special education support for students with special needs within mainstream classrooms. While progress has been made in the provision of special education support for students with mild disabilities in mainstream schools, the provision of special education support and options for students with higher support needs within mainstream school environments remains limited. For instance, beyond the special school setting, a special classroom option for students with moderate to severe disabilities that is located within a mainstream school is nonexistent. This option would increase the opportunities for these students to interact and learn with their peers without disabilities and vice versa due to their proximity with each other within the same school environment and routines. Greater opportunities for regular interaction between both these groups of students can facilitate the learning of appropriate social and life skills as well as relationships and friendships which are foundational to an inclusive society.

Preparation of Special Educators

Over a decade ago, Poon, Musti-Ra and Wettasinghe (2013) highlighted a need for special education teachers in Singapore to “receive training equal, if not greater, in intensity to that which their counterparts in mainstream education receive” (p. 63). While there have been key program developments in teacher education in special education, special education preparation continues to be less comprehensive in its coverage as mainstream teacher preparation program in terms of its depth in discipline-specific and curricular content knowledge due to the shorter length of the DISE program. There is still no undergraduate degree offered in special

education at NIE, although there is now a minor in special education that is available to undergraduates. Since the robustness of a discipline depends on the quality, amount, and duration of preparation of its student teachers, these limitations in teacher preparation for special educators can affect the quality-of-service delivery.

To further improve the competencies of teachers in special education and increase the attractiveness of special education as a sustainable career, there is a need to periodically review the hiring requirements, salary scales, career progression, and the duration of special education teacher/personnel programs. In recent years, the Ministry of Education has attempted to redress some of these issues by offering more avenues for the career progression and training of teachers in special education schools (Teng, 2020) and reviewing remuneration (Goh, 2024).

CONCLUSION

The Singapore education system has been evolving from a focus on fulfilling economic needs and an emphasis on academic development and performance to broader and more holistic student development and outcomes, such as character education, socio-emotional growth, social and self-awareness, mental health, and social participation and relationships with diverse others (Kwek et al., 2023; Ministry of Education, 2023a). MOE launched the next phase for education in Singapore (from 2020 onwards) in the “Learn for Life” movement to move away from an over-emphasis on academic performance and results to a more holistic and student-centric preparation for students to become future-ready through nurturing lifelong attitudes and skills (Ministry of Education, 2018). These educational shifts, in response to the uncertainties of global challenges

and changing local realities (such as the rapidly aging population: by 2030, almost one in four Singaporeans will be 65 and older, thereby heightening the vulnerability quotient in society), signal a greater thrust towards fostering a more “inclusionary space” (Lim & Thaver, 2021) within mainstream education and society for diverse citizens including those with special needs. In light of these directions in education, it is anticipated that the role of special education in Singapore to prepare teachers both within special and mainstream schools, will continue to expand in partnership to serve all students.

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ABOUT THE AUTHORS

Levan Lim, Ph.D.

Dr. Levan Lim is an Associate Professor at the Psychology and Child & Human Development Academic Group (PCHD AG) at the National Institute of Education (NIE), Nanyang Technological University (NTU). He obtained his Ph.D. in Special Education from the College of Education, Lehigh University, Pennsylvania, USA, and has also worked at Charles Sturt University and the University of Queensland (both in Australia). He was Head of the Early Childhood & Special Needs Education Academic Group from 2009 to 2018 which was the department at NIE responsible for teacher education in special needs and early childhood education before its 2020 merger into PCHD AG. At NIE, he has taught courses in special education in the Master of Education program, the Diploma in Special Education programs for Special School Teachers and Special Educational Needs Officers, and the NTU's University Scholars Program.

Thana Thaver, Ph.D.

Dr. Thana Thaver is a Senior Lecturer at the Psychology and Child & Human Development Academic Group, National Institute of Education (NIE), Nanyang Technological University, Singapore. She teaches a range of courses from general pedagogies in teaching and learning, educational psychology to inclusive education. She is currently Assistant Dean, Professional and Leadership Development in the Office of Graduate Studies and Professional Learning, National Institute of Education.

Loh Pek Ru, Ph.D.

Dr. Loh Pek Ru is a Lecturer of Psychology and Child & Human Development at the National Institute of Education, Nanyang Technological University, Dr Loh Pek Ru has a PhD in Applied Psychology from Curtin University, Western Australia. Prior to becoming a faculty member, she was a practicing senior psychologist and a post-doctoral research fellow. Her research interests include child and adolescent mental health, neurodevelopmental disorders (ASD, ADHD and DCD), parenting stress and special education.

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