

Inclusive education in Singapore:
A collective case study of shadow education
for students with special educational needs from mainstream schools

Patricia Ho See Mei
Master of Education
Bachelor of Arts



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THESIS DECLARATION

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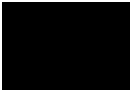
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ABSTRACT

This study explored the nuanced dynamics of the mediating role and contribution of shadow education (private supplementary tutoring) in contributing to the ongoing efforts to support and complement inclusive education practices for students with special educational needs (SEN) enrolled in mainstream schools in Singapore. Drawing upon Bronfenbrenner's ecological systems theory (1979), the investigation addresses a gap in the local context concerning the considerable financial investments in shadow education made by families in Singapore. Insights from key stakeholders, such as shadow educators and parents can provide valuable information on how shadow education functions as a supplemental form of community resource to understand the educational experiences and outcomes for students with SEN in the inclusive educational environment.

The overarching aim of this collective case study was to explore the phenomenon of shadow education in the Singapore context to generate a local theory, grounded in the perspectives of participants from two stakeholder groups with the goal of contributing to the ongoing efforts to support and complement inclusive education practices. Participants were purposively selected: subcase 1 consisted of 19 experienced shadow educators; subcase 2 included 15 parents of children with SEN enrolled in mainstream schools. The study was thus located broadly in interpretivism together with symbolic interactionism to understand the participants' perspectives based on interactions they experienced and the associated meanings they attributed to them.

Data collection employed qualitative strategies of semi-structured interviewing, taking field notes and examining any documents shared by the participants. Data analysis adhered to Miles and Huberman's (1994) model for thematic analysis process, utilising grounded theory techniques, leading to the emergence of five prevailing themes: 1) factors

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influencing the supportive role of shadow education, 2) aptitude of shadow educators, 3) proficiency of shadow educators, 4) dissonance between policy intentions and practical implementation of inclusive education, and 5) potential of shadow education as a support for these students. This study highlights the complex nature of shadow education as a support structure and suggests that thoughtful regulation could enhance equitable access to educational resources.

The distinctive contribution of this study lies in its nuanced examination of the mediating role and contribution of shadow education in contributing to the ongoing efforts to support and complement inclusive education practices for students with SEN who are enrolled in mainstream schools. It illuminates the complex nature of shadow education as a support structure and underscores the need for effective regulation. Additionally, the study emphasises the potential of collaborative efforts between schools and other key stakeholders in the immediate support networks of students with SEN. These findings offer directions for future research and practice and also emphasise the value of partnerships within the SEN support system for schools to recognise and embrace, especially in the face of existing resource constraints.

Keywords: inclusive education, special educational needs, children with special educational needs, shadow education, private tutoring, mainstream school, pedagogy, Singapore

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PRAISE THE LORD!

Psalms 106:1

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LIST OF ABBREVIATIONS

AED(LBS)	Allied Educators (Learning and Behavioural Support)
AT	Assistive Technology
CDAC	Chinese Development Assistance Council
CGC	Child Guidance Clinic
CMT	Case Management Teams
CRPD	Convention on the Rights of Persons with Disabilities
DREM	Disability Rights in Education Model
EA	Eurasian Association
IAP	Implementation Advisory Panel
IDEA	Individuals with Disability Education Act
LSM	Learning Support for Mathematics
LSP	Learning Support Programme
MENDAKI	Yayasan MENDAKI (Council for the Development of Singapore Malay/Muslim Community)
MOE	Ministry of Education, Singapore
MPs	Members of Parliament
PSLE	Primary School Leaving Examination
REACH	Response, Early intervention and Assessment in Community mental Health
SDT	Student Development Teams
SEN	Special Educational Needs
SENO	Special Educational Needs Officer
SINDA	Singapore Indian Development Association
TRANSIT	Transition Support for Integration

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This thesis presents findings of a qualitative research study conducted to understand the mediating role and contribution of shadow education as a form of supplemental community support for students with special educational needs (SEN) enrolled in mainstream schools in Singapore. Shadow education, commonly referred to as “tuition” in Singapore, refers to the system of private supplementary tutoring that exists alongside the mainstream education system (Bray, 2023a; Hajar & Karakus, 2022). The overarching aim of this collective case study was to explore the phenomenon of shadow education in the Singapore context to generate a local theory, grounded in the perspectives of participants from two subcases: shadow educators and parents. Drawing upon Bronfenbrenner’s ecological systems theory (1979), the study specifically examines the mediating role and contribution of shadow education as a form of supplemental community support in contributing to the educational experience and outcomes of students with SEN enrolled in mainstream schools. The purpose was to understand the mediating role and contribution of shadow education as a form of supplemental community support in playing a role in the educational experience and outcomes of students with SEN in mainstream school settings, with the goal of contributing to the ongoing efforts to support and complement inclusive education practices.

This study provides a valuable contribution to the knowledge, research and practice in the field of special education by examining how shadow education supports students with SEN enrolled in mainstream schools. By understanding the perspectives of key stakeholders and identifying factors that influence the supportive role of shadow education, this research has the potential to contribute to the ongoing efforts to support and

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complement inclusive education practices for students with SEN enrolled in mainstream educational settings. Furthermore, the findings and insights obtained from this study offer valuable guidance for practitioners, policymakers and researchers seeking to improve the educational experiences and outcomes of students with SEN.

1.1 Background and Context to Study

As early as 2016, it was reported by Yusoff (2016) that parents of children with SEN expressed concerns with the support provided in mainstream schools. A survey conducted by the Lien Foundation on Inclusive Attitudes in the same year (2016), revealed that Singapore was perceived as being far from inclusive for children with SEN. This perspective continues to be prevalent today, with parents and Members of Parliament (MPs) advocating for more comprehensive support for students with SEN enrolled in mainstream schools (Chia, 2018; Choo, 2019; Teng, 2022a; Yuen, 2019).

The Ministry of Education (MOE) had been dedicated in providing support in mainstream schools for students with SEN since 2015, making significant strides towards a more inclusive education system (Choo, 2019). The efforts to support these students include various specialised provisions such as access arrangements, barrier-free accessibility, assistive technology, services from social service agencies, transport concessions or subsidy schemes. Furthermore, the education system incorporates intervention programmes such as the Learning Support Programme (LSP) and Learning Support for Mathematics (LSM), along with initiatives like TRANSition Support for InTegration (TRANSIT), School-based Dyslexia Remediation Programme, and Circle of Friends are in place. The MOE also ensured the availability of specialised personnel, such as teachers trained in special educational needs and special educational needs officers

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(formerly known as allied educators in learning and behavioural support) to support students with SEN. In addition, the MOE facilitates referrals for individuals requiring therapy at local hospitals or intervention from allied health professionals such as occupational therapists, speech and language therapists, physiotherapists and psychologists, as well as school counsellors. Mental health services such as Response, Early intervention and Assessment in Community mental Health (REACH) and Child Guidance Clinic (CGC), are also made available (MOE, 2022b). These measures demonstrate the MOE's strong commitment to supporting inclusive education and practices within mainstream schools.

Despite the government's efforts, some concerned parents who engage shadow education services believed that additional support is necessary to help their children with SEN cope in mainstream schools (Today, 2012). Wong et al. (2015, p. 124), reported that parents of children with SEN "actively sought private tuition and professional therapy to provide additional support" for their child with SEN enrolled in mainstream schools. This prompted an examination of the mediating role and contribution of shadow education as a form of supplemental community support in the educational experience and outcomes of students with SEN enrolled in Singapore mainstream schools.

Shadow education, also referred to as private supplementary tutoring (Bray, 2013a; Yu & Zhang, 2022) has become a massive global enterprise (Bray, 2013a, 2020; Bray & Zhang, 2023; Exley, 2021; Mori & Baker, 2010; Research and Markets, 2024). Parents sought tutoring services for their children for various reasons, ranging from providing extra support to help them catch up with their peers to having high expectations for their academic performance in examinations. In Singapore, shadow education serves as a

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supportive role to mainstream education by offering programmes not available in schools such as enrichment courses like life-skills programmes, speech and drama courses as well as academic remediation for students facing challenges in specific subjects.

Although the Household Expenditure Survey 2017/2018 documented the growth and widespread use of shadow education in Singapore (Singapore Department of Statistics, 2019), there was limited local research on this topic especially regarding students with SEN. Only a few studies (Blackbox,2012; Koh, 2016; Lim & Subramaniam, 2019; Manzon & Areepattamannil 2014; Ng, 2015; Tan, 2009) have explored shadow education in the Singapore context. This study is particularly relevant in light of the MOE's inclusion of children with SEN in the Compulsory Education Act, which took effect in January 2019 (Chia, 2016). The study aimed to explore the phenomenon of shadow education in Singapore, generating a local theory, grounded in the perspectives of participants from two subcases: shadow educators and parents. In this study, the term "mainstream schools" is defined as schools that primarily cater to students with the cognitive and adaptive skills required to access the national curriculum and participate in a mainstream learning environment (MOE, 2022a), as outlined in the "Definition of Key Terms" section (p.18). It sought to deepen the understanding on the mediating role and contribution of shadow educators in facilitating educational experience and outcomes for students with SEN in mainstream school settings. The study was conducted within the interpretivism theoretical framework, informed by the principles of "symbolic interactionism", the concept of "perspectives". A thematic analysis approach using grounded theory techniques was employed.

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With the recent prohibition on private tutoring in China, the debate surrounding the necessity of shadow education has resurfaced in the public sphere (Ng & Sages, 2021). In the context of this study, the justification for shadow education is derived from the perspectives of shadow educators who have supported students with SEN and parents who have engaged shadow educators for their children with SEN. The focus of this study is on understanding the perspectives of shadow educators and parents on inclusive education practices in Singapore mainstream schools. It is crucial to understand the perspectives offered by shadow educators and parents to understand the mediating role and contributions of shadow educators in facilitating the educational experience and outcomes for students with SEN within these mainstream school settings.

To understand the research problem and its significance, it is necessary to provide a brief overview of Singapore's journey towards inclusive education. Extensive research on inclusion practices worldwide has shed light on several key points. Firstly, inclusion can take on various forms and manifestations (Grensing-Pophal, 2021; National Professional Development Center on Inclusion, 2009; Times 2018). Secondly, collaboration between general and special educators is important for the success of inclusive education (Burstein et al., 2004; Milteniene & Venclovatie, 2012; Khairuddin et al., 2016). Lastly, continuous professional development for both general and special education teachers is necessary in the effective implementation of inclusive education (Costley, 2013; Donath et al., 2023). These key points serve to demonstrate the importance of understanding the term "inclusion" and the dedicated efforts in supporting students with SEN. Such understanding is essential for ensuring the successful implementation and enhancement of inclusive education practices.

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In the past 15 to 20 years, the inclusion of children with SEN in mainstream schools has gained momentum worldwide. The concept and practice of inclusion has undergone notable changes since its introduction, marked by significant milestones such as the Salamanca Statement. This document, adopted by UNESCO in 1994, emphasised the importance of inclusive education and called for schools to accommodate all children, regardless of their diverse needs. The United States and the United Kingdom have played pivotal roles in shaping the current understanding and implementation of inclusion, providing a framework for the rest of the world. In the historical context of 1993, the education of students with SEN had transitioned from segregated, pull-out programmes to a majority of these students being taught alongside their neurotypical peers in mainstream classrooms (Choate, 1993).

In Singapore, progress towards inclusive education was relatively limited until 2004 when Prime Minister, Mr Lee Hsien Loong, outlined a vision of an inclusive society in his inaugural National Day Rally speech, emphasising the need for greater integration of people with disabilities into mainstream society. In response, the government assigned additional funding to support the students with SEN enrolled in mainstream schools, including specialised facilities, specialised personnel, intervention and programmes and referrals.

The number of students with SEN enrolled in mainstream schools has been steadily increasing. In 2013, an estimated 13,000 students with SEN were studying in mainstream schools and by 2022, this number had risen to 28,400 (Elangovan, 2023; Wong, 2018). As the student population grew, concerns regarding the quality and accessibility of resources for students with SEN enrolled in mainstream schools became a topic of discussion among

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the Members of Parliament (MPs). Second Minister for Education, Ms Indranee Rajah, acknowledged the ongoing improvement in support and resources, stating that the support and resources provided have been progressing concurrently (Ang, 2019). Table 1 provides a historical overview of MOE's provision of support and resources offered to students with SEN enrolled in mainstream schools over time.

Table 1

History of MOE's Provision of Support and Resources for Students with SEN Enrolled in Mainstream Schools

Timeline	Support and Resources
1999	The funding for assistive technology devices such as the MOE Assistive Technology (AT) Fund aimed to provide support students with sensory and physical impairments in their learning needs.
2005	Special needs officers, later referred to as Allied Educators (Learning and Behavioural Support) (AED/LBS), were placed in mainstream schools to support students with SEN. The role formerly known as AED/LBS has since been renamed as Special Educational Needs Officers (SENO) in 2023.
2016 to 2020	The MOE raised the number of AED/LBS personnel (now referred to as SENO) by more than 40%, resulting in a total of over 600 officers. Each primary school received a baseline provision of two SENOs, while approximately 95% of the secondary schools were allocated one SENO.
2016	Student Development Teams (SDT) were set up in all primary and secondary schools with the purpose of enhancing each school's capacity in developing age-appropriate programmes and supporting the holistic development of all students. The SDTs also provided support and intervention for specific groups of students in need of additional help.
2017	Comprehensive resources related to the Transition Support Framework were made available to schools, and school personnel received training. This aimed to ensure better support for students experiencing transitions within and across schools.

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Table 1 (continued)

Timeline	Support and Resources
2018	The MOE progressively introduced enhanced training to build the capacity of schools' case management teams (CMT) in identifying and supporting students with SEN. The training focussed on areas such as learning, behavioural, social and emotional needs.
2018	Mayflower Primary School became the first designated mainstream primary school to provide support for students with Hearing Loss who required the use of sign language.
2019	Intervention programmes such as “Circle of Friends” and “Facing Your Fears” were introduced in mainstream schools, enabling neurotypical students to better support their neurodivergent peers.
2020	The SEN Professional Development Roadmap was introduced, aligning it with the SkillsFuture for Educators framework. The goal was to strengthen baseline pre-service and in-service training in providing support for educators in mainstream schools regarding special educational needs.
2020	All mainstream schools ensured that at least one Physical Education (PE) teacher was trained in Inclusive PE. This facilitated the active participation of students with SEN in PE classes by providing appropriate support.
2021	The MOE conducted a pilot of TRANSIT in approximately 40 schools, which accounted for one-fifth of the primary schools. The programme was planned to be progressively implemented to all primary schools by 2026, targeting Primary 1 [#] students with social and behavioural needs

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[#]In Singapore, “Primary 1” is equivalent to “Grade 1” or “Year 1” in other educational systems.

Despite the provisions of these supports and resources as well as the efforts made to build capacity and capability in school personnel, Wong et al. (2015, p. 124), found that parents of children with SEN enrolled in mainstream schools “actively seek private tuition and professional therapy” to provide additional support for their children. This is consistent with the findings of the Household Expenditure Survey 2017/2018, which reported that average household spending on tuition in Singapore amounted to \$339 per month. This indicates a prevalent trend among families to invest in additional educational support,

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highlighting the significance of educational support for a range of students in mainstream school settings.

1.2 Rationale of Study

The study acknowledges the existing gap in research regarding the relationship between inclusive education and shadow education, specifically from the perspectives of shadow educators and parents. By exploring their perspectives, the study provided the research participants with an opportunity to reflect on how they express their understanding of inclusive education and to evaluate the discourse surrounding it (O'Donoghue, 2019). Understanding these perspectives is crucial as people act on their perspectives, beliefs and motivations (Blackledge & Hunt, 2019).

Furthermore, there is a lack of information about the knowledge base, skills and aptitudes necessary for shadow educators to provide responsive support for students with SEN enrolled in mainstream schools. The study concedes the limited recognition and attention given to shadow educators supporting students with SEN enrolled in Singapore mainstream schools despite the role they play in shaping the educational experience and outcomes of supporting these students. It emphasised the need for further research to bridge the gap between existing knowledge and the work of shadow educators, as well as to understand the perspectives of parents who engaged the services of shadow educators for their children with SEN enrolled in Singapore mainstream schools.

There is value in studying the mediating role and contribution of shadow education as a form of supplemental community support in contributing to the ongoing efforts to support and complement inclusive education practices for students with SEN enrolled in mainstream schools. The paucity in research challenges efforts to enact reforms that could

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surface possible key strategies that promote effective practices. Despite the existence of shadow educators in the community who support students with SEN enrolled in mainstream schools, they have received little recognition and attention. More research is needed to bridge the gap between current knowledge and the work of shadow educators who support these students. Correspondingly, there is little research focused on the perspectives of parents of students with SEN regarding the support provided by shadow educators. By shedding light on the activities of shadow educators and capturing the perspectives of parents, the study sought to motivate further research on shadow education for students with SEN enrolled in mainstream schools. It also sought to provide a platform for discussions that are often overlooked, enabling governing bodies, shadow educators and parents of students with SEN with a “language for speaking about that which is not normally spoken about” (Hargreaves, 1993, p. 149).

1.3 Aim of Study

The overarching aim of this collective case study was to explore the phenomenon of shadow education in the Singapore context to generate a local theory, grounded in the perspectives of participants from two subcases with the goal of contributing to the ongoing efforts to support and complement inclusive education practices. Throughout the research process, subordinate aims emerged as outcomes of the research design, data collections, analysis and findings. Although this research is centred on Singapore, it provides valuable qualitative insights into the challenges and strategies of shadow education for students with SEN. The contextual data can enhance international comparative studies by revealing how different cultural and educational contexts impact shadow education. This study’s findings

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can inform policymakers and educators globally about the benefits and limitations of various shadow education models, fostering a broader perspective on inclusive education.

To achieve the aim of the research, a qualitative collective case study design was employed involving a total of 35 participants. Among them, 20 were practicing shadow educators and 15 were parents who sourced the support of shadow educators for their children with SEN enrolled in mainstream schools. However, one shadow educator withdrew from the study due to employment circumstances, resulting in a final sample of 34 participants which included 19 shadow educators and 15 parents. The collective case study prioritised the perspectives and experiences of these participants (O'Donoghue, 2019) to understand the intentions of parents who sourced for additional support for their children with SEN enrolled in mainstream schools and to gain insight into the lived experiences of shadow educators providing that support. Therefore, this study falls within the interpretivist paradigm, as it sought to understand "how people define events or reality" and "how they act in relation to their beliefs" (Chenitz & Swanson, 1986, p. 4), or in other words, the social meanings people assigned to situations and behaviour. These social meanings are used by individuals to comprehend their world and respond to it (O'Donoghue, 2019; Taylor & Bogdan, 1998).

1.4 Overview of the Literature

This study focussed on understanding the perspectives of shadow educators and parents on inclusive education practices in Singapore mainstream schools for students with SEN. With parents striving to ensure that their children with SEN are effectively included in mainstream schools, sourcing the support of shadow educators has emerged as a potential stop-gap measure to address the diverse and unique challenges faced by their

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children in the mainstream school setting. Given the current policy intentions and practical implementation of inclusive education practices in Singapore, there is a need to understand the mediating role and contribution of shadow education in facilitating inclusive education for students with SEN in Singapore mainstream schools.

Considering that students with SEN often have unique learning difficulties and additional needs, in terms of academic learning and navigating the complexity of the social environment in a mainstream school, the literature review for this study explored research that specifically addressed these needs. Notably, previous research on inclusive education has not extensively examined the link between school support for students with SEN and the supplemental community support provided through shadow education. To provide a conceptual framework for the study, Bronfenbrenner's ecological systems theory was employed, which emphasised the contextual nature of students with SEN and how their development is influenced by various environmental factors, including the microsystem, the mesosystem, the macrosystem and the exosystem (Bronfenbrenner, 1979).

The literature review also delved into the topics of inclusive education, shadow education and the challenges experienced by students with SEN in the classroom, as well as existing approaches to address these shortcomings.

1.5 Definition of Key Terms

The following definitions of terminology used frequently throughout this thesis are provided for reference:

- **Shadow Education**

Shadow education, commonly referred to as "tuition" in Singapore, describes the system of private supplementary tutoring provided alongside the mainstream school

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curriculum (Bray, 2023a; Hajar & Karakus, 2022), which parents source to provide additional support for their children. It encompasses various educational activities that take place outside mainstream schools, regardless of the location where these services are provided (Bray, 2013a; Byun et al., 2012; Lee, 2003). However, it is important to note the concept of shadow education does not encompass the support provided by private special needs assistants or the resource support services offered by associations or social service agencies. These are separate entities and fall outside the scope of the shadow education (private supplementary tutoring) providers because their services do not parallel mainstream school offerings. Instead of primarily focussing on academic tutoring, they provide individualised or small group support focussing on therapeutic, behavioural or life skills training, areas that are typically outside the purview of shadow education services.

Bray (2013a, p. 412) described private supplementary tutoring as a “shadow education system” highlighting its distinctive features compared to mainstream education. The existence of shadow education is separate from formal education, and it serves the fundamental role of providing additional support to students outside of mainstream school settings. Providers of these services, whether individuals or businesses, engage in transactions where they offer support, often in exchange for financial payment. In Singapore, shadow education transactions vary widely. These can range from free services provided by non-profit and religious organisations or higher education student groups to nominal fee-paying services offered by self-help groups (Chapter 2, p. 46) and full fee-paying private supplementary tutors. Typically, such arrangements involve a private agreement between the parents as the service purchaser and the shadow educator as the

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service provider. This study included paid and unpaid forms of supplementary tutoring support within the context of shadow education.

The enrolment of students with SEN in mainstream schools has increased from 13,000 in 2013 to 35, 500 in 2022 (Elangovan, 2023; Wong, 2018). This growth has been accompanied by concerns among parents whose children with SEN attend mainstream school due to resistance from the general public towards greater inclusivity. As a result, parents have turned to engaging shadow educators, contributing to the expansion of what has been described as a significant shadow education system, according to Tan's commentary published in 2019.

- **Students with Special Educational Needs (SEN)**

Students with SEN, including those with learning disabilities (such as dyslexia, specific language impairment), developmental disabilities (such as mild Autism Spectrum Disorders, Attention Deficit Hyperactivity Disorder) and physical and sensory impairment (such as hearing loss, and visual impairment) (IAP, 2017) are currently enrolled in mainstream schools in Singapore. These mainstream schools primarily cater to students with the cognitive and adaptive skills required to access the national curriculum and participate in a mainstream learning environment (MOE, 2022a).

- **Inclusive Education**

Internationally, inclusive education is defined as restructuring programmes and environments in schools to make them responsive to all learning needs, providing equal opportunities for all students and fostering an environment where all children can learn together (Barton & Armstrong, 2007). This concept highlights the importance of all children, regardless of their abilities and backgrounds, learning together within the same

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educational settings. Definitions of inclusive education vary across different educational and social settings, reflecting contextual differences in historical, geographical and theoretical contexts (Florian et al., 2016). To cater to their various contexts, some emphasised rights, while others emphasised values and community and there were still others that focussed on school capacity to cater to the diverse range of learners.

While inclusive education has historically taken various formats, such as mainstreaming, integration and regular education, it is important to note that none of these formats fully embody a model of full inclusion for children with SEN enrolled in mainstream schools. Inclusive education fully supports a model, where all children, including those with SEN, are included in mainstream classes, with appropriate accommodations, support, and adjustments made to ensure their full participation and access to learning opportunities. Inclusion has been perceived and defined in various ways across the inclusive education literature.

Despite the diversity of views, several common features have been identified in schools where inclusive education thrives (Deppeler & Ainscow, 2016; Erten & Savage, 2012; Miles & Singal, 2010). Mitchell (2015) summarised them as:

Inclusive education is a multifaceted concept that requires educators at all levels of their systems to attend to vision, placement, curriculum, assessment, teaching, acceptance, access, support, resources and leadership. It is no longer appropriate for policy-makers and researchers to define inclusive education solely, or even primarily, in terms of placement. (p.28)

Singapore's education system is built on the principle that every child matters (Shanmugaratnam, 2017). Regardless of race, gender, ability, disability, family or social circumstances, every child is entitled to a holistic and values-driven education. Singapore's

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child-centric approach, as recognised by the Organisation for Economic Cooperation and Development (OECD, 2011), has positioned it as a leading example of an excellent education system worldwide. According to the OECD’s report, Singapore has consistently ranked at or near the top of most major world education ranking systems. The same approach is applied to children with SEN through a dual system education system (Lim & Nam, 2000), where students are categorised into mainstream schools or special education schools based on their assessed needs. Parents are advised to have their children with SEN assessed by qualified professionals registered with the Singapore Register of Psychologists (MOE, 2022b) to determine the most suitable educational placement.

Chapter 2 will explore these educational placements in detail. For an overview of the various pathways available during the secondary school years for both placement categories, please refer to Appendix A. Students assessed as capable of benefitting from mainstream school environments are placed there, where inclusive education practices are implemented, including accommodations and supports designed to enhance the learning and overall experience of students with SEN in mainstream school settings. However, for children with SEN requiring additional support beyond what mainstream schools can provide, qualified professionals recommend alternative educational settings, such as special schools. These schools offer a customised curriculum to meet the diverse needs of these students and maximise their potential (MOE, 2022a). As aptly described by Poon (2016, p. 4), this educational structure ensures that each child has access to “an appropriate environment – be it mainstream or specialised environment – so as to ensure that each child’s opportunities in education can be maximised”.

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- **Perspectives**

In this study, perspectives, as defined by Woods (1992, p. 7), served as “frameworks by which people make sense of the world” around them. These perspectives played a central role in dealing with the key concept under investigation. Understanding individuals’ perspectives, beliefs and motivations was crucial, as they influenced their actions (Blackledge & Hunt, 2019). The study adopted an interpretivist approach, rooted in symbolic interactionism to understand people’s perspectives on the phenomenon in question. This approach allowed the researcher to uncover underlying perspectives, observe actions taken in response to those perspectives, and identify patterns that emerged from the dynamic interplay between perspectives and actions over time (O’Donoghue, 2019).

- **Theory**

According to Corbin and Strauss (2015, p. 55), theory encompasses “a set of well-developed categories (themes, concepts) systemically interrelated through statements of relationship to form a theoretical framework that explains something about a phenomenon”. For this study, the grounded theory technique was chosen due to its association with interpretivism and symbolic interactionism. Symbolic interactionism, which emphasises the interpretation of human interaction through symbols like language, has significantly influenced grounded theory. By employing grounded theory techniques, the researcher systematically examined qualitative data, including interview transcripts, field notes and relevant documentation provided by participants with the overarching aim of generating a local theory that captures the essence of the phenomenon.

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- **Mainstream School**

In Singapore, a mainstream school is a local government or government-aided school that is open to all students between the ages of 7 to 17 years. These schools primarily cater to students with the cognitive and adaptive skills required to access the national curriculum and participate in a mainstream learning environment (MOE, 2022a). Within these schools, students with physical and sensory challenges such as visual impairment or hearing impairment, as well as those with additional learning challenges may be educated alongside their peers. These students may receive assistive technology support or engage in withdrawal sessions with a Special Educational Needs Officer (SENO) to enhance their participation in the mainstream environment.

Professionally assessed children with SEN, deemed capable of benefitting from the mainstream educational setting, are enrolled in mainstream schools. On the other hand, students with cognitive abilities but facing challenges in terms of behaviour and/or social interactions may choose to access the national curriculum through special schools in Singapore, such as Pathlight School, St Andrew's Mission School, Canossian School and Lighthouse School. These special schools provide customised support to meet individual needs, offering a range of curricula, both mainstream and customised approaches, tailored to each student's specific needs.

Singapore is committed to international human rights principles and is a signatory to the Convention on the Rights of Persons with Disabilities (CRPD, United Nations, 2006). The country ensures protection, preservation and fulfilment of rights outlined in the convention, including the fundamental right to inclusive education. Singapore's Ministry of Education, believes that every individual regardless of their abilities, deserves a quality

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education to reach their full potential. MOE's commitment to leaving no one behind and promoting success for every student is evident in its educational policies and initiatives (Chan, 2023).

Despite Singapore's commitment to inclusive education, the placement of children with SEN remains a topic for discussion. As mentioned in the "Inclusive Education" section (p. 14), ongoing discussions revolve around the definition of inclusive education and determining the most appropriate educational setting for children with SEN, whether in mainstream schools or special education schools.

1.6 Significance of Study

This study holds significant importance for several reasons. While numerous studies have examined inclusive education and shadow education separately, the relationship between the two has received little attention from researchers. Therefore, this study fills a critical gap by providing empirical data on shadow education as a community link playing a role in facilitating inclusive education.

By studying the methods and strategies employed by shadow educators, educators can gain valuable insights into tailored approaches for supporting students with diverse learning needs. Although empirical research directly supporting the effectiveness of shadow educators' practices is currently limited, anecdotal evidence and professional experiences suggest that their support can potentially benefit students with SEN. While further research is needed to validate these observations, educators can still explore and incorporate effective techniques observed in shadow educators' work to enhance their own pedagogical practices and better meet the needs of these students in mainstream classrooms.

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Moreover, this study generated a local theory specific to the phenomenon of shadow education in the Singapore context. By understanding the perspectives from shadow educators and parents, the study has implications for professional practice, governing bodies and future research. Mainstream educators can gain concrete ideas from this theory to enhance support for students with SEN in their schools. At the policy level, school leaders and MOE policy makers can consider these findings in meeting the needs of students with SEN in Singapore mainstream schools. Furthermore, this study can inspire further research into supplemental community support for students with SEN in Singapore and influence qualitative research on shadow education for inclusive education in other countries.

1.7 Research Questions

1.7.1 Central Research Question

The aim of this study was to generate a local theory grounded in the perspectives of participants from two subcases. The purpose was to understand the mediating role and contribution of shadow education as a form of supplemental community support in playing a role in facilitating the educational experience and outcomes of students with SEN in mainstream school settings, with the goal of contributing to the ongoing efforts to support and complement inclusive education practices. The participants' perspectives on inclusive education, informed by their experiences with students with SEN, were examined to achieve this. Consequently, the central research question was formulated as follows: What are the shadow educators' and parents' perspectives on shadow education for students with SEN studying in Singapore mainstream schools? This question sought to deepen the understanding of the role played by shadow educators as a supplemental community

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support in contributing to the ongoing efforts to support and complement inclusive education practices for students with SEN enrolled in mainstream schools.

1.7.2 Guiding Questions

The guiding questions for this study were derived from Blackledge and Hunt's (2019) components of perspectives, which includes intentions, strategies, significance and outcomes, along with the reasons behind these components:

- (a) What are the aims and intentions of shadow educators and parents when providing shadow education for their children/students with SEN enrolled in mainstream schools? What are the underlying reasons for these aims and intentions?
- (b) What strategies do parents and shadow educators employ to achieve their aims and intentions? What are the reasons for selecting these strategies?
- (c) What is considered significant in relation to the aims, intentions and strategies? What are the reasons given to support their significance?
- (d) What outcomes are expected as a result of pursuing these aims and intentions? What reasons are provided to justify these expected outcomes?

These guiding questions led to the development of interview questions for shadow educators (Appendix E) and parents (Appendix F). These questions explored their understanding of inclusive education, their underlying beliefs and values, interactions between shadow educators and students with SEN, as well as the support and methods prescribed and utilised (O'Donoghue, 2019).

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1.8 Overview of Research Method

This qualitative collective case study examined two subcases and conducted an in-depth investigation into the participants' experiences with shadow education as a supplementary community support for students with SEN enrolled in mainstream schools. A collective case study combines individual experiences or cases to form a collective understanding of the phenomenon (Merriam & Tisdell, 2016). The research question necessitated (i) "an in-depth study, (ii) one or more instances of the phenomena inclusive education in schools, (iii) real-life context, and (iv) the questions reflected the perspective of the participants involved in the phenomenon" (Gall et al., 2010, p. 447), making a collective case study the appropriate choice.

Aligned with the interpretivist paradigm and informed by symbolic interactionism, this study focussed on interpretation of social phenomena and theory generation, emphasizing that a large number of participants is not a prerequisite to generate theory and maintain the study's value (O'Donoghue, 2019). Purposive sampling was used to recruit shadow educators with at least one year of experience and parents who engaged shadow educators for at least a year to ensure valuable insights from their experiences. The initial sample comprised 20 shadow educators and 15 parents. However, one shadow educator withdrew from the study due to employment circumstances, which occurred after the analysis had been completed, resulting in a final sample of 19 shadow educators and 15 parents who sought the support of shadow educators for their children with SEN enrolled in mainstream schools.

Data collection methods included individual semi-structured interviews conducted with participants to delve into their perspectives and experiences. In addition, field notes

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were taken, providing contextual insights. Furthermore, relevant documentation provided by participants, such as written work or educational records, supplemented the interview data, enriching the depth of understanding. Following the interpretivist approach, data collection and analysis occurred concurrently (Corbin & Strauss, 2015). Theoretical sampling guided further data collection based on emerging theoretical directions from the analysis (Punch, 2014). Inductive analysis was employed, involving constant coding and comparison of raw data to identify themes, patterns and conceptual relationships, facilitating the generation of ideas and conceptual elaboration (Glaser, 1978; Miles & Huberman, 1994).

Data from the two subcases were initially analysed separately, and then cross-case analysis was conducted to identify convergent and contrasting perspectives on inclusive education, experiences in working with students with SEN and effective practices. Emerging themes and categories led to the formulation of propositions that contributed to a local theory explaining shadow education as a form of supplemental community support for students with SEN enrolled in Singapore mainstream schools. The intention was to further ongoing efforts to support and complement inclusive education practices.

1.9 Contribution of the Study

The study's findings highlighted the significant impact of key stakeholder' beliefs in inclusive education on the attitudes, motivations and support for students with SEN. The empirical evidence demonstrated the congruence, coherence, and alignment of shadow education with inclusive education efforts for students with SEN. The study also explored the strategies employed by shadow educators to customise support based on students' needs. Furthermore, the findings shed light on the current and desired outcomes of

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inclusive education for students with SEN and educators as well as the potential for schools to strengthen current implementation by fostering community collaboration in supporting these students. By fostering greater collaboration and providing professional development, and access to relevant curriculum materials as well as resources for shadow educators, schools can strengthen their support for SEN.

The emerging themes of the study have led to key propositions that contribute to the development of a local theory grounded in the perspectives of participants from the two subcases: shadow educators and parents. The research enhances the understanding of shadow education's mediating role and contribution of shadow education in facilitating the educational experience and outcomes of students with SEN in mainstream school settings. The identified themes explored the factors influencing the supportive role of shadow education, aptitude of shadow educators in supporting for students with SEN, their proficiency, the dissonance between the policy intentions and practical implementation of inclusive education and the potential of shadow education as a support for students with SEN.

Based on the study's findings, a model of supplemental community support is proposed to contribute to the ongoing efforts to support and complement inclusive education practices for students with SEN enrolled in Singapore mainstream schools. The findings suggest that current practices of shadow educators in supporting these students in mainstream schools, contribute to the ongoing efforts to support and complement inclusive education practices by facilitating their educational experience and outcomes within the mainstream school setting. By implementing the proposed model, inclusive education

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practices can be further improved and tailored to meet the specific needs of students with SEN.

1.10 Conclusion

This chapter introduced and contextualized the study as well as justified the timely need for this research. The literature review in Chapter 2 expands on the key issues surrounding inclusive education. It establishes the conceptual framework for the study, examining two related fields of knowledge: shadow education and inclusive education, and identifying practices and concerns from previous research to understand the mediating role and contribution of shadow education as a community support utilised by parents to play a role in facilitating the educational experience and outcomes for students with SEN in mainstream school settings.

Chapter 3 further describes the background and context of the study, along with two subcases of participants, and presents the research design and methods employed in the study. The detailed findings from the two subcase studies are presented in Chapters 4 and 5. In Chapter 6, a cross-case analysis of the participant's perspectives was undertaken based on the obtained data.

Chapter 7 focussed on the development and discussion of theoretical propositions derived from the study. The concluding chapter reflects on the implications for professional practice and provides directions for future research.

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The study explored the perspectives of participants from two subcases to examine the mediating role and contribution of shadow education in supporting inclusive education for students with SEN in Singapore mainstream schools. This study was situated at the intersection of educational policies and community practices within the context of Singapore's commitment to fostering inclusive environments for children with SEN in mainstream schools. The intricate interplay between policy intentions and practical implementation of inclusive education underscores the central focus of this research.

Singapore has demonstrated a strong commitment to inclusive education, particularly in facilitating the integration of students with SEN into mainstream educational settings. This commitment is evident through various initiatives aimed at equipping educators with inclusive teaching practices. For instance, teacher training programmes ensure that teachers are adequately prepared to meet the diverse learning needs of their students. In addition, the provisions of Special Educational Needs Officers (SENO) further enhance support for teachers in catering to students with varying needs. The Learning Support Programme (LSP) offers targeted assistance to students who require extra support in areas such as literacy and numeracy. Furthermore, Singapore prioritises the provision of assistive technology devices and support services to students with SEN, enabling them to access the curriculum, enhance communication and foster independent learning. Moreover, significant infrastructure enhancements have been made in mainstream schools to ensure wheelchair accessibility and accommodate the specific needs of students with SEN. These collective efforts highlight Singapore's commitment to creating an inclusive educational environment. As a consequence, this research endeavours to explore the diverse

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perspectives of shadow educators and parents, shedding light on the dynamics and challenges that arise from the practical implementation of inclusive policies. The literature review for this study focusses on the evolution of inclusive education policies and examines their tangible effects on the local educational landscape. The primary emphasis is on the developmental trajectory of policies for inclusion and their translation to real-world practices, rather than exclusively addressing the multifaceted needs of students with SEN. By situating this study within the broader context of policy intentions and practical implementation of inclusive education, an understanding of the challenges and opportunities surrounding the educational experience and outcomes of students with SEN enrolled in Singapore's mainstream school was explored.

To understand the mediating role and contribution of shadow educators in facilitating the educational experience and outcomes for students with SEN in mainstream school settings, the literature review delves into relevant literature on shadow education and inclusive education practices, with the corresponding literature matrix provided in Appendix G.

The review begins by providing a background to inclusive education and the various practices used to gain a contextual understanding of the mediating role and contribution of shadow education in facilitating inclusive education. From the body of research, it becomes evident that the mediating role and contribution of shadow education in inclusive education are complex, particularly for students with SEN enrolled in mainstream schools. The main focus is to understand the perspectives of shadow educators and parents on inclusive education in Singapore mainstream schools for these students. Through this understanding, insight is gained into how shadow educators play a role in the educational experiences and

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outcomes for students with SEN in Singapore mainstream schools. By examining shadow education as a supplemental community support and its role in the educational experience and outcomes for students with SEN enrolled in mainstream schools, this research sought to provide valuable insights to contribute to the ongoing efforts to support and complement inclusive education practices for these students.

2.1 Background to Inclusive Education

The concept of inclusive education has a historical foundation dating back to the early 1900s. During this period, the focus was primarily centred on identifying individuals considered as “misfits” (Thomas et al., 1998, p. 3). However, progress in inclusive education was hindered by the influence of psychometrics and eugenics, which led an education system categorising students based on their abilities. The 1944 UK Education Act further reinforced this categorisation approach by segregating education into ten categories of handicaps.

The perspective on inclusive education underwent a significant transformation during the civil rights movement of the 1960s and 1970s. Concerns about the social exclusion of specific groups sparked discussions surrounding inclusive education. Despite its origins in the early 1900s, the concept of inclusive education remained overshadowed by the influence of psychometrics and eugenics until the aftermath of World War II, when it resurfaced and garnered renewed attention.

The study of inclusive education mainly began after World War II, following the recognition of the Universal Declaration of Human Rights (Universal Declaration of Human Rights, 1948, Article 26). The UDHR emphasised the right to education for all, leading many schools to adopt inclusive practices. Advocates of inclusive education argue

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that segregated education leads to segregation in adulthood. Table 2 provides a timeline summary of important milestones in supporting students with SEN globally.

Table 2

Timeline of Milestones for Education Applied to Students with SEN

Year	Policy	Details	Outcome
1948	Universal Declaration of Human Rights (UDHR, Article 26)	The human right of all children to education was recognised.	It was recognised that everyone has the right to education, including students who were entitled to receive educational opportunities. However, some of these children were seen as maladjusted and deemed incapable of being educated. As a result, special schools were established to offer life-skills training for these students.
1959	Declaration of Rights of the Child	Universally accepted rights for children were set out.	Many nations started to address elements of children's lives that had been earlier ignored but were essential for upholding our fundamental humanity
1975	Declaration of Rights of Disabled Persons	The fundamental human rights of people with disability were set out.	Efforts were made to promote equal enjoyment of human rights for all people regardless of their nationality.

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Table 2 (continued).

Year	Policy	Details	Outcome
1989	Convention on the Rights of the Child	There were advocates for the protection of children's rights, aiming to assist children in meeting their basic needs and expanding their opportunities to achieve their full potential.	National governments made a commitment to safeguard and ensure the rights of children. They also agreed to be held accountable for this pledge before the international community
1990	World Declaration on Education for All (EFA)	Education was recognised as encompassing more than just access to primary education; it also addressed the basic learning needs of all children, youth, and adults .	Efforts were made to push new boundaries in order to ensure that EFA became a reality in a changing world.
1994	Salamanca Statement and Framework for Action on Special Needs Education (UNESCO)	It was acknowledged that every child had a fundamental right to education to attain an acceptable level of learning. Moreover, students with disabilities were ensured access to regular schools and the ability to meet their appropriate educational needs.	Global issues concerning students with disabilities and their right to equal opportunities within education were addressed.
2000	World Education Forum: the Dakar Framework for Action (UNESCO)	Efforts were made to achieve EFA and six goals were identified to be met by 2015.	Governments, development agencies, civil society and the private sector worked together collaboratively to achieve the EFA goals.

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Table 2 (continued).

Year	Policy	Details	Outcome
2006	Convention on the Rights of Persons with Disabilities (CRPD, Article 7)	Efforts were made to clarify and qualify how all categories of rights applied to persons with disabilities. In addition, areas were identified where adaptations had to be made to cater to the needs of persons with disabilities.	92 countries and 25 international organisations became signatories to the first international legal document proclaiming inclusive education as a human right. Singapore ratified this in 2013, reinforcing its commitment to inclusive education.

Note. A summary of milestones in chronological order on the development of inclusive education. The information for 1948 is from The *Universal Declaration of Human Rights* by United Nations. Copyright 1948 by United Nations. The information for 1959 is from the *Declaration of Rights of the Child* by United Nations. Copyright 1959 by United Nations. The information for 1975 is from the *Declaration of Rights of Disabled Persons* by United Nations. Copyright 1975 by United Nations. The information for 1989 is from *Convention on the Rights of the Child* by United Nations Human Rights. Copyright 1989 by Office of the United Nations High Commissioner for Human Rights. The information for 1990 is from *World Declaration on Education for All* by United Nations Human Rights. Copyright 1990 by Office of the United Nations High Commissioner for Human Rights. The information for 1994 is from The *Salamanca Statement*, by United Nations Educational, Scientific and Cultural Organisation. Copyright 1994 by United Nations Educational, Scientific and Cultural Organisation. The information for 2000 is from The *Dakar Framework for Action* by United Nations Educational, Scientific and Cultural Organisation. Copyright 2000 by United Nations, Educational, Scientific and Cultural Organisation. The information for 2006 is from the *Convention on the Rights of Persons with Disabilities* by United Nations Human Rights. Copyrighted 2006 by Office of the United Nations High Commissioner for Human Rights.

In 2001, the United Kingdom (UK) took a significant step by introducing the Special Education Needs and Disability Act, which supported students with disabilities in pursuing their education goals. Similarly, in 2004, the United States of America (USA), enacted the Individuals with Disabilities Act (IDEA), empowering and enabling students with disabilities to strive academically. These policies marked important milestones in creating an inclusive educational environment for students with diverse needs.

Both the UK and USA policies established objectives, goals, and evaluation techniques specifically tailored to students with SEN. In developed nations, these inclusive

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policies led to the employment of teacher assistants to address the needs of individual learners. In the UK, policy reforms encouraged teacher assistants to assume teaching-type roles to reduce teachers' workload.

In the United States, teacher assistants provided instructional support to students with SEN both inside and outside of the classroom. These policies have facilitated equal opportunities in education for students with SEN by establishing guidelines and support processes for accessing learning. Over the past two decades, researchers have shown interest in the role of teaching assistants in schools with the aim to identify effective deployment and measure their impacts (Blatchford et al., 2012; Sharma & Salend, 2016). Recent research suggested that teaching assistants' impact on learning outcomes varies based on their deployment (Webster & Boer, 2022).

Furthermore, the first international legal document proclaiming inclusive education as a human right saw a significant milestone in 2006, with 92 countries and 25 international organisations becoming signatories. Building on this global momentum, Singapore further showcased its dedication to inclusive education by ratifying this important document in 2013, highlighting its commitment to aligning with international standards and enhancing support for students with SEN.

2.2 Concepts of Inclusive Education

The promotion of inclusive education has been a significant focus on national agendas for nearly three decades with countries worldwide making substantial efforts to create more equitable and accessible learning environments for all students. The Salamanca Statement (1994) emphasised the importance of regular schools with an inclusive orientation, promoting a culture free from discrimination and providing universal

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access to education. The World Declaration on Education for All (EFA), established through The Dakar Framework for Action in 2000, recognised primary education as a fundamental right for every child, to be achieved by 2015, leading many countries to prioritise the implementation of inclusive education in their reform agendas.

Despite these efforts, inclusive education remains a complex issue (Ainscow, 2020; Barshay, 2023; Haug, 2017; Leijen et al., 2021; Mitchell, 2015) yet to be fully realised in any country, according to international organisations like UNICEF, UNESCO, the Council of Europe, the United Nations and the European Union. Fletcher and Artiles' (2005) highlighted four key areas related to inclusion and their implications for schools: inclusion as placement for disabled children and those with special educational needs, inclusion as education for all for groups with limited or poor-quality education, inclusion as participation for marginalized learners, and social inclusion for groups at risk of social exclusion. Challenges persist in terms of children with SEN accessing education, social inclusion, and experiencing quality education (Leijen et al., 2021; Sarton & Smith, 2018).

Recent research by Obah (2024) has examined the effectiveness of inclusive education policies in fostering social inclusion and academic achievement among students with SEN. Obah suggested that inclusive education policies have the potential to foster academic achievement and social inclusion for students with disabilities contributing to a more equitable and supportive educational system. According to Stone and Karr (2024), and Leijen (2021) successful inclusive education requires a multi-faceted approach that addresses systemic factors, builds educator capacity, and fosters inclusive school cultures to meet the diverse needs of all students.

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In 2004, Singapore's Prime Minister advocated for a more inclusive society, leading the MOE to restructure and focus its services on a more inclusive approach to supporting students with SEN enrolled in mainstream schools. Singapore ratified the United Nations Convention on the Rights of Persons with Disabilities (UNCRPD) in 2013 and Poon (2016) explained that in Singapore, students are given the opportunity to maximise their potential through an appropriate educational setting that suits their needs, whether in mainstream or special education schools. Nonetheless, a system has been established to inclusively support students with SEN, meeting their diverse needs and ensuring access and participation, quality of education, and proper assistance (Poon, 2022). This concept of inclusive education in Singapore serves as another tangible expression of the commitment to inclusion in practice. The MOE has made remarkable strides in promoting inclusive education by providing ongoing support in terms of infrastructures, facilities and the development of personnel within schools. The MOE ensures barrier-free accessibility, specialised support programmes and services, and employs specialised personnel such as teachers trained in special educational needs, SENOs, school counsellors and psychologists with the Ministry of Education (MOE, 2022a, Toh, 2018).

While students with SEN enrolled in mainstream schools receive additional support in key areas impacting inclusive education, namely, student learning and behavioural outcomes, challenges still persist. However, despite these efforts significant challenges persists, indicating gaps in achieving full inclusivity. According to a survey conducted by Lien Foundation on Inclusive Attitudes (2016), perceptions suggested that Singapore fell short of being truly inclusive for children with special needs. In addition, research by Wong et al., (2015) highlighted that parents of children with SEN enrolled in mainstream

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schools frequently supplement available support by actively seeking private tuition and professional therapy. This proactive approach highlights parental concerns about the adequacy of support within the school environment alone. Moreover, reports from *The New Paper*, highlighted the presence of shadow teachers (special needs assistants), who play a crucial role in supporting students within mainstream schools (Yusoff, 2016). This reflects a broader perception among parents that existing support frameworks may not fully address the diverse needs of their children with SEN. Furthermore, an article in the *Straits Times* in 2019 noted an increasing tendency among parents to seek out shadow schools due to a sense of helplessness and a desire for more comprehensive support for their children with SEN enrolled in mainstream schools (Yuen, 2019). This trend highlights persistent challenges and indicates a gap between perceived and actual support provision within mainstream educational settings.

The literature review concentrates on understanding the concept of inclusive education, particularly in relation to the mediating role and contribution of shadow education in shaping the educational experiences and outcomes for students with SEN enrolled in mainstream schools. It seeks to achieve an understanding of the inputs, processes, and outcomes of inclusive education in practice.

2.3 Inclusive Education in Practice

The existing literature indicates that various countries worldwide have embraced inclusive education, each aligning with their national goals (Faragher et al., 2021; Johnstone & Chapman, 2009; Kearney & Kane, 2006; Liasidou, 2008; UNESCO, 2020). Exploring the approaches taken by other countries provides valuable context for understanding Singapore's inclusive education policy intentions and practical implementation.

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However, developed nations have encountered challenges in their efforts to support inclusive education. In response to global initiatives, governments worldwide have endeavoured to address inclusive education within their education agendas. Table 3 provides a historical overview of policies and practices in several developed nations illustrating their recent history and current efforts to institutionalise inclusive education.

Table 3

Inclusive Education Practices Across Developed Nations

Location	Inclusive education in practice
Australia	Historically reliant on separate special educational systems, Australia is progressively embracing inclusive education, with some regions adopting whole-school approaches and in-class support for students with disabilities. This shift aligns with the Disability Standards for Education 2005 and the National Disability Strategy 2021, emphasising reasonable adjustments and equal learning opportunities. While implementation varies across states and territories, ongoing efforts aim to address challenges and ensure a truly inclusive education system for all learners.
Canada	While inclusive education practices vary across Canadian provinces and territories due to decentralised education systems, Canada demonstrates a broader commitment to inclusion, guided by principles like the UNCRPD. Current trends focus on Universal Design of Learning, Response to Intervention, and culturally responsive practices, with ongoing efforts to strengthen inclusive education for all learners.
Europe	European approaches to education vary, with some nations maintaining separate special education systems, while others move towards inclusion, as noted by the European Commission's 2017 report. Despite a commitment to inclusive education guided by frameworks like the UNCRPD, implementation differs across member states, and not all schools offer fully inclusive environments. However, a general trend towards inclusion is evident, with growing emphasis on early intervention, individualised support, and teacher training.

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Table 3 (continued).

Location	Inclusive education in practice
New Zealand	Grounded in legislation like the Education Act (1989) and the New Zealand Disability Strategy (2016), New Zealand schools are obligated to provide inclusive education, ensuring equal opportunities for all learners. Ongoing initiatives like Education and Training Act 2020 and the Learning Support Action Plan further advance inclusive practices, emphasising early intervention, personalised learning, and teacher development.
The United Kingdom (UK)	The legislative frameworks of the UK, encompassing the Equality Act (2010) and Children and Family Act 2014, mandate inclusive education for students with Special Educational Needs and Disabilities (SEND). While these acts provide a strong foundation, ongoing efforts address implementation challenges and focus on areas like early intervention, mental health, and teacher training to ensure effective support and equal opportunities for all learners.
The United States of America (USA)	The Individuals with Disability Education Act (2004) mandates that US public schools to provide inclusive education for students with SEN, ensuring access to the general curriculum and individualised support through Individualised Education Plans (IEPs). While challenges exist, ongoing efforts aim to strengthen inclusive practices and ensure equitable access to quality education for all learners.

Note. A summary of inclusive practices from various developed nations. The information for states and territories within Australia is from the Disability Standards for Education 2005, Review 2020. Copyright 2020 by Commonwealth of Australia. The department of Social Services is responsible for The Disability and Australia’s Disability Strategy 2021 -2031. Copyright by Commonwealth of Australia. The information for provinces and territories within Canada is from UNESCO GEM Report 2020. Copyright 2020 by GEM Report. The information for nations within Europe is from the European Council (2017). Copyright 2017 by European Union. The information from territories within New Zealand is from Education Act, copyright 1989 by Crown, and the New Zealand Disability Strategy 2016 - 2026, copyright 2016 by Crown. Education and Training Act 2020, copyright by Crown. The information for nations within UK is from UK Equality Act, copyright 2010 by Crown, and Children and Families Act, copyright 2014 by Crown. The information for states and territories within USA is from The Individuals with Disability Act 2004. Copyright 2004 by US Congress.

Table 3 highlights the practical implementation of inclusive education, indicating a focus on fostering greater equitable educational outcomes for all children. On the other hand, in the developing nations in Southeast Asia (SEA), support for inclusive education predominantly takes the form of legislative measures (Singh, 2022). Table 4 presents a

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summary of nations in SEA including developing and developed nations (Singapore and Malaysia) along with their practices to inclusive education.

Table 4

Inclusive Education Practices Across Southeast Asia Nations

Location	Inclusive education in practice
Cambodia	Cambodia has shown a strong commitment to inclusive education, evident in its strategic approach outlined by the Ministry of Education, Youth and Sports in 2014. Key focus areas include early childhood education, teacher training, accessible infrastructure, and community awareness. While challenges like resource constraints exist, ongoing efforts and collaboration among stakeholders are crucial to ensure continued progress and successful implementation of inclusive education throughout the nation.
Indonesia	Indonesia emphasises integrating students with disabilities into mainstream schools, where support services like Special Classes, functioning as guidance centres, and Resource Rooms, serving as consultation, assessment and training centres, play a crucial role (Djajda Raharja, 2014). Despite these efforts, challenges remain in ensuring consistent policy implementation, addressing accessibility issues in schools, and overcoming teacher shortages.
Laos	Laos is working to make its education system inclusive for all children, including those with disabilities. Early initiatives, like those mentioned by UNICEF (2003) focussed on developing inclusive kindergartens and enhancing the skills of teachers involved in the project. While the government has shown further commitment through policy development and international agreements, challenges like limited resources and societal attitudes still exist.

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Table 4 (continued).

Location	Inclusive education in practice
Malaysia	Malaysia demonstrates its commitment to inclusion through programmes like special education integration programmes which provides integration support for students with SEN within mainstream schools. In 2014, there were a total of 1742 special and integration schools, with 436 classes specifically within the inclusive education programme, catering to 5376 students with special needs, representing 9.6% of the student population throughout Malaysia (Bahagian Pendidikan Khas, 2014).
Myanmar	Myanmar's journey towards inclusive education has been fraught with challenges. Despite adopting inclusive education in 2004 as noted by Mari Koistinen and Tha Uke (2013), the extent of its implementation remained unclear. While past efforts from the government and international organisations existed, the current landscape is uncertain.
Philippines	The Philippines is committed to inclusive education guided by the 1987 Constitution and laws like Magna Carta for Disabled Persons and the Enhanced Basic Education Act 2013. Though provisions for appropriate education programmes and individual support services for students are available (Teresita G. Inciong, 2007), challenges include resource limitations, accessibility issues, and teacher training needs.
Singapore	Singapore demonstrates a commitment to inclusive education, particularly within mainstream schools, through various initiatives aimed at supporting students with mild to moderate disabilities. As described by Cohen (2009), these initiatives include the training and deployment of Special Educational Needs Officers, along with additional funding for resource schools and professional development opportunities for mainstream educators to enhance their ability to teach students with SEN. While challenges remain in ensuring consistent inclusion across schools and supporting students with complex needs, ongoing efforts aim to strengthen inclusive practices and provide equitable access to quality education for all learners.

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Table 4 (continued).

Location	Inclusive education in practice
Thailand	Thailand's dedication to inclusive education is evident in its diverse support services, ranging from mainstream integration to specialised special education schools and centres (Education for Individuals with Disabilities Act 2008). Despite these efforts, challenges remain ensuring consistent policy implementation, addressing accessibility issues in schools and overcoming teacher shortages.
Vietnam	While Vietnam prioritises increasing enrolment of students with SEN in schools, challenges like the quality of education has been hindered by inadequate resources to support inclusive practices effectively (Bui The Hop, 2014). Despite these challenges, Vietnam focusses on integrating students with disabilities into mainstream schools while also providing specialised support through special education schools and centres.

Note. A summary of inclusive practices from various Southeast Asia nations. The information is from *Windows on Inclusion: The experience in Southeast Asia*. Copyright 2015 by Dr Yasmin Hussain.

The table provides a recent historical account of past practices in Southeast Asia nations, serving as a record of inclusive education and relevant legislation in the region. It is worth noting that the references utilised in this context primarily derive from earlier works, with the most recent being Hussain's work dated 2015. It is crucial to acknowledge the possibility of evolution in the Southeast Asian landscape since the time of these studies, potentially resulting in improvements or changes in practices. Despite efforts to locate more recent information, the situation in the region remains complex with various factors contributing to its stability. While progress persists in certain areas like economic development and regional cooperation, the overall landscape concerning inclusive education appears to have maintained relative stability in the last decade.

Previous studies highlighted the challenges faced in implementing inclusive education in the region, indicating that it falls short of providing education for all (Grimes

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et al., 2011; Hosshan et al., 2019; Jelas & Ali, 2014; Kurniawati et al., 2012). These studies have identified severe resource limitations such as inadequate facilities, a shortage of qualified staff, poor educational quality, insufficient supplies and learning materials and a lack of administrative support (UNESCO, 2005, 2020). These constraints have restricted educational opportunities for children with disabilities (Bani & Lach, 2024).

While the historical perspectives provided by these references offer insights into the context of inclusive education practices in Southeast Asia nations, the present situation warrants attention. Ongoing efforts are being made, yet many countries in the region face economic constraints that may hinder increased funding for education. These countries are still grappling with the challenge of providing equitable opportunities to students returning from school closures during the post-pandemic recovery period (SEADS, 2022). By considering the developments in the region, future research can contribute to understanding the state of inclusive education and identifying areas for improvement to achieve equitable educational outcomes for all children in the region.

Recent studies, such as that by Hosshan et al. (2019), indicated that the literature on inclusive education in Southeast Asia is still emerging. While global advancements in inclusive education have been significant, Southeast Asia faces unique challenges and opportunities. These challenges include diverse educational systems, varying levels of economic development, and cultural attitudes towards special needs. In several Southeast Asian countries, inclusive education policies are still in the nascent stages of implementation. The necessary infrastructure and resources to ensure that students with SEN can access quality education are often inadequate.

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UNICEF (2021) has outlined policies, strategies, and practices for inclusive education that have been put into action throughout the entire education system in the South Asia region. Singh (2022) stated that countries in the region have committed to inclusion and the obligation to protect the rights of individuals with disabilities. Although progress can be gradual, it is slowly advancing throughout the region. These efforts hold promise for expanding access and enhancing learning outcomes for children with disabilities.

2.4 Global Inclusive Education Discourse and Complexities

Although current literature provides inclusive education practices across different nations, it is crucial to acknowledge the continuous debates and complexities in this field. A major challenge is the absence of a unified definition and understanding of inclusive education. Different nations tend to emphasise various aspects of inclusion, such as physical integration, academic achievement, or social participation, resulting in inconsistencies in policy and practice (Ainscow, 2020). In addition, the transition from segregated special education to fully inclusive mainstream environments has proven challenging for many nations. Practical challenges such as teacher training, resource allocation, and parental attitudes, can impede the realisation of inclusive goals (Mokaleng & Mówes, 2020). The disparity between policy intentions and actual experiences highlights the need for a more critical examination of the implementation process.

A related debate concerns the existence of special education schools alongside inclusive mainstream schools. The debate surrounding special schools is divided. Some argue that these institutions provide essential specialised support, while others believe they reinforce the marginalisation of students with SEN (Bešić, 2020). Balancing the needs of diverse learners within the education system is complex. Research suggests that the

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implementation of inclusive education varies significantly depending on the socio-cultural, economic and political contexts of different nations (Ainscow, 2020). Key factors such as resource availability, teacher training, and societal attitudes towards special needs play crucial roles in determining the success or challenges of these initiatives. This indicates that context-specific strategies are essential, as universal approaches may not be effective.

These discussions and challenges highlight the lack of uniformity in inclusive education practices and emphasise the ongoing need to critically analyse the assumptions, barriers and potential solutions to provide equitable and quality education for all students.

2.5 Shadow Education

According to existing research, shadow education, also known as private tutoring, has traditionally thrived in Asian countries like China, South Korea, Japan, Taiwan, Singapore, India, and Kazakhstan as well as some European countries like Turkey (Bray, 2010). This form of private supplementary support, provided by individuals or commercial companies, has gained momentum and expanded in various other nations (Bray & Lykins, 2012; Bray et al., 2013; ReportLinker, 2021; Subedi, 2018; Tansel & Bircan, 2006; Yu & Zhang, 2022). Recent studies have shed light on the prevalence of private tutoring in various contexts (Bray, 2017; Bray & Lykins, 2012; Boudreau, 2021; Liao & Huang, 2018), the impact of regulating private tutoring (Bray & Kwo, 2014; Choi & Choi, 2016), teacher corruption as tutors (Bray, 2013b; Kobakhidze, 2018), how private tutoring exacerbates social inequality (Boudreau, 2021; Bray, 2010, Choi, 2012; Dawson, 2010; Exley, 2021; Hajar & Karakus, 2024), its influence on parents' and students' lives (Cayubid et al., 2014; Otto & Karbach, 2019; Sriprakash et al., 2016), and its effects on mainstream education (Kwo & Bray, 2014; Liao & Huang, 2018; Wang & Bray, 2016; Yung, 2020).

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In Singapore, shadow education has become deeply ingrained in the educational framework. Singapore has gained the reputation of a tuition nation (Teng, 2015) with families spending \$1.1 billion on tuition a decade ago and the expenditure increased to \$1.4 billion in 2019 according to the Department of Statistics' Household Expenditure Survey 2017/2018 (Singapore Department of Statistics, 2019). Previous research from Blackbox Research, 2012 highlighted 67% of Singaporeans currently had either enrolled or previously enrolled their children in tuition, while a joint poll by the Straits Times and research company Nexus Link found that 7 in 10 parents opted tuition for their children (Davie, 2015). A recent article reported in Zaobao (2024) indicates a growing demand for free shadow education among parents in Singapore, attributed in part to the current high cost of living. These insights indicate the enduring significance of shadow education in the educational landscape, highlighting its continued prevalence among Singaporean students.

In the discussion of shadow education, it is important to note the available studies primarily focus on the support given by private special needs assistants who are hired by parents to accompany their children with SEN throughout their day in mainstream school (Hamid et al., 2020; Nasir et al., 2019; Ng, 2015; Yusoff, 2016). These special needs assistants offer various forms of support, ranging from helping students with SEN stay focussed in class to facilitating their interaction with peers. Some assistants even provide assistance with activities like toilet training for younger students with SEN.

However, it is important to distinguish the roles and services provided by shadow education (private supplementary tutoring), private special needs assistants (NCSE, 2023) and resource support services provided by associations or social service agencies such as associations for vision, hearing impairment, or dyslexia (MOE, 2023a). Shadow educators

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primarily offer private supplementary tutoring outside mainstream school settings and they do not accompany students to schools. In contrast, special needs assistants provide direct in-school support, tailored to specific educational needs. Resource support services from associations or social service agencies play a different role, focussing on providing specialised resources and interventions for students with SEN. These services are designed to address specific special needs or learning challenges and often collaborate closely with educational institutions under distinct mandates and funding frameworks from private tutoring. This research specifically explores the mediating role and contribution of shadow education as a supplemental community support, distinct from the services provided by private special needs assistants and resource support services.

The literature has focussed on the significance of shadow education in East Asia (Bray, 2022; Dawson, 2010; Zeng, 1999). South Korea is known for its hagwons, Japan for its juku, and Taiwan for its buxiban (Kimura, 2018; Liu, 2012; Roesgaard, 2006; Seth, 2002). Tutoring institutions have also emerged on a large scale in Vietnam and Mainland China (Dang, 2008; Feng, 2021; Zhang, 2011). Extensive shadow education exists in much of South Asia (Bray, 2022; Bray & Lykins, 2012; Pallegedara, 2011; Sujatha & Rani, 2011), Southern Europe (Bray, 2011, 2021a; Kassotakis & Verdis, 2013), and certain parts of North Africa (Akkari, 2010; Bray, 2021b; Sobhy, 2012). Singapore, in particular, is well-known for its tuition centres registered under various names such as education centres, enrichment centres, learning hubs and language centres. According to Wong (2021), MOE recorded an increase in tuition centres from around 600 in 2016 to over 800. It is important to note that the figure does not include non-profit organisations, religious organisations and voluntary groups of higher education students providing shadow education.

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In Singapore, the spectrum of shadow education encompasses diverse offerings, ranging from free services provided by non-profit and religious organisations or higher education student groups (Teng, 2016), to nominal fee-paying services offered by self-help groups like the Chinese Development Assistance Council (CDAC), Eurasian Association (EA), Singapore Indian Development Association (SINDA) and Yayasan MENDAKI (MENDAKI). These organisations through their collaborative Tuition Programme launched in 2002 to help students across various communities to have access to affordable shadow education (Today, 2013). The market also offers fee-based shadow education services provided by private individuals or commercial learning centres.

Although existing literature provides valuable insights into the prevalence and motivations behind shadow education in Singapore, it is important to acknowledge the temporary limitations of data. For instance, the most recent statistics available, dating back to 2016, revealed that approximately 60% of secondary school students and 80% of primary school students are enrolled in tuition. However, the absence of more recent data may hinder the ability to discern any shifts or developments in this trend. As highlighted by Davie in 2015, the primary motivations for seeking shadow education include the desire to improve grades (70%) and to help children keep up with their peers (52%). On average, students in Singapore spend approximately three hours per week in tuition. From a societal perspective, motivations for private tutoring may stem from Confucian traditions that place high value on academic performance as a means of socioeconomic advancement (Bray & Lykins, 2012). Furthermore, Singapore's governing principle of meritocracy (Heng, 2019), has intensified competition in education, as performance in the national examinations determines future opportunities and choices. While existing studies have provided valuable

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insights into the prevalence and motivations behind shadow education in Singapore, there is a need to explore the soft benefits and experiences of students, particularly students with SEN. The experiences of students with SEN in the shadow education system are particularly understudied.

Despite efforts made by the MOE, some parents feel that more needs to be done for students with SEN enrolled in mainstream schools (Yuen, 2019). While Chee et al., 2015 found no negative effects on the quality of education for students with SEN or their mainstream peers in their research for mainstreaming, it is important to note that other studies may present differing findings on this matter. However, parents appear to doubt whether the opportunities offered by inclusive education in Singapore mainstream schools sufficiently counterbalance the effects of the meritocracy policy on children with SEN. Consequently, when parents feel at a loss or believe the support in mainstream schools is inadequate, they turn to shadow education (Yuen, 2019).

Personalised shadow education, for example, proves instrumental in enabling learners progressing at a slower pace to keep aligned with their peers. This not only enhances their academic performance but also contributes to bolstering their self-esteem and fostering a sense of accomplishment. Oller and Glasman (2013) contend that tutoring support programmes in France:

act as ‘intermediary spaces’ in which children and adolescents have the chance to admit gaps in their knowledge without being punished at school or harassed by impatient parents. Students can thus do and redo tasks they did not perform well and, ultimately, take charge of their own learning. (p.7)

Shadow education has been recognized as a useful educational practice that can benefit students at all academic levels (Baker et al., 2001; Bray, 2011; Dang & Rogers,

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2008; Stevenson & Baker, 1992). Research on the benefits for high achievers is limited, however one study conducted in Russia found that participating in shadow education positively impacts the achievement of high-achieving students (Loyalka & Zakharov, 2016). Furthermore, there is a growing recognition of the importance of shadow education in supporting students' academic progress (Bray, 2022; Young et al., 2018).

Dang and Rogers (2008) suggested that improved support through shadow education can positively impact educational outcomes and has the potential to contribute to the overall development of human capital within society. This perspective is grounded in existing literature and supported by empirical evidence (Berberoğlu & Tansel, 2014; Mischo & Haag, 2002; Nickow et al., 2020; Stevenson & Baker, 1992). It is important to note that while there is evidence to suggest potential benefits of shadow education, it is necessary to consider the diverse perspectives and experiences of parents, students, and educators regarding the effectiveness and appropriateness of shadow education in various contexts (Benckwitz et al., 2022; Guill & Bos, 2014).

Numerous studies have explored the factors influencing the demand for private tutoring. One significant determinant is perceived ineffectiveness of the public education system (Kim & Lee, 2010; Oliver & Schwaneberg, 2019; Silova & Bray, 2006). Parents and students who are dissatisfied with the education provided by the public schools often seek alternative solutions such as engaging in private tutoring or considering studying abroad (Kim, 2004). In teacher-centred systems that may not cater well to students who require additional support, private tutoring becomes a more necessary option (Bray, 1999). Some parents may simply desire more personalised attention for their children (Bray 2021b; Feng, 2021; George, 1992; Wei & Guan, 2021).

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Numerous empirical studies have explored the impact of private shadow education on academic performance, yielding varied findings. Several studies have reported positive outcomes (Berberoğlu & Tansel, 2014; Bray & Lykins, 2012; Hajar & Abenova, 2021; Stevenson & Baker, 1992; Wei & Guan 2021). For instance, Stevenson and Baker (1992) found that private shadow education in high schools increased the likelihood of university attendance in Japan. Similarly, Hajar and Abenova (2021) study revealed that private shadow education improved students' academic performance. Berberoğlu and Tansel (2014) also observed improved test scores among students attending private tutoring in Turkey.

However, it is noticeable that while these studies indicate positive effects, they primarily provide speculative and anecdotal evidence. As a result, the conclusions drawn regarding the effectiveness of private tutoring were mixed. It is important to consider various factors that may influence the impact of private shadow education, such as the quality of tutoring, the specific educational context, cultural and societal norms, and individual student characteristics.

Furthermore, establishing causal connections between the nature of education systems and the demand for private tutoring, particularly among mainstream school students with SEN, remains challenging. The interplay between educational systems, shadow education practices, and the diverse needs of students with SEN is a complex and multifaceted area that requires further investigation and research.

Previous studies examining perspectives on the work of shadow educators, including those involving parents (Jansen, et al., 2022; Kobakhidze & Šťastný, 2023; Soo, 2011) were not included in the literature review to avoid potential bias in data collection and analysis, especially as these studies were from a context outside of Singapore.

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2.6 Bronfenbrenner's Ecological Theory

Bronfenbrenner's ecological systems theory (1979) provides a model for understanding the impact of environmental factors on child development and education (Bronfenbrenner, 1979). This theory categorises these factors into five levels: microsystem, mesosystem, exosystem, macrosystem and chronosystem, demonstrating how they are interconnected and influence the individual development.

Previous studies have applied this framework to understand the complexities of shadow education. For example, Bray and Kobakhidze (2015) analysed the evolving landscape of private supplementary tutoring in Hong Kong, highlighting how micro, meso, exo and macro levels shape shadow education practices. Similarly, studies were done by Hajar (2024) in Kazakhstan and Uzbekistan (Hajar & Tabaeva, 2024). Luo and Chan 's (2022) review of the literature highlighted the theory's relevance in understanding educational ecosystems and the role of shadow education.

Building on these foundations, this study utilises Bronfenbrenner's ecological systems theory to examine how private supplementary tutoring enhances inclusive education for students with SEN in Singapore mainstream schools. This theoretical lens helps explore the complex interactions between students, families, school environments, community-based supports like shadow education and broader educational policies.

2.7 Challenges of Inclusive Education

Implementing inclusive education systems poses numerous challenges, with educators playing a pivotal role in overcoming these obstacles (Kazmi et al., 2023; Kurowski et al., 2022; Leijen et al., 2021). While the movement towards inclusion aligns with broader human rights principles, many educators express valid concerns regarding the growing trend of placing students with SEN in mainstream schools (Florian, 2008).

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Teachers' involvement in curriculum decisions and student groupings boosts their confidence in providing necessary additional assistance to students with SEN. Failing to provide the necessary support to meet the needs of these students can have detrimental effects on their well-being (Klapp et al., 2023). To ensure consistent progress for students with SEN, teachers must be well-trained, skilled and motivated (Yuwono & Okech, 2021). As students with SEN often lag behind their peers, teachers need to be equipped to address this issue effectively. According to Brownell et al. (2010), the success of an inclusive education system relies on the development and retention of a sufficient pool of professional, well-prepared and skilled teachers.

Hudgins (2012) identifies the values and beliefs held by different communities as another challenge when implementing inclusive education programmes. The emphasis is on the need for cultural reforms in schools, societies and homes. These reforms involve addressing the perceptions and sentiments of individuals working in inclusive schools, as these thoughts influence teaching practices, student learning and the development of programmes by administrators to achieve the desired progress.

2.8 Indicators of Effective Inclusive Education

The measure of "effective" inclusive education is no longer based solely on the number of students with SEN attending mainstream schools. Instead, the focus has shifted towards the quality of education, educational outcomes and inclusion experiences for children with SEN (Schuelka, 2018).

Booth and Ainscow (2002) developed a set of indicators that support inclusive development in schools, encompassing three dimensions: creating inclusive cultures, establishing inclusive policies, and fostering inclusive practices. Hollenweger and

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Haskell (2002) also devised a range of quality indicators that encompass educational inputs and resources, processes, and results. In 2005, Peters et al. introduced the Disability Rights in Education Model (DREM) which illustrates the dynamic interrelationship between outcomes, resources, contexts and inputs. This model serves as a valuable framework for understanding the various factors that influence inclusive education. By recognising the interconnected nature of outcomes, resources, contents and inputs, policy makers, educators, community members can work together to create an inclusive educational environment that addresses the diverse needs of students with disabilities. The DREM provides a comprehensive and holistic approach to inclusive education planning and implementation, fostering a more inclusive and equitable educational system.

Loerman et al. (2014) proposed that successful inclusive education sites can be distinguished by evaluating inputs, processes, and outcomes. These evaluations can be conceptualised at the national (macro), district (meso) and school (micro) levels. At the macro level, inclusive education is influenced by various factors such as policy, staff professional development and teacher education, resources and finances as well as school leadership (Xue et al., 2022). These inputs play a role in shaping inclusive practices. Also, school climate, school practices, collaboration and shared responsibility, support to individuals and the role of specialised personnel drive the inclusive processes (Lindener et al., 2022; Xue et al., 2022). These elements work together to create an inclusive environment where all students can thrive. The desired outcomes at this level include increased student participation, improved academic achievement and expanded post-school options. Similarly, at the meso level, inclusive education is influenced by the inputs mentioned at the macro level, including curriculum. The processes and outcomes of

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inclusive education remain consistent across these levels, emphasizing the importance of a holistic approach to inclusive practices.

At the micro level inclusive education is primarily influenced by resources and finances, leadership and curriculum (Massouti et al., 2023). While the processes at this level do not explicitly include specialised personnel, they still encompass various aspects such as school climate, classroom practices, collaboration and shared responsibility, and support to individuals. These factors contribute to the overall success of inclusive education at the micro level, ensuring positive outcomes for students.

The availability of evaluation tools for assessing the effectiveness of inclusive education presents an opportunity to gain valuable insights into the necessary steps for informed planning and allocation of resources at all levels (Lutz et al. 2024). These tools enhance the provision and outcomes of inclusive education by identifying areas that require attention and improvement. By utilising these evaluation measures, policymakers, educators, and stakeholders can make informed decisions to ensure inclusive education is effectively implemented and that resources are allocated appropriately to support its success.

2.9 Conclusion

The literature review presented, focussed on the provision of inclusive education for students with SEN globally, with an emphasis on the complexity of implementing inclusive education in mainstream schools. The concept of inclusive education was approached from various perspectives, highlighting the challenges involved in its implementation for students with SEN. Studies and inclusive education policies suggest that all students in schools should be able to learn together and form friendships with peers who have different abilities. (Lindner et al., 2022; Patterson et al. 2008).

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Despite the efforts and support provided by the MOE, to address the complexity of supporting inclusive education in mainstream schools, many parents still believe that more could be done (Menon, 2022). Some parents seek private supplementary shadow education to help their children with SEN in coping within the mainstream school setting. The review highlighted the different practices across nations in implementing inclusive education, where some children with SEN were unconditionally placed in mainstream schools while others have specific conditions for placement.

Existing studies on the role and contribution of shadow education in supporting students with SEN primarily focussed on private special needs assistants who accompany students with SEN throughout their school day. These assistants provided various types of supports, from helping students focus in class to facilitating social interactions and even providing personal care (Hamid et al., 2020; Nasir et al., 2019; Yusoff, 2016). It is important to clarify that these studies predominantly examined the role of special needs assistants who accompanied students with SEN in school throughout the school days rather than shadow educators (tutors) who do not accompany their students to schools. In the context of this study, the term “shadow education providers”, refers to shadow educators who provide supplemental community support outside of the mainstream school setting.

There is a growing awareness of what inclusive education entails for students with SEN around the world. Although there is no universal agreement on the ideal model of inclusive education, there is a consensus on the importance of inclusive practices. The literature review underscored the wide range of practices adopted globally to support students with SEN in mainstream schools, highlighting the absence of a uniform approach. The varying nature and degree of disabilities among SEN students contributed to this

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diversity. Consequently, it becomes essential to develop a set of principles for inclusive education that are adaptable enough to accommodate the unique needs of individual children. These principles should allow for flexible practices within mainstream schools, including the possibility of collaboration with private providers working alongside mainstream school teachers.

Understanding of the mediating role and contribution of shadow education as a form of supplemental community support and its contribution to ongoing efforts to support and complement inclusive education practices for students with SEN enrolled in mainstream schools required the consideration of factors at the macro, meso and micro levels. The conceptual framework proposed by Bronfenbrenner (1979) on the ecological systems theory, allowed for an exploration of the multiple interactions between children with SEN and the wider system.

Singapore, renowned for its excellent education system, has the potential to develop effective ways of supporting students with SEN. Understanding the perspectives of the shadow educators and parents on the mediating role and contribution of shadow education as a supplemental community support for students with SEN in inclusive settings can provide potential insights on facilitating the educational experience and outcomes for these students in mainstream school settings. The findings and local theory emerging from this research may contribute to the development of a pragmatic model of supplemental community support, further defining the mediating role and contribution of shadow education for students with SEN in mainstream school settings.

CHAPTER 3: LOCAL CONTEXT, RESEARCH METHOD AND DESIGN

The preceding chapter contextualized the central problem of this research within the national and international context of literature on inclusive education policies and practices. In the section “Concepts of Inclusive Education” section (p. 32), it was found that despite the efforts, similar to those made in other countries, to provide inclusive education through formal school structures, the literature indicated that parents in Singapore perceived that support as insufficient. Consequently, they sought additional support for their children with SEN through shadow education providers. There has been a paucity of research into the functions of shadow education providers in Singapore for students with SEN, despite the existence and availability of this support in the community that is sought after by parents for their children with SEN. More specifically, little is known about the motivations of parents of children with SEN in selecting supplemental community support in the form of shadow education for their children. Therefore, the central research question addressed in this study is: What are the shadow educators’ and parents’ perspectives on shadow education for students with SEN studying in Singapore mainstream schools?

This chapter presents the research design and methods employed to explore the perspectives of shadow educators and parents on shadow education for students with SEN enrolled in mainstream schools in Singapore. The intention is to develop an explanatory theory on the mediating role and contribution of shadow education as a supplemental community support, contributing to the ongoing efforts to support and complement inclusive education practices for these students. Before delving into the specifics of the research design, it is essential to provide a contextual overview of inclusive education in Singapore, as it sets the foundation for understanding the educational landscape in which this study takes place.

3.1 Contextual Overview of Inclusive Education in Singapore

Since 2004, Singapore's MOE has been on a transformative journey toward fostering an inclusive society, a vision highlighted by the Prime Minister's call for inclusivity (Lee, 2004). The MOE has been actively restructuring and refocussing its services to support mainstream schools in fostering inclusive practices. This includes developing systems to prevent exclusion, providing psychological support officers to collaborate with schools, and creating a more inclusive approach.

In line with this approach, Ms Indranee Rajah, the Second Minister for Education, in her keynote address at the 2018 Special Education (SPED) Conference, emphasised the MOE's commitment to fostering inclusivity while striving to embrace diversity and meeting educational needs effectively (Rajah, 2018). The MOE's strategy revolves around recognising students' abilities and embracing those with different abilities (Ibrahim, 2018), aiming to maximise their potential within an educational setting that best suits their needs. To achieve this goal, the MOE has implemented various initiatives, provisions and structures that support inclusion across the education system.

- **Multiple Educational Pathways**

Singapore's educational system has flourished by offering increased options and flexibility. The primary school curriculum is standardised for all students from Primary 1 to 4. In Primary 5 and 6, students can select individual subjects at either the foundation or standard levels. Students in foundation level subjects are given additional assistance. The Primary School Leaving Examination (PSLE) results determine the posting group and subject level in secondary school for these students to pursue. Table 5 illustrates the implementation of the posting system in 2023:

Table 5*Secondary 1 Posting System*

PSLE Score	Posting group	Subject level for most subjects
4 to 20	3	G3
21 to 22	2 or 3	G2 or G3
23 to 24	2	G2
25	1 or 2	G1 or G2
26 to 30 (with achievement level 7 in English language and mathematics)	1	G1

Note. From 2024, Secondary 1 students will be offered subjects at three levels, G1, G2 and G3 mapped from the current Normal (Technical), Normal (Academic) and Express standards respectively. Students can take a range of G1/G2/G3 subjects based on their abilities. New Secondary 1 posting system. Copyright 2023 by SPH Media Limited

The secondary school system also provides a range of groups and subjects with varying levels of demand to cater to diverse abilities and needs. Students have the opportunity to transfer to a more rigorous subject level, should they demonstrate the capacity to handle increased demands. If additional support is required, it will be provided to ensure their academic success. Moreover, students can choose to pursue up to two subjects at an advanced level, known as subject-based banding. All primary schools use subject-based banding, which will be extended to all secondary schools by 2024 (MOE, 2021a). This new approach replaces the three traditional streams – Express, Normal (Academic) (N(A)) and Normal (Technical) (N(T)) – with subjects taught at three levels: G1, G2, and G3 where “G” represents “General”. G1 roughly corresponds to the current N(T) standard, G2 to N(A), and G3 to Express (Davie, 2019). Appendix B provides an overview of the new pathways, removing the labelling associated with different streams.

CHAPTER 3: LOCAL CONTEXT, RESEARCH METHOD & DESIGN

Alongside mainstream secondary schools, there are four specialised schools for underperforming students who have completed the PSLE. These schools offer foundational studies in numeracy and literacy as well as vocational studies leading to skills certification. Students with less academic inclination are more likely to pursue vocational and technical subjects (Grosse, 2016). This structure was to ensure that every child has ample opportunities to develop their capabilities in an environment that values not only achievement but also inclusivity across abilities and social economic backgrounds (Ng, 2017). Furthermore, there are specialised independent schools focussing on art and sports, as well as mathematics and science. While they receive public funding and follow the MOE curriculum, their programme offerings are more flexible. Despite the ongoing development towards full inclusion, Singapore has made remarkable advancements in delivering education that addresses the varying requirements of students. This progress is evident through the implementation of diverse educational initiatives and the establishment of various MOE-funded schools such as Government and Government-Aided schools, independent schools, specialised independent schools, specialised schools and special education schools.

Despite the existence of a diversified and flexible system of pathways in secondary schools, many still perceived that children with SEN were not fully included in the mainstream system (Ng, 2016). For an overview of the Singapore education system, illustrating the various pathways available to students with SEN enrolled in mainstream school, please refer to Appendix A. For students with SEN studying in Special Education Schools, the pathways are mapped according to their disability type (Appendix C).

CHAPTER 3: LOCAL CONTEXT, RESEARCH METHOD & DESIGN

Due to their unique needs and challenges, children with severe SEN are rarely placed in Singapore's mainstream schools. Many of these children faced difficulties in expressing their needs and wants, moving freely and grasping abstract concepts and ideas. Moreover, this student population is highly diverse in terms of characteristics, capabilities and learning needs (Horn & Kang, 2014). The MOE recognized these unique needs and remained committed to providing a relevant and customised curriculum to enhance their learning opportunities, experiences and overall potential. Children with moderate to severe SEN are encouraged to attend Special Education Schools alongside intentional inclusion programmes such as the Satellite Partnership Programme with mainstream schools (Lim et al., 2022). Students with severe needs who are academically capable may join their peers in mainstream classrooms for selected subjects and joint activities such as co-curricular activities and camps are co-organised. Furthermore, Special Education Schools are intentionally co-located with mainstream schools, facilitating interaction and socialisation between students from both settings (Shanmugaratnam, 2004).

- **Capacity Building**

MOE's efforts to support the diverse spectrum of learning needs among students with SEN, include the provision of Allied Educators in Learning and Behavioural Support (now known as SENO) since 2004 (Poon et al., 2013). In 2010, there were 300 Allied Educators (Learning and Behavioural Support) (Sim, 2010); which increased to more than 700 SENOs by 2022 representing over 50% increase (Elangovan, 2023). In 2018, MOE set the target of having a baseline of two Allied Educators (Learning and Behavioural Support) in all 185 primary schools and at least one Allied Educator (Learning and Behavioural Support) in 92 out of the 150 secondary schools to support students with SEN enrolled in

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mainstream schools (Puthuchery, 2018). The role of the SENO is to provide intervention support; systems consultation in the area of educational development; and liaise with stakeholders to ensure continued support for students with SEN enrolled in mainstream settings (MOE, 2022c).

In addition to the provision of SENO, all pre-service teachers undergo training on how to support students with special educational needs. Furthermore, approximately 15% of mainstream teachers have received certification as teachers trained in special educational needs (Sin, 2019). Selected teachers are required to complete a specialised 108-hour training course to cater to students with SEN enrolled in mainstream schools. The MOE has been actively working to provide all teachers with basic competencies through training and cluster-based workshops. This deliberate shift toward inclusiveness has allowed for greater inclusion of students with SEN in mainstream schools.

- **Support Programmes**

The MOE has actively implemented inclusive education programmes to support students with SEN. Since 2016, Learning Support Programmes (LSP) have been introduced in all schools, supplemented by additional specialised support services from social service agencies. For instance, the Dyslexia Association of Singapore provides further assistance to students with dyslexia (Poon et al., 2013). Social services agencies also offer school-based services to address the needs of students with visual, hearing or physical impairment (Toh, 2018). To support students with SEN, SENOs may arrange tailored weekly sessions lasting from thirty minutes to an hour. In more complex cases, SENOs collaborate with MOE educational psychologists to develop targeted intervention plans in order to help students with SEN achieve independence in areas of identified difficulty.

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Two new programmes, namely Circle of Friends and Facing Your Fears, have been introduced (Rajah, 2018). The Circle of Friends is a peer support initiative tailored for students with SEN, particularly those grappling with social, emotional and behavioural challenges. Within this programme, students convene with their form teacher or SENO alongside a close-knit group of six to eight friends with whom they share a sense of comfort and camaraderie. Notably, secondary school students contending with anxiety concerns actively engage in a series of 10 weekly sessions, collaborating with a group of two to four peers who resonate with similar needs. These sessions play a pivotal role in empowering students to cultivate effective strategies for managing their anxieties.

• **Individualised Support**

In foster equal opportunities for learning and assessment, the MOE deployed SENOs to schools and provided teacher training aimed at delivering individualised support to meet the specific needs of students with SEN (MOE, 2022c, 2022e, 2022f). In addition to the coaching sessions provided by SENOs and the establishment of specialised programmes, the MOE has made provisions for accommodations. These accommodations include the use of assistive devices in the classroom and the option to apply for access arrangements during assessments (MOE, 2022e). Access arrangements may involve adjustments such as enlarging font size, extending test duration, and other customized arrangements to meet the needs of students with SEN. Furthermore, differentiated instruction is employed to cater to the individual learning needs of students (SingTeach, 2019). To enhance effective support, case management teams have been formalised in schools, playing a critical role in ensuring timely intervention strategies for students with SEN (MOE, 2022f).

• **Curriculum Adaptation and Modification**

In the 1980s and 1990s, a streaming system was implemented in Singapore's education system, customising the curriculum to cater to students' overall academic abilities. In the primary schools, there were three language streams known as EM1, EM2 and EM3 (EM stands for "English and mother tongue") (Sim, 2016). These streams consisted of students who learnt their mother tongue as a first language, as a second language or at an oral proficiency level. In the secondary schools, there were three streams: Express, Normal (Academic) and Normal (Technical) (MOE, 2021a).

However, by mid-2000s, the streaming system was gradually phased out in primary schools. In secondary schools, a subject-based banding approach was introduced where learning was customised at the subject level to meet the students' needs. Students now have the flexibility to choose the subjects of varying difficulty based on their individual academic abilities. As a result, a student will be able to take a combination of subjects across different bands (Davie, 2019). The intention of this shift was to eliminate the labelling or categorisation associated with specific streams and provide students with access to a curriculum tailored to their abilities and strengths. By allowing students to take subjects from different bands, the MOE aspires to foster social mixing and encourage mutual support among students (MOE, 2023b).

3.2 Research Paradigm

The overarching aim of this collective case study was to explore the phenomenon of shadow education in the Singapore context to generate a local theory, grounded in the perspectives of participants from two subcases with the goal of contributing to the ongoing efforts to support and complement inclusive education practices. To achieve this, a

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qualitative approach based on the interpretivist paradigm was adopted (Creswell, 2018). This approach allowed for a deeper understanding of the diverse meanings constructed by individuals within a social context (Gubrium & Holstein, 2005; Miles & Huberman, 1994). By adopting an interpretivist paradigm, the researcher focussed on how shadow educators and parents made sense of inclusive education practices in mainstream schools and attributed meanings to them (O'Donoghue, 2019; Sarantakos, 2013; Taylor & Bogdan, 1998).

Interpretivism was chosen as the appropriate approach for this study because it allowed the researcher to uncover the meanings attributed by participants to various inclusive education practices and how these meanings influenced the mediating role and contribution of shadow educators in facilitating inclusive education for students with SEN in mainstream school settings (O'Donoghue, 2019). According to interpretivist principles, participants in this study derived meanings from their own experiences with inclusive education practices, within their unique contexts. Furthermore, the significance of these interactions and the associated meanings highlighted the importance of symbolic interactionism (Blumer, 1969) as an approach to inquiry, which greatly influenced the interpretive perspective.

Symbolic interactionism was the chosen inquiry approach to examine the participants' diverse meanings attributed to symbols reflecting their experiences regarding the mediating role and contribution shadow educators in supporting inclusive education. This perspective emphasises the social meanings people assign to the world and how they respond to these meanings (O'Donoghue, 2019; Taylor & Bogdan, 1998). Blumer (1969) proposed three principles of symbolic interactionism. The first principle highlights that

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humans act in response to things based on the meanings those things hold for them, which aligns with the study's focus on understanding inclusive education practices in mainstream schools in Singapore. The study sought to understand the meanings participants attributed to inclusive education and how these meanings influenced the mediating role and contribution of shadow educators in facilitating the educational experience and outcomes for students with SEN in mainstream school settings.

The second principle of Blumer (1969) states that meaning is derived from social interactions; consequently, a person's understanding of something can change due to changes in other people's actions and interactions with them. In this study, as shadow education occurs within the mesosystems of the child, the shadow educators interact with various microsystems, including the child, the mainstream school, and the child's family. Hence, the perspectives of the shadow educators who provide private supplementary tutoring to students with SEN, as well as parents who sourced the support of shadow educators for their children with SEN enrolled in mainstream schools, were examined. This principle was valuable in understanding the participants' perspectives as they interacted between the child's micro and mesosystems.

The third principle of symbolic interactionism posits that meanings are handled and changed through the person's interpretation of encountered situations. This process involves individuals aligning their actions with those of others in a group, leading to shared meanings that contribute to the human experience (O'Donoghue, 2019). This principle guided the researcher's investigation of how participants negotiated their perspectives on inclusive education, informing the mediating role and contribution of shadow education as a supplemental community support for supporting and complementing inclusive education

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practices for students with SEN enrolled in mainstream schools. Meaning construction and interpretation occur based on these principles through social interactions with others.

Meaning is negotiated through an individual's experience of the situation and constantly evolved or changed in response to their engagement with the world (Woods, 1992).

In this study, the concept of perspectives holds central importance. Building on Woods' (1992, p. 7) definition of perspectives as "frameworks through which people make sense of the world," Blackledge and Hunt (2019) identified key components of perspectives from the researcher's standpoint when applying symbolic interactionism to inquiry. These key components include the aims and intentions of individuals in specific situations, the strategies used to achieve those aims, the significance attached to the situation, the expected outcomes, and the reasons given for the aims, strategies, significance and expected outcomes of a particular situation.

Through adopting a symbolic interactionism approach to inquiry, the researcher explored the perspectives of the participants based on empirical data. This exploration sought to understand the actions and behaviours that arose from these perspectives, ultimately enabling the generation of a local theory through grounded theory method of data analysis (O'Donoghue, 2019).

3.3 Research Design

The chosen research design for this study was a collective case study, which involved investigating two subcases: shadow educators and parents. The purpose of this study was to understand the mediating role and contribution of shadow education as a form of supplemental community support in the educational experience and outcomes of students with SEN in mainstream school settings, with the goal of contributing to the ongoing

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efforts to support and complement inclusive education practices. According to Miles and Huberman (1994, p. 26), using multiple cases allows for a “deeper understanding of processes and outcomes of cases”. By examining multiple sites and collecting data from several cases, or subunits, the collective case study design offers more robust analytical conclusions through the possibility of direct replication (Yin, 2018).

To develop an understanding of inclusive education practices in mainstream schools and the mediating role and contribution of shadow education, the study initially concentrated on each individual subcase. Once the individual subcase was thoroughly examined, a cross-case comparison and analysis was conducted to gain insights into broader collective issues (Stake, 1995). This approach allowed for a deeper exploration of the perspectives of shadow educators and parents on inclusive education, and the mediating role and contribution of shadow educators in supporting and complementing inclusive education practices for students with SEN enrolled in mainstream schools. Involving both shadow educators and parents in the collective case study design also enhanced the reliability and validity of the findings by incorporating a range of experiences from which to draw conclusions (Merriam & Tisdell, 2016; Yin, 2018).

3.4 Research Participants

Purposive sampling was employed to select participants for this study (Merriam, 1998; Merriam & Tisdell, 2016; Punch, 2014). According to Merriam and Tisdell (2016), purposive sampling identifies individuals who possess extensive knowledge about the topic under investigation. It allowed the researcher to select specific participants who exemplified and shed light on the particular topic of interest that the researcher wanted to examine.

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In this study, stratified purposeful sampling was utilized, focussing on two subcases: shadow educators and parents of students/children with SEN (Punch, 2014). The selection criteria for shadow educators included those who had provided support to students with SEN enrolled in mainstream schools for at least a year. Similarly, parents who had sourced shadow educators to support their children with SEN enrolled in mainstream schools for at least one year were included as participants.

To maximise sampling variation, participants were chosen from various grade levels, subject areas, and special needs categories in both subcases (Punch, 2014). This approach ensured diversity in characteristics, including experience and involvement in supporting inclusive education practices. The final number of participants was determined based on the point of theoretical saturation in the data, which was estimated to be achievable with up to 20 participants for each sample population. Unfortunately, one shadow educator had to withdraw from the study due to employment circumstances, leading to a final sample of 19 shadow educators. While more than 20 parents initially agreed to be interviewed, only 15 parents actively participated in the study. Some parents did not respond to follow-up calls or failed to keep their scheduled interview appointments, while others did not show up for the interview at the agreed time or became unresponsive when follow-up calls were made. In addition, to respect the sensitivity surrounding the discussion of the child's special educational needs, one parent chose not to participate directly. Instead, the child's eldest sibling was interviewed to provide insight into the family's experiences and perspectives. The decision was made to exclude this dataset to maintain the focus as outlined in the study's objectives.

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Early on, the researcher was concerned about this reticence in parent-participants. One possible explanation could be attributed to the local coronavirus threat as well as the implementation of a circuit breaker (lockdown) from 7 April to 1 June, 2020. Except for essential services, most workplaces and schools transitioned to full home-based working/learning. The demands of work, full-time care for school-aged children, and in some cases, elderly parents, might have contributed to the reticence of some parents to commit to the estimated hour-long interview. Additionally, the sensitivity of the subject matter, discussing their children's special needs issues, could have been a factor. While these interpretations are speculative, it was clear that there were reasons behind the absences or the participants who went missing.

To gain access to the field, the researcher reached out to shadow educators and parents through a network of contacts and by writing to shadow education providers as well as parent advocacy groups. The copies of letters can be found in Appendices H, I and J. Snowball sampling was employed, although it carries the disadvantage of potentially favouring individuals with similar perspectives rather than encompassing a range of views. To mitigate potential bias and ensure anonymity and confidentiality, the shadow educators and parents who recommended others for the study were not informed about the actual participants. If potential participants were part of an organisation, the principal of the shadow education providers or the president of the parent advocacy groups were asked for their consent to allow their shadow educators or parents to participate in the study as evidenced in Appendix K (Informed Consent Form for Organisation). Anonymity and confidentiality were guaranteed to shadow education providers, parent advocacy groups and the participants.

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After the shadow educator or parent expressed their willingness to take part in the study, they were provided with an information letter together with the consent form (Appendix L). These documents explained the safeguards in place to protect the participants and provided a clear understanding of their roles in the research, as well as how their provided data would be used. Participants were encouraged to ask any questions they had about the research and their involvement, ensuring they felt informed and comfortable throughout the process.

3.5 Ethical considerations

This study involved human participants, and therefore, ethical approvals were obtained from the relevant organisations and individuals involved. The Human Rights and Ethics Office (University of Western Australia) granted permission to conduct the study (Approval #: RA/4/20/5769). Furthermore, consent was obtained from shadow education providers as well as parent advocacy groups to interview shadow educators and parents and to collect documents. The data collection process commenced after all necessary permissions were obtained.

- **Participant Consent**

Shadow educators with experience in supporting students with SEN and parents who engaged shadow education services for their child with SEN for a year or longer were invited to participate in the study. Initial contact with potential participants was made via email to express interest in the study, and to seek permission for an interview and recording.

Prior to the interviews, each participant received an Information Sheet (Appendices F and G), which provided detailed information about the study's nature, their role as

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participants, the data collection and processing procedures, and assurances regarding anonymity and confidentiality throughout and after the study. The researcher securely stored the returned and signed consent forms.

• **Participant Protection**

To ensure participant confidentiality, all identifying information, such as names of schools, locations, and participants' names, was de-identified and assigned pseudonyms in the data records. All personal data and information provided by participants, including recordings and transcripts were securely stored.

Electronic files were stored in a password-protected folder on a password-protected laptop exclusively used by the researcher. All data will be carefully maintained under lock and key in a filing cabinet in the researcher's home for seven years after which they would be appropriately disposed of.

Access to information was limited to the researcher and supervisor for the study's duration. Participants' contributions were solely for the purposes of this study and for subsequent publications and presentations.

3.6 Data Collection

The study's data collection methods included individual semi-structured interviews and available documents. The primary method employed was the interview, which provided access to the participants' "perceptions, meanings, definitions of situations and constructions of reality" (Punch & Oancea, 2014, p.182). This approach aligned with the study's overarching aim to explore the phenomenon of shadow education in the Singapore context to generate a local theory, based on the perspectives of participants from two subcases with the goal of contributing to the ongoing efforts to support and complement

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inclusive education practices. The study sought to deepen the understanding of the supplemental community support offered by shadow educators to students with SEN enrolled in mainstream schools and its role in the educational experience and outcomes of these students within the mainstream school setting. This aligned with the goal of contributing to the ongoing efforts to support and complement inclusive education practices.

Face-to-face interviews were preferred over online alternatives to create a more naturalistic setting for investigating the social phenomenon (Heppner et al., 2008). These interviews took place over a six-month period (November 2019 to April 2020) followed by three months of online interviews during the circuit breaker (May 2020 to July 2020). The in-person (both face-to-face and online) interviews gave a private and safe space for participants to develop a language to express their views and share their experiences, fulfilling the subordinate aim of developing a “language for speaking about that which is not normally spoken about” (Hargreaves, 1993, p.149).

The interviews, lasting between 45 and 90 minutes, were conducted based on carefully crafted questions with guidance from Blackledge and Hunt's (2019) components of perspectives. For specific details, please refer to the “Guiding Questions” section (p. 21). All the interviews with the shadow educators and parents were conducted in English, as this was the primary language of both researcher and the participants. This choice ensured clear and effective communication, avoiding potential issues related to translation or interpretation. Their English at times had Singlish-like quality, reflecting the influence of their native language and dialect. These were retained in the transcripts to accurately reflect the participants’ original words and maintain the authenticity of their responses. During the

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interviews, the questions were refined based on discussions with participants to ensure clarity and relevance. With participants' permission, the interviews were audio-recorded, and the researcher took supplementary notes in a research journal to supplement the transcripts during the analysis stage. Observational notes were also taken to capture contextual influences on social behaviours such as body language and attitudes (Punch & Oancea, 2014), or to provide additional insights that complemented the interview transcripts (Corbin & Strauss, 2015). This approach allowed for recalling the context in which particular comments were made, thereby improving accuracy of coding and ensuring that the themes identified were grounded in the context of the interactions.

Participants received the interview questions one week in advance, allowing them to contemplate their responses independently and guide the interview based on their considered opinions and relevant issues. While the pre-determined questions were asked in the same order to each participant, the researcher allowed for flexibility and discussion of emerging questions and topics during the dialogue. This approach facilitated exploration of various topics and sub-topics as they arose, aligning with the focus of documenting the values, practices of shadow educators and the experiences of parents of students with SEN, including parents' motivation, rather than focussing only on a predetermined agenda of the researcher. Recorded interviews were transcribed in English using Otter AI. This process preserved the authentic voices and phrasing of participants and followed Duncan's (1997, p. 2) "abstract technique" to preserve authentic phrasing. Each participant received a copy of their transcript to review and confirm its accuracy, fostering transparency and participant ownership throughout the data collection process.

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Participants were also encouraged to bring to the interviews any relevant documentation, such as school results and assignments that they considered relevant to the issues they would discuss. These served to illustrate and supplement the information provided during the interviews. In collective case studies, documents played a crucial role in confirming and supplementing evidence from other sources (Yin, 2018) serving as a rich data source for education and social research (Punch, 2014). They provided the necessary “conceptual density” for authentic research (Strauss, 1987, p. 55) and facilitated triangulation by utilising multiple methods and data types within a single project (Denzin & Lincoln, 2008). The researcher reviewed copies of documented progress tracking and work samples related to supporting students with SEN, which were provided by participants. These reviews helped to determine the mediating role and contribution of shadow education on students’ progress and the extent to which the work samples were tailored for the students with SEN. The document review occurred after the on-site interviews.

To ensure reflexivity and manage potential bias, the researcher maintained a self-reflexive diary throughout the stages of data collection and analysis. An excerpt from the research diary can be found in Appendix D. This practice allowed for recognition, examination, and understanding of the researcher’s social background and assumptions that could influence the research process (Hesse-Biber & Leavy, 2006). The diary served as a tool for reflective thought processes, safeguarding against misinterpretation and helping acknowledge the influence of personal values, beliefs and experiences on research (Davis, 1998). The value of a research diary, as emphasized by Etherington (2004), encourages researchers to reflect on how their personal experiences and background may influence their view of the research or interpretations of the obtained data obtained.

3.7 Data Analysis

In this study, the coding process was conducted by a single researcher using a thematic approach based on grounded theory coding methods (Miles & Huberman, 1994; Strauss & Corbin, 2008) was used to analyse the data. Grounded theory analysis methods were employed to generate abstract theory explaining central aspects of the data, aligning with the interpretivist paradigm (Punch, 2014). While grounded theory is primarily an inductive approach, it also incorporated deductive elements as the researchers moved back and forth between specific observations and generalisations during analysis (Punch, 2014; Strauss & Corbin, 2008). This method of analysis was considered most appropriate, considering the emphasis on the participants and the collected data. Unlike other forms of qualitative data analysis that focusses on summarising and describing raw data, thematic analysis using grounded theory techniques helped to focus on the creation of abstract conceptual categories to interpret the data from the start of the data analysis (Punch, 2014). The intention was to gain insights into various perspectives on the work of shadow educators for students with SEN and to understand how they helped to enhance current inclusive education practices by facilitating these students' development and adaptation within the mainstream school setting.

The analysis began as soon as the first set of data was gathered, and the initial interview was transcribed. During this stage, sentences or paragraphs from interview transcripts, documents and memos were segmented and code words or phrases were generated to represent their meaning (Creswell, 2018). Coding served the purpose of attaching meaning to concepts, but it is important to avoid fixing meaning too early in the analytic process as it hinders creative thinking and impede the analyst's ability to discover

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new insights (Seale, 1999). Therefore, indexing which involved signposting interesting parts of the data without finalising meanings, was adopted during the early phases of coding (Seale, 1999). Indexing was implemented from the initial interviews, and data analysis commenced after all interviews were completed. All data were thoroughly read and recoded multiple times with initial codes (descriptive codes), which were defined and refined during the analysis process (Miles & Huberman, 1994). Some codes represented actual words spoken by the participants. Data collection and analysis continued until theoretical saturation was achieved, indicating that no new data revealed new theoretical elements, but only reaffirmed established ones (Punch, 2014). The data analysis, involved at least two phases of coding: open (or initial) coding and axial coding (Strauss & Corbin, 2008). As the sole researcher, regular consultations with the supervisor were instrumental in navigating methodological decisions and facilitating the interpretation of complex data points. These discussions enhanced the research findings and provided valuable insights into the implications within the study's scope. While the attainment of theoretical saturation has been addressed through iterative analysis, these consultations contributed significantly to ensuring rigour of data interpretation.

In open coding, the raw data collected were deconstructed, examined, compared, conceptualised and categorised to identify and develop concepts. Each transcript was independently coded independently line-by-line for open coding, with sufficient space in the margins for the codes representing the segment's content (Charmaz, 2006). Line-by-line coding allows for a thorough examination of the data. Appendix M provides an example of open coding for a segment of an interview transcript.

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Subsequently, axial coding involved reassembling the data in new ways by establishing connections between categories (Strauss & Corbin, 2008). This level of coding was more analytical in nature. An “axis” was employed to interpret the elements of the coded data and establish relationships between them. Unlike open coding, which fragmented the data, the axial coding process “brings the data back together in a coherent whole” (Charmaz, 2006, p. 186). The coded data were then grouped and integrated into meaningful units or categories, as demonstrated in Appendix N. This process facilitated the identification of interconnections between open codes and the development of themes. It allowed the researcher to discern coherent patterns of meanings present in the data.

The subsequent stage involved data display, which entailed organising and presenting the coded data in suitable graphical representations such as summaries, tables and mind maps. Data display helped the researcher gain a visual understanding of the collected data (Miles & Huberman, 1994). In this study, the coded data from each participant’s transcripts were presented in table format, showcasing categories and codes aligned with the five sections according to the guiding questions developed throughout the research (Appendix O). This provided the researcher with an understanding of how shadow education as a form of supplemental community, indirectly shape the educational experience and outcomes of students with SEN enrolled in mainstream schools.

Further questioning and comparison of concepts and categories led to multiple labels being assigned to each piece of the data. This labelling process was not indefinite; instead, the researcher continually examined and questioned the labels and categories, making judgements based on commonalities and central ideas that emerged. To ensure the generation of the best possible theory using a thematic analysis with grounded theory

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techniques, maximum variation in the data is typically sought, as it helps capture the unique context and specificities (Lincoln & Guba, 1985). This was achieved by exhausting all possible themes suggested by the data.

The final stage of the data analysis process involved drawing conclusions and verifying the data. This stage was designed to synthesise the completed tasks into a cohesive and meaningful understanding of the data (Punch, 2014). Following data verification, a cross-case analysis was conducted. The codes within each subcase were iteratively analysed for themes, and the constant comparative method was used to interpret the findings. Emerging themes were compared, enabling the researcher to identify theoretical possibilities suggested by the data (Punch, 2014). The developed themes were evaluated against the data to ensure empirical grounding (Punch, 2014; Sarantakos, 2013). Appendix L contains examples and samples of the analysis. Based on the perspectives of the participants, key categories were identified and served as the foundation for propositions developed through both inductive and deductive analytical processes.

3.8 Trustworthiness of the Study

While quantitative measures such as validity and reliability may not translate directly, qualitative researchers often utilise criteria such as credibility, transferability, dependability, and confirmability to ensure the trustworthiness of their findings (Lincoln & Guba, 1985). Methodological rigour and trustworthiness were upheld through meticulous procedures implemented during the analysis. While inter-coder reliability with a second coder was not employed, various strategies were implemented to enhance credibility of the findings.

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Credibility was rigorously maintained throughout the study. A holistic understanding of the phenomenon was achieved by providing detailed information about the research context, and utilising the probe questions, audit trails, and thick description (Punch, 2014). The probe questions, framed within the structure of the guiding questions, allowed participants to share their opinions and elaborate on their practices. The questions were worded in familiar language and free of jargon, to facilitate a conversational atmosphere.

Dependability was ensured through meticulous documentation and maintenance of an audit trail. Digital recordings, transcripts, additional researcher and participant notes, and corrections to transcripts as well as memos, coding and diagrams were appended or attached, to the transcripts during data analysis, enabling the demonstration of the steps taken from data collection to the development of abstract concepts and categories. This comprehensive audit trail enhanced the study's dependability (Lincoln & Guba, 1985).

Member checking was performed by returning the interview transcripts to the participants before data analysis, allowing them to review and make corrections or additions if necessary. Transferability is acknowledged as a potential limitation due to the specificity of the context of the subcase studies and participants' experiences. While generalisation may not be possible, some degree of transferability may be possible. This study therefore sought to provide a data base that would benefit readers who are looking for insights to apply to their own situations (Lincoln & Guba, 1985).

Thick description played a significant role in enhancing the study's trustworthiness. It involved capturing and conveying a fuller picture of the phenomenon under investigation, ensuring a holistic understanding of the study within its own context (Punch, 2014), thereby

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supporting credibility and allowing for assessment of its relevance to similar contexts.

Recruitment of participants sought to ensure maximum variation in sources of information without devaluing the base of experience. The quality of the probe questions, document reviews and reflexive journal, contributed to the study's success. Transparent description of the research processes allowed readers to assess credibility and external validity.

In ensuring confirmability, this study strictly relied on participant-provided evidence rather than on the researcher's subjective interpretations (Lincoln & Guba, 1985). This study aimed to ground interpretations in empirical data, thereby reducing the influence of the researcher's personal biases or assumptions. To foster reflexivity, the researcher kept a self-reflexive diary. This practice aimed to foster transparency and maintain objectivity by prompting critical self-reflection. It allowed the researcher to recognise and address personal values, beliefs and experiences that could potentially impact the research process (Davis, 1998).

3.9 Conclusion

This chapter provided an overview of the study's research method and design, situated within the interpretivist paradigm and adopting a symbolic interactionism approach. The overarching aim of the study was to explore the phenomenon of shadow education in the Singapore context to generate a local theory, based on the perspectives of participants from two subcases with the goal of contributing to the ongoing efforts to support and complement inclusive education practices. The research design was a collective case study, focussing on two subcases: shadow educators and parents. Purposive sampling was used to select participants, and the data were collected through individual semi-structured interviews and any relevant documents provided by the participants.

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The data analysis followed a thematic approach using grounded theory coding methods. Open coding and axial coding were conducted to identify concepts, categories and themes. Data display techniques, such as tables, were used to organise and present the coded data. The analysis aimed to generate a local theory that explained the mediating role and contribution of shadow education as a form of supplemental community support and its role in the educational experience and outcomes for students with SEN in mainstream school settings.

The study addressed ethical considerations by obtaining relevant approvals and consent from participants. Participant confidentiality and data protection were ensured through de-identification of personal information and secure storage of data. The trustworthiness of the study was addressed through strategies such as credibility, transferability, dependability, and confirmability, including member checking, maintaining an audit trail and employing reflexivity.

Overall, the study employed a rigorous data collection and analysis process, adhering to established qualitative research methods. The trustworthiness strategies implemented, enhanced the credibility and validity of the findings. The next two chapters will delve into the findings of the subcases, presenting a detailed analysis of the perspectives and experiences of shadow educators and parents. These findings shed light on the specific challenges and successes of inclusive education practices while also highlighting the mediating role and contribution of shadow education in supporting and complementing ongoing efforts to facilitate inclusive education practices for students with SEN enrolled in mainstream schools.

CHAPTER 4: SUBCASE 1 (SHADOW EDUCATORS)

This collective case study examines the shadow educators' mediating role and contribution in supporting inclusive education, drawing from the perspectives of shadow educators and parents. This chapter presents findings from the shadow educator subcase, while the subsequent chapter explores the parents' perspectives. By examining the perspectives of both these groups, an understanding of how shadow education serves as a supplemental community support and the mediating role it plays in the educational experience and outcomes of students with SEN enrolled in Singapore mainstream schools.

Considerable care was taken in the selection of participants for this subcase. Only experienced shadow educators with a minimum of one year of practical experience were chosen, and to maximise sampling variation, participants were chosen from various grade levels, subject areas, and special needs categories in both subcases (Punch, 2014). This ensured that valuable insights were derived from their hands-on involvement. The recruitment process and further details on participation identification and engagement are described extensively in the "Research Participants" section (p. 67). It is important to note that none of the shadow educators involved in this subcase were employed by the parents who participated in subcase 2. Therefore, this subcase stood on its own, offering a distinct perspective and unique insights that are separate from those of the participants in subcase 2 (parents).

The findings are presented in a standardised format. The background of the participants is discussed, followed by the empirical findings of the case study, which were directly related to the central research question: What are the perspectives of shadow educators and parents in Singapore on shadow education for students with SEN from mainstream schools?

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Each subcase addresses the guiding questions and is structured into five sections:

1. Beliefs about Inclusive Education
2. Purpose of Shadow Education for Students with SEN
3. Strategies to Support Students with SEN
4. Concerns Related to Supporting Students with SEN
5. Additional Support for Shadow Educators to Support Students with SEN

The focussed codes within each subcase were analysed iteratively for themes using the constant comparative method. This data analysis process led to the identification of major issues and themes presented in these sections and their corresponding categories can be found in Appendix O.

To safeguard participant confidentiality and maintain anonymity, a coding system was utilised to distinguish between shadow educators and parents. For example, the code “T1” was assigned to the first shadow educator, “P1” represented the first parent, and “C1” denoted the child associated with that parent. This approach ensured that the identities of individuals involved in the study remained protected. Extensive use of quotes was incorporated throughout both chapters to present the voices, beliefs, experiences and individual perspectives of the participants. All interview transcripts were reviewed by the participants to ensure the accuracy of perspectives attributed to them.

4.1 Participants’ Profile

The participants’ demographic information and experiences as shadow educators providing support to students with SEN enrolled in mainstream schools were used to develop a profile of the participants. This profile offered contextual information for the emerging themes and issues related to working with students with SEN enrolled in

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mainstream school setting. While the participants held similar perspectives on teaching and learning for students with SEN under their guidance, there were some differences among them.

Demographic data for the initial group of 20 shadow educators is presented in Table 6. Late in the study, one participant chose to withdraw from participation due to a change in their employment status, leading to a conflict of interest. Since the analysis and writing phases had been completed at the point of withdrawal, keeping the original participant numbering was a strategic decision to maintain the study's integrity. Therefore, excluding the withdrawn participant's data was a decision made to ensure the study's efficiency.

The participants were initially interviewed as part of the study, aligning with the component of perspectives outlined by Blackledge and Hunt's (2019). For specific details, please refer to the "Guiding Questions" section (p. 21). Within this participant group, there were 13 individuals who identified as female and 7 individuals who identified as male. Two participants were above 60 years old, one participant was in the age range of 50-59, four participants were in the age range of 40-49, three participants were in the age range of 30-39 and ten participants were below the age of 30. The participants in this study shared their own distinct set of experiences and perspectives, which contributed a valuable dimension to the research. It was through their individual stories and diverse backgrounds that insights into their work with students with SEN were obtained. Table 6 provides specific details about the professional backgrounds of the shadow educators who took part in this study.

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Table 6:

Subcase 1(Shadow Educators): Participant Summary

Participant Name	Highest academic qualification	Professional certification	Years teaching special needs	Type of special needs	Teaching context	Level
T1*	A-Levels	Diploma in Education	Over a year	ADHD	Small group	Pri
T2	Withdrawn from study in 2021 due to change in work circumstances					
T3	Degree	Nil	24 years	ADHD, Autism (Asperger), Dyslexia, Intellectual Disability, Obsessive Compulsive Disorder, Oppositional defiance Disorder	Individual	Pri to Sec
T4	Degree	Diploma in Special Education	2 years	ADHD, Autism (Asperger), Apraxia	Individual	Pri
T5	Degree	Post-graduate diploma in education	More than a year	ADHD, Autism, Dyslexia	Individual	Pri
T6	Degree	Post-graduate diploma in education	4 years	ADHD, Autism, Dyslexia	Individual	Pri
T7	Masters of Science	Post-graduate diploma in education	6 years	ADHD, Autism, Dyspraxia	Small group	Sec
T8	Undergraduate	Nil	3 years	Deaf, Dyslexia	Individual	Pri to Sec
T9	Degree	Post-graduate diploma in education	3 years	ADHD, Autism	Individual	Pri

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Table 6 (continued).

Participant Name	Highest academic qualification	Professional certification	Years teaching special needs	Type of special needs	Teaching context	Level
T10	Undergraduate	Nil	1.5 years	Hearing loss	Individual	Pri
T11	Undergraduate	Nil	More than a year	Hearing loss	Individual	Sec
T12	Undergraduate	-	1 year	Hearing loss	Individual	Pri
T13	Undergraduate	-	More than a year	Dyslexia and hearing loss	Individual	Pri
T14	Degree	Post graduate diploma in education	2 years	Autism	Individual	Pri to Sec
T15	Undergraduate	-	More than a year	Hearing loss	Individual	Sec
T16	Undergraduate	-	3 years	Hearing loss	Individual	Pri
T17	Degree	-	2 years	ADHD, Dyslexia	Individual	Pri
T18	Master in Special Education	Diploma in Special Education	8 years	Autism, Harlequin Fetus Syndrome	Individual	Pri
T19	Diploma	Diploma in Special Education	12 years	ADHD, Autism, Fragile X	Individual	Pri
T20	Master in Education	Post graduate diploma in education	5 years	ADHD, Autism, Visual Impairment	Individual	Sec

Note. Pri = Primary; Sec = Secondary; ADHD = Attention Deficit Hyperactivity Disorder; Small group = 2 to 20 students.

* All names are coded.

Most of the shadow educators had no prior background in special education and were not specifically trained to support students with SEN. Initially, becoming shadow educators for students with SEN was not their primary intention. However, all the shadow

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educators interviewed had experience teaching at least one student with SEN enrolled in mainstream school for a year or more. Despite their experience, they expressed a belief that their knowledge was inadequate and varied greatly depending on the student and the specific category of special needs. Essentially, they did not consider themselves as well-equipped to effectively teach students with SEN. However, many of these shadow educators did not position themselves as specialists SEN tutors. Instead, they were either already employed by a tutoring centre and accepted these students as part of the centre's services, or they had a genuine desire to help students who needed support. Several shadow educators expressed a strong commitment to inclusive education, motivated by both a passion for helping students and the need to earn a living. Parents often chose these shadow educators because they were both affordable and accessible, despite their lack of specialised qualifications. The affordability of these shadow educators made them a viable option for parents who might not have been able to afford more specialised tutoring services. In addition, parents valued the commitment and willingness of these shadow educators to work with their children with SEN, which sometimes outweighed their concerns about the shadow educator's lack of qualification or formal SEN training. Another common aspect among the participating shadow educators was that many of them provided individual sessions, with the exception of two shadow educators, T1 and T7, who provided small group tuition with a student with SEN in the group. These two shadow educators held qualifications in teacher education. One of them was associated with a commercial tuition centre, while the other was a retired teacher who offered private group tuition at home.

In this subcase, the participants' ability to teach students with SEN enrolled in mainstream schools was determined by their experience of teaching the same student with

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SEN for a year or more. This criterion was met by all the shadow educators interviewed and served as a reasonable indicator of their capacity to support students with SEN enrolled in the mainstream school setting. The available data indicated that the majority of shadow educators had taught students with SEN enrolled in mainstream schools for varying durations, ranging from one year to twenty-four years. One shadow educator was relatively new to the field, having taught for only a year. Among the 19 participants, fifteen shadow educators had tutored for one to five years, three for six to twelve years and one for twenty-four years.

Considering that qualification level is widely recognised as an important aspect of teaching competency, it was expected that the shadow educators would have completed at least their General Certificate in Education, Advance-Levels (GCE A-Levels) or an equivalent qualification as a minimum requirement. The data revealed that the shadow educators possess different levels of qualifications, ranging from academic certifications in GCE A-Levels to undergraduate degree and professional certifications in special education teaching. In terms of the level of shadow education provided to students with SEN, twelve primarily focussed on teaching at the primary level, four at the secondary level, and three taught across both primary and secondary levels. While no clear pattern emerged for shadow educators teaching at the primary level in terms of qualifications (ranging from A-levels to undergraduate degrees), among the seven who taught at secondary level, a pattern of academic certification was evident, with three pursuing undergraduate degrees and the other four either holding or pursuing a degree or post-tertiary degree. Notable shadow educators with professional qualifications in special needs education included T4, T18 and T19. In addition, T18 held a Master's degree in special education. These qualifications

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were considered to assess their relevance as a necessary criterion for evaluating the mediating role and contribution of shadow educators in supporting and complementing ongoing efforts toward inclusive education practices for students with SEN enrolled in mainstream schools.

In the section “Students with Special Educational Needs” (p. 14), it was observed that while most of the special needs supported by the shadow educators were consistent with the categories outlined by the Implementation Advisory Panel (IAP) 2017 and the Ministry of Education (MOE), this subcase revealed the inclusion of additional types of special needs such as Dyspraxia, Obsessive Compulsive Disorder, Oppositional Defiance Disorder, Harlequin Fetus Syndrome, and Fragile X Syndrome. This indicated the presence of other types of special educational needs in mainstream schools beyond the commonly identified categories by the IAP and MOE. Therefore, it suggested that additional forms of support beyond what was currently available in schools might be necessary.

4.2 Shadow Educators’ Beliefs about Inclusive Education

Shadow educators’ beliefs about inclusive education were examined to gain a better understanding of their perspectives on their mediating role and contribution to the ongoing efforts to support and complement inclusive education practices for students with SEN enrolled in mainstream schools. These beliefs shed light on whether the needs of students with SEN can be effectively met within inclusive education settings. The majority of shadow educators expressed their belief that students with SEN enrolled in mainstream schools require support. Many participants emphasised the importance of avoiding discrimination between neurotypical and neurodivergent students. For instance, T3 highlighted:

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Inclusive education is something that every child should be given enough opportunities, and support for as long as they need it until they can find their own space in society – be it a longer time to learn things – no marginalization, and I think we just got to give them a certain kind of dignity.

T17 shared a similar perspective amongst the shadow educator participants: “an inclusive education is a system which embraces learners with different learning styles, leaving no man behind. No one should be deprived of receiving basic education”.

While many participants shared this perspective, differences emerged in comparison to existing practices. According to the MOE, students with SEN in mainstream schools are expected to manage the national curriculum with minimal extra support. However, some shadow educators regard additional classroom support as necessary due to the unique needs of the students with SEN.

For example, T7 mentioned that some students with SEN are often pulled out of class to receive support from SENOs during curriculum time, and occasionally outside of curriculum time. This practice contradicts MOE’s emphasis on minimal extra support, indicating a divergence. However, it is important to acknowledge that not all shadow educators shared the same perspective on the level of support required for students with SEN to cope with the national curriculum. T19 shared an experience where a child with SEN was “just being there in the environment” but lacked adequate support to facilitate learning. T19 emphasised that true inclusive education should go beyond the mere presence of the child in the environment.

It is worth noting that while T19 recognised the presence of students with SEN in mainstream classrooms, there was emphasis on the need for appropriate supports to be in

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place in order to achieve true inclusive education. This perspective aligned with the majority view among shadow educators, who also emphasised the importance of providing sufficient support to ensure inclusivity for students with SEN enrolled in mainstream schools. This emphasises the gap between MOE's intentions and the practical challenges faced in practice.

Examining the shadow educators' beliefs about the inclusion of students with SEN enrolled in mainstream schools, revealed challenges. In essence, while MOE advocates for minimal extra support, the majority of shadow educators highlighted the complexities arising from the diverse needs of the students they support, suggesting additional support within the classroom was necessary for successful inclusion in mainstream schools. Furthermore, shadow educators emphasised the importance of providing appropriate support to ensure access to the national curriculum and learning environment. These instances of diverging perspectives underscored the necessity for a more nuanced understanding of inclusion and the varied requirements it entails to effectively cater to the needs of SEN students enrolled in mainstream schools.

4.3 Shadow Educators' Perspectives on the Purpose of Shadow Education for Students with SEN Enrolled in Mainstream Schools

The motivation of shadow educators in providing shadow education for students with SEN enrolled in mainstream schools was primarily centred around offering additional support and bridging the gap for these students in coping with the mainstream school setting. The following sub-headings provide details of the findings.

- **Supporting Students with SEN**

The support provided by shadow education participants demonstrates a student-centred approach that focusses on the specific needs of each student with SEN. T19 expressed the importance of individualising teaching techniques for each child, while T15 emphasised tailoring instruction to match the student's level of understanding:

...based on personal experience it's a very one-to-one thing. That way, you can really make sure that their curriculum and how you teach is very tailored to that one child You teach at the level of the child, not at the level that he or she is supposed at.

T1, employed at a tuition centre that primarily uses small group instruction, encountered a student with SEN who faced difficulties adapting to the dynamics of the group. To address this, the tuition centre made efforts to accommodate the student by exploring different group options and session timings. Ultimately, it was "concluded that she would be in a solo session with me". This decision was driven by the recognition of the student's specific learning needs and the goal of creating an environment where she could thrive and receive the necessary support. Importantly, this decision was not based on cost considerations on the part of the tuition centre, as the parents continue to pay for group tuition fees and not for individualised tuition sessions.

T7, who conducted classes in a small group setting, described a teaching approach that involved initially instructing the student within the group and then:

what I do is, after the two hours, and I know the kid is not able to finish on time, those kids are given extra time or I put them in another room and allow them to continue.

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It was worth noting that mainstream schools also provide individualised support. T9 shared that some of the students with SEN, with the additional help provided by teachers, were coping in class despite facing a bit of difficulties. T9 mentioned that the teachers occasionally stay back for remedials or one-to-one sessions with students with SEN. These “little bits of help” contribute to the student’s ability “cope well in class”. However, T18 acknowledged that despite the help given, a student might not receive adequate attention within the mainstream classroom because:

... you don’t expect the teacher to be able to produce results for all of them because there are many, many other factors – whether the child’s attentive, whether the child has the cognitive ability to follow up or not...because of the lack of manpower, we (teachers) do not give very, very good attention to every individual.

According to the data, students with SEN were likely to cope better in the mainstream school setting if appropriate support was provided. T6 shared a success story about a student, who with the right support, coped better:

some children they have normal IQ, it’s just that they lack certain skill, so, they cannot really cope with what has been taught in school. But they are basically quite intelligent kids. So, what I need to do is just to bridge this gap, find out what is wrong, fix it, that’s all. I have one student, he had over 60 lessons with me and now the Mum says we take one month holiday because he scored 29/30 for his surprise English test.

Overall, shadow educators played a role in providing additional support by identifying and addressing the unique needs of students with SEN in order to facilitate academic, social and behavioural development.

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- **Bridging the Gap for Students with SEN**

In addition to providing appropriate support, shadow educator participants saw their work as bridging a gap for the students with SEN from their perspective. T10 emphasised that in large classes, the diverse needs of students with SEN might go unattended and stated that “shadow education is there to help pick up the pieces”. These “pieces” encompassed tasks such as preparing students for class, “reinforced whatever that’s been taught” as well as “to provide them the support that they need” and to “teaching them in the style that they can most benefit from”.

In alignment with the theme identified in the thematic analysis “Aptitude of shadow educators in supporting students with SEN”, Appendix P displays the data indicating that the supports and approaches adopted by shadow educators were customised and responsive to the individualised needs of students with SEN. This understanding laid the groundwork for a more in-depth exploration of the strategies employed by shadow educators to address the unique needs of their student with SEN.

- **Providing Social-Behavioural Support for Students with SEN**

The shadow educator participants had varied perspectives on supporting students with SEN in social-behavioural aspects. Some expressed concerns about their students’ behaviour, while others believed that it required patience. T6 mentioned a student with autism who coped academically but faced “difficulty following the routine in the class and can be quite disruptive at times”. Reportedly, the teacher found it difficult to manage the child and according to the perspective of this shadow educator, the student “cannot be in the mainstream”. However, T6 acknowledged other students who were coping well despite being “delayed by one or two years.”

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T14 observed that a student required breaks during which the student would wander out of the room and maybe into the siblings' or to the computer rooms. T6 would follow the student, and "just chat about anything" with the student.

T3 provided a more pragmatic perspective, acknowledging that not all days are unpleasant, and provided insight into the behaviour that was encountered when dealing with the students with SEN:

There are good days, there are better days but there are also very, very bad days. And bad days can last weeks, sometimes one week, one a half week. And then there's a sudden awareness there's a catch-up period, they go berserk "I haven't done this! I haven't done that!" So, you have all these things – for special needs children, it's just a different ball game altogether. And if you are having a group tuition, this child cannot be in that setting!

While T14 did not specifically offer a perspective on managing or supporting students with SEN in a large group setting, the implication suggested that some shadow educators may view these students' unique needs as requiring a more tailored and individualised approach, which may differ from what can be provided in a large group setting. It is essential to recognise the diversity of opinions among shadow educators, as some may hold the view that certain students with SEN might face challenges in a mainstream setting, even though their parents have intentionally selected it. This perspective may stem from the recognition that certain students with SEN may face challenges in fully participating in aspects of the mainstream curriculum. The structured and contained learning environments typically found in mainstream curriculum components may not always align seamlessly with the distinctive needs and behaviour of some students with SEN in a large group setting.

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Consequently, this misalignment can create difficulties for them to fully benefit from the group learning experience.

T3 believed that mainstream settings “don’t have the resources, the time or the energy” and it is ‘unthinkable’ for teachers to support students with unique needs. T3 felt that the ADHDs were easier to handle but considered that they could not be confined “to a chair or you cannot confine them too long to certain fixed kind of pattern”. By fixed pattern, an example was shared of the child who “needs to be under table, sometimes on the floor, can go toilet 15 times, you must allow all that”. T3 also spoke about comorbidity and the quirks that come with a child who has “ADHD with OCD, you can only use a certain pen to mark, you can only use a certain colour of red to mark, you can’t use a light red to mark, purple for correction, green for marking they’re very set in their patterns”. The need for flexibility and understanding in accommodating their individual quirks was emphasised by T3.

T13 shared an experience of behavioural challenges and the need to address social skills deficits in a deaf tutee:

Behavioural problems, there might be a bit. Sometimes might be very hard to grab their attention, like the deaf kids, some tend to be very active. So, their break they’ll run around. They might be lacking in social skills, like, my deaf tutee, when angry would slam the table. But because of the deafness, the student does not know how loud that is. The student was not aware of how much the others in the group was disturbed. So even that, it had to taught during tuition.

Based on the findings from the shadow educator participants, it was evident that students with SEN enrolled in mainstream schools often displayed

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social-behavioural issues that deviated from expected norms. These challenges hinder their participation and learning in the classroom. By understanding the underlying causes of these behaviours and providing prompt support as well as attention, shadow educators contributed to regulating and fostering a safe and accepting environment for these students.

- **Teaching Interpersonal Skills to Students with SEN**

The experiences of shadow educators have highlighted the significance of teaching interpersonal skills to students with SEN. Communication skills and social interactions are important aspects that need attention to help these students thrive in a mainstream environment. T9 mentioned a child with autism whose parents prioritised social needs over grades. T16, while discussing a deaf student, mentioned the student:

has never been able to communicate with anyone before like I came into the picture. I will even go as far to say that, we are very close because I'm the only private communicator with this student because the mom isn't very familiar with sign language, and because in school, teachers just can't be very private with deaf students... I will be the one who will teach this student values and because this student is Malay, the mom has taken very long to explain to this student what is *halal* (malay for 'permitted'), so, I taught the child about *halal*. So, it's not just education that's what I strongly feel.

T12 took on the responsibility of supporting social interaction and was still "figuring out how to teach the student to properly interact with people. Because this student doesn't know how to interact with the 'friends', that's why many of the so-called 'friends' in the school and also in tuition centre avoid this student".

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Guralnick (1999), highlighted that students with SEN often face challenges in forming peer relationships due to difficulties in communication, cognitive, affective and motor skills. This reinforces the importance of addressing social aspects alongside academics, as education is not just about imparting knowledge but also facilitating social integration. T13's experience further reinforces this, emphasising the social aspect of education. According to T13, "apart from academics it's (school) still a social place." Recognising that students with SEN might face challenges in academic progress, T13 emphasised the importance of improving social interactions. This is aligned with the broader understanding that students with SEN might experience social isolation and difficulties in forming peer relationships.

By developing communication and social skills in students with SEN, shadow educators can play an essential role in helping these students establish meaningful connections in a mainstream school setting. Moreover, addressing social needs can contribute to improved self-esteem and emotional well-being, combating the feeling of exclusion and supporting a more inclusive environment. This aligned with T9's sentiments which was "to help them to accommodate to the school setting as well as to help them through social interactions".

Furthermore, the data shed light on the social experiences of students with SEN enrolled in mainstream schools. Some shadow educators observed that their students often struggled with lower self-esteem as they are aware that they are "different" from their peers. T19 stressed the need for additional support from the perspective of a student with SEN, who stated "it is very easy to feel disheartened or to feel like I'm not good enough, I'm different from my classmates". This highlighted the importance of having someone to

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check on their emotional well-being and monitor on how they were coping with the academic materials.

T12 shared the experience of a student with SEN, who lacked a social circle and was completely “excluded by ‘friends’”. T12 speculated that the exclusion might be due to the student’s use of sign language: “I think the student was not being included by the mainstream kids because the student signs, and the mainstream kids don’t sign”. T16 also mentioned that neurotypical students in the same class as a student with SEN were taught to sign and they “take it very seriously”.

T20 recounted a heart-breaking encounter with a student with SEN who expressed a sense of exclusion saying:

They don’t feel that they belong there. In fact, many years ago I had a student who is mildly autistic. The student told me something that rather broke my heart. The student asked, “why they all don’t like me?”

T20 found it challenging to answer the student’s question but provided reassurance, emphasising “everybody is special in their own way.” The findings indicated that students with SEN enrolled in mainstream schools often face social challenges due to negative perceptions of their condition or the need for specialised communication skills, such as sign language for deaf students. Additionally, the data revealed the use of derogatory labels (e.g., “stupid”, “strange”, “biologically stupid”) and negative perceptions, which can contribute to self-stigmatisation as shared by T20.

Overall, these finding highlighted the importance of teaching interpersonal skills to students with SEN. Shadow educators can help these students to cope better and thrive in a mainstream school setting.

4.4 Strategies to Support Students with SEN Academically

This subcase is part of the research, which sought to explore the strategies employed by shadow educators to support students with SEN. The findings indicated that these strategies do not necessarily require specialised skills or knowledge. However, when working with profoundly deaf students, the ability to sign and knowledge of Signing Exact English was deemed essential for effective teaching of the English language. Table 7 provides an overview of the strategies employed by shadow educators to support students with SEN enrolled in mainstream schools.

Table 7

Subcase 1 (Shadow educators): Teaching Strategies for Students with SEN

Approach & prevalence of application	Strategies for teaching	Application by shadow educator participants	Addresses
Build rapport <i>Prevalence of application: 89% of participants</i>	<ul style="list-style-type: none"> • Exercise flexibility • Have patience, empathy • Be caring, firm and consistent • Persevere 	T1*, T3, T5, T6, T7, T8, T9, T10, T11, T13, T14, T15, T16, T17, T18, T19 & T20	Teacher-student relationship
Understand the needs of students <i>Prevalence of application: 84% of participants</i>	<ul style="list-style-type: none"> • Profile students • Pitch at the level of student's understanding • Pace according to student's needs 	T1, T4, T5, T7, T8, T9, T10, T11, T12, T14, T15, T16, T17, T18, T19 & T20	Diversity of needs

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Table 7 (continued).

Approach & prevalence of application	Strategies for teaching	Application by shadow educator participants	Addresses
Use multiple ways to teach a concept <i>Prevalence of application: 84% of participants</i>	<ul style="list-style-type: none"> • Use manipulatives and building on student's interest • Leverage on technology • Advance teaching • Include visuals • Incorporate kinaesthetic learning activities 	T1, T3, T4, T6, T7, T8, T9, T10, T11, T12, T13, T14, T15, T16, T18 & T19	Student's understanding of abstract concepts
Motivate students with SEN <i>Prevalence of application: 79% of participants</i>	<ul style="list-style-type: none"> • Experience small successes • Allow breaks • Incorporate fun eg use humour, games • Make it relevant 	T1, T3, T6, T7, T8, T9, T10, T11, T12, T13, T14, T15, T16, T18 & T20	Student's self-esteem and confidence
Provide customised teaching <i>Prevalence of application: 74% of participants</i>	<ul style="list-style-type: none"> • Simplify concepts • Scaffold learning • Repeat (Drill) and Reinforce (Memorise) learning • Cater to interests of students • Targeted skill acquisition 	T1, T4, T6, T7, T8, T9, T10, T11, T13, T14, T15, T18, T19 & T20	Mastery of subject content
Collaborate with stakeholders <i>Prevalence of application: 68% of participants</i>	<ul style="list-style-type: none"> • Involve parents • Coach parents • Partner with school 	T3, T4, T5, T6, T8, T9, T11, T12, T14, T16, T18, T19 & T20	Shared understanding of student

* All names are coded.

Upon analysing the data presented in Table 7, it became apparent that the majority of shadow educators sought to adapt their approaches to meet the unique needs of students with SEN and foster collaboration with relevant stakeholders.

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The following sub-sections elaborate on some of the key strategies that emerged from the data. These strategies played a pivotal role in supporting the academic and social development of students with SEN in the mainstream school setting.

- **Flexibility in Accommodating Students with SEN**

Flexibility was an important aspect highlighted by the shadow educators in supporting students with SEN. As discussed earlier, these students often require additional time to practice and apply learnt skills and concepts. They are aware of their differences from their peers and rely on targeted help. T4 emphasised the significance of flexibility in facilitating understanding by personalising the learning experience. T4 explained:

I basically try to figure out what their personal interest liking; this student of mine loves soccer, so I'll use that as my platform to teach the student the grammar rules or whatever. If it is relevant in our lives, it will go a step further ... if the student like soccer and the student like Liverpool, Manchester United ... Basically, I will use what the student like, as my context to include what I need to teach. So, for tenses, past, present perfect tense, it is very challenging for them. For the visual ones, I have to draw a time machine, "Okay, we're going to travel back to time, let's travel back to past tense", and I'll use that time machine concept. I use a lot of concepts.

To help students with SEN grasp concepts, teachers must employ diverse teaching strategies and be flexible. Traditional approaches that deliver knowledge in a linear manner with predefined outcomes are ineffective for these students. Shadow educators stressed the importance of personalising content, process, outcome and learning environment, to cater to the unique needs of each learner with SEN. This flexibility was deemed essential in fostering positive educational outcomes.

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• **Understanding the Needs of Students with SEN**

The data indicated that many shadow educator participants prioritised understanding the needs of students with SEN before tailoring their lessons to the students' level. T19 highlighted the shadow educators' dedication to helping the student, "regardless of whether they (shadow educators) have the skills or not, they want to help the child", and that "none of them, when they start the first session, just jump in and start teaching". T9 shared an approach, stating that shadow educators:

... need to understand their conditions, as well as their interests and I plan my lesson accordingly. So, what I did for my child, the child with autism that I taught, was that I use different mediums in my tuition sessions. It is never like paper and pen. I don't really believe that especially for that child. So, I have games for example, when I was teaching verbs.

T18 provided an example of checking for understanding to closely align the learning experience to the student's level. The goal was "always to teach what the student doesn't know". T18 observed how the student arrived at an answer and the method the student employed. Based on this observation, the student was taught "how to move on from there based on his own method of how he adds." If T18 found the student's method to be inefficient, another approach would be taught to help the student to understand "the way I do it". T18 strove to understand the student's thought processes before introducing new techniques of working out a solution, and would avoid relying on a typical instructional approach to teach a concept.

After determining the student's level of understanding, the shadow educator could focus on enhancing the specific skills necessary for the student's learning. Traditional

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instructional delivery often assumed that the student had already mastered the content through teaching. However, shadow educators emphasised the importance of students learning from their own perspective and adapting the teaching approach accordingly.

- **Providing Targeted Skill Support for Students with SEN**

After gaining knowledge about their students with SEN, shadow educators personalised their lessons to provide targeted skill support. T6 emphasised the significance of this strategy, sharing a case where a student struggled to read. Addressing this urgent need became a priority, ensuring the student could read and spell, which is foundational for various tasks. This shadow educator highlighted the importance of identifying the lacking areas and working on them when taking on new students.

Furthermore, T16 emphasised the importance of continuously checking for understanding, even after a targeted skill was mastered. For deaf children, understanding is key, and T16 facilitated it by having the students “explain and then to understand when to use what... because especially for deaf children in general, understanding is very, very important”.

Shadow educators acknowledge that providing targeted skill support may present challenges for teachers. T11 explained:

As a shadow educator, I can understand that they might need certain help that generally other students don't. If they are in a mainstream class, the teacher might not know, or even if the teacher knows, he or she might not be able to help because there's so many students in the class. I'm not saying that he or she cannot, because definitely, even in mainstream school, there are people with different abilities, but it just makes it harder, I guess, for the teacher.

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Shadow educator participants who addressed targeted skills recognised that lacking essential academic, social or behavioural skills could pose challenges for their students to fully integrate into mainstream settings.

• **Teaching in Multiple Ways to Reach Students with SEN**

The majority of shadow educator participants reported using multiple teaching methods when working with students with SEN. T20 emphasised the importance of employing various strategies, stating, “when I teach the student, I will say that I have to really use all the strategies I have, being a mainstream school teacher before, to actually try to communicate the concept to the student”. This finding highlighted the complexities involved in teaching students with SEN. T9 also confirmed the use of this strategy by explaining the application of “different mediums in my tuition sessions. It is never like paper and pen”. T9 highlighted strategies such as incorporating games, hands-on activities, being “multimodal” and “geared towards his interests” as effective ways to engaged the student with SEN.

T7 highlighted the attribute of patience and the ability to intuitively explore different tutoring approaches. T7 described the process as “instinctive” and “trying different ways” until the student grasps the concept. However, it was not simply a matter of adopting different teaching approaches. T10 shared the struggle in helping a deaf student to understand heteronyms, emphasising the difficulty in explaining the difference in pronunciation and meaning based on the context. For instance, the word “read,” which has the same spelling but different pronunciation and meaning depending on the tense:

... they won't be able to tell if they just look at the sentence because they don't know that there is a sound difference. And then if 'read' is the only thing that

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signals the past tense then it's going to be very difficult for us to explain why is this, past tense? I think that is the part where we have to really look at the sentence, the context, and explain to them. It's really quite difficult honestly, sometimes I still struggle with it, because even after explaining it, they will still not get it.

Something I still struggle with; I still try to think of how to do to explain this sort of words to them.

Utilising multiple instructional methods went beyond having a random repertoire of skills that could be applied until the student understood. It involved an experimental approach, where shadow educators explored what worked best for each individual student. It also required a deep understanding of the specific needs of the student to select appropriate instructional methods that enhanced comprehension for students with SEN.

• **Using Manipulatives and Building on Interests for Students with SEN**

Another strategy employed by shadow educators specifically for students with SEN is the use of manipulatives and building on their interests. T6 emphasised the importance of providing “a lot of teaching materials” that cater to the “tactile” nature of most students with SEN. T6 used “cards and manipulatives” to enhance the learning experience. T11 provided an example of using real-life objects to teach algebra, making the concept more relatable: “Algebra is difficult to teach. I have to use real things, like ‘x’ then I’ll just say, ‘Oh, ‘x’ is this car, you add two cars together, but we don’t know how many people are in the car’”. T19 also incorporated manipulatives by integrating the student’s interests into algebra instruction, making the learning process more engaging.

T16 shared the effectiveness of using a Number Board to help a student understand number concepts better. The physical act of manipulating tiles on the board helped the

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student memorise “where the numbers are on the board”. To learn the concept of a number being bigger than the other, the student memorised the placement of the tiles on the board. For the student, numerals were associated with spatial memory rather than the auditory memory used by neurotypical students. T16 continued to share that the student is unable to think of the numerals as 1, 2, 3, 4, 5 but was able to think of numerals as being placed in positions “in terms of spatial memory”. T16 also used the number board to teach odd or even numbers, helping the student visualise the patterns, such as “odd numbers are like three then the student can memorize, like it skips”. If the student saw a number on a worksheet, T16 felt that the student was able to associate it to the positioning of numbers on the board. By understanding how the student thought, rather than focussing on memorisation, T16 tailored the instruction to meet the student’s specific needs.

The use of manipulatives by shadow educators demonstrated its effectiveness in helping students with SEN to construct their understanding from concrete experiences to abstract reasoning. Manipulatives not only enhanced engagement but also supported the development of their interests and active participation in the learning process.

- **Repetition and Reinforcement Techniques for Students with SEN**

The majority of shadow educator participants agreed that students with SEN often face challenges with memory retention, leading them to employ repetition as a strategy to reinforce learning. For example, students with SEN tend to forget, T13 emphasised the importance of reinforcement, stating: “if the student can still remember, what I taught last week, it’s good progress enough.” Similarly, T9 highlighted the significance of using “reinforcements and a lot of revisions to solidify and to ensure that their concepts are strong, so that they will not face as much difficulty when they progress and I feel like I’ve

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done that quite well”. T7 described slowing down the pace, using repetition and engaging in practical exercises to enhance understanding:

I slow down and I make them understand and I do repetition. I make them do and do and sometimes you have to do the graphs and redo after that, to absorb the concept. Sometimes they do, sometimes they don't, but over a period of time they will get better and better.

T10 found that “reinforcing everything the student has been learning” and “reiterating things to the student was quite effective also”. However, T14 raised concerns about the limitations of repetition, particularly in situations requiring the application of understanding, particularly for question styles involving “more inference”. T20 shared an example where a student had difficulty transferring the learning to a different context, indicating the limitations of this strategy. The example shared was: “acid plus metal will give you salt plus hydrogen gas”. When the question was adapted to “What happens if you have iron plus hydrochloric acid?”, the student had difficulty answering, unable to apply his previous learning. T20 used probing questions to redirect the student’s thinking to see if the student was able to “recognise that iron is a type of metal” to aid in recognising concepts. T18 used the analogy of flying a kite to explain the strategy emphasising the need to balance pushing and drawing back, similar to repeating and revising concepts:

Sometimes you need to just push, sometimes you need to draw back just like flying a kite, how much to push, how much to draw back sometimes they may not know. So, I'm happy to get them to just keep on repeating the same thing again and again. So that the kid gets revision, after I go in, I'll just check how much they know and then I'll move on from there.

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T14 believed that while schools were using this strategy, there were still limitations. The shadow educator expressed that “there were some teachers who really care, and they really go the extra mile to meet the students – recess time, before school, after school – to go through with them questions or to go through the topic with them again” but there is generally a “lack of manpower” and “lack of time”.

According to the shadow educator participants, reinforcing learning through repetition was considered one of the most effective strategies to help students with SEN to memorise their learning. These students often required additional time and reinforcement to retain what they had learnt.

• **Utilising Technology to Aid Learning for Students with SEN**

All the participants in the shadow educator subcase unanimously agreed that incorporating technology in teaching and learning for students with SEN had proven to be effective. For example, T12 mentioned using technology to engage a student by letting “the student play games on the iPad – those games that teach the student Math and English”. T6 shared that utilising technology helped reinforce learning and highlighted the role parents play in the follow-up process:

...children like IT (information technology) programme. So, I will prepare some slides, some animation, they love it very much. Usually, I will copy for the parents, so that they can revise between the interventions. I think the most effective part is that parents know what is taught during the lesson and they do the intervention. They also do the follow-up, I think the follow-up helps a lot, because for these children overlearning is very important.

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Furthermore, some shadow educator participants recognised technology not only as an assistive tool but also as a valuable learning tool for students with SEN. The advancements in technology have opened up new opportunities for learning through virtual platforms, allowing shadow educators to enhance student learning experiences.

- **Simplifying Content with Scaffolding for Students with SEN**

In the data collected, shadow educator participants shared their practice of simplifying the content taught in school to ensure better understanding among their students with SEN. For example, T14 mentioned restructuring “the content such that it sounds simpler or you slowly explain it until the student is able to absorb and understand”. One of the reasons for this simplification was the presence of dense text in textbooks, as mentioned by T14: “the textbook has one large chunk of text” and the shadow educator needed to “go through each sentence to try and better explain it” to assess the student’s comprehension of what the sentences meant.

Moreover, the participants in the shadow educator subcase emphasised the importance of scaffolding the content for students with SEN. They noted that these students may not actively seek help even when they do not understand. For example, T8 commented, “working with children with hearing loss is to make sure that they had a place to clarify their doubts because everybody I worked with, they really didn’t speak up in class”. T8 emphasised the need to provide a safe space for clarifying doubts, particularly for children with hearing loss who tended to remain silent in class. T11 observed that a student hesitated to ask for assistance because “the student just doesn’t want to be a burden” and sensing this, T11 highlighted the importance of offering proactive help because “sometimes help needs to be offered” to students with SEN as they are unlikely to ask for it. Consequently, the shadow educator participants emphasised the significance of

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assessing understanding to tailor their teaching approaches to meet the specific needs of each student with SEN.

- **Fostering Success for Students with SEN**

Based on insights shared by shadow educator participants, they recognised the importance of creating opportunities for students with SEN to experience success. T9 highlighted that many students with SEN were aware of their difficulties, “the children themselves know that they are having some form of problems and a lot of them, they will be taken aback or demoralised by the by this fact. Sometimes they are not motivated at all”. T6 emphasised the significance of pre-learning, as it gives the student confidence because “they can follow and they won’t be a nuisance in the class, so, they have a successful experience”. Another approach mentioned by T7, was:

identifying where their strengths are; certain topics, you can’t really pinpoint a specific concept. But when it happens, you know, they’re picking up very fast – faster than the normal kid. That’s when you affirm them and you encourage them. But there are areas where there are concepts that are a little bit more difficult, that’s when you have to slow down and really help them to process it.

The pressure for students with SEN to cope well, and experience success in order to have more options in the future, highlights the role shadow educators as community resources outside of school hours. They act as a support system for students with SEN filling the gaps that mainstream education might not be able to address due to capacity limitations. This aligned with T18’s opinion that it was “very important because we come in to fill in the gaps that the mainstream education currently is not able to, given its capacity”.

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By providing opportunities for success, shadow educators can help students with SEN develop confidence, feel included in the mainstream setting and become more motivated to actively participate in their education.

- **Advance Teaching as a Strategy for Students with SEN**

Some of the participants in shadow educator subcase acknowledged the practice of teaching students with SEN in advance. T18 provided an example of the need for advanced teaching to provide more time for the student with SEN to learn. T18 explained that “by the time when the student goes back to school and the teachers teach at a slower pace, it’s like a revision for them”. By teaching in advance, the student has “more time to get used to the content and then transfer to the application stage”. Similarly, T19 preferred teaching ahead of the curriculum so that “the student will already have certain prerequisites, a certain understanding”. T19 believed that by teaching ahead, the shadow educator was a foundation and scaffolding for the student, making it easier for the teacher to “input more things”. T19 found that this strategy “really works” for students with lower cognitive ability as some “instructional content or materials may be challenging for students with SEN. Providing advance teaching helps the student with SEN in building their schema”. This shadow educator contended that “when the content or materials are used in class, the schema for the student is triggered allowing him to access the learning and participate fully”.

According to these shadow educators, advance teaching supports learning and understanding of students with SEN, especially those with lower cognitive ability who might require the extra time to understand the learning of new content. These shadow educators demonstrated an understanding of the variables in teaching and an awareness of

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the role of cognitive ability in learning. This awareness enabled them to have a sense of timing and an adaptable teaching style that catered to the needs of these students.

- **Infusing Creativity into Lessons for Students with SEN**

Some shadow educators expressed the importance of incorporating creativity when educating students with SEN. These ideas included utilising games, taking breaks and using humour. T9 mentioned, “after a while, I saw that even playing games or learning through activities can help in the progress of a child”. According to T10, the use of games was effective since it aids with the retention of learning:

I’ll use games and at the same time, I also have his friend to join in and then after that, we’ll have the mini games and more discussions of things. I can see them enjoying and actually remembering the things that I taught. Because sometimes in school the student learns something ... and doesn’t understand but when I play games with the student, the student still remembers the next week what is it. I would think it’s quite effective.

T15 used simple card games to improve the student’s mental math skills because it was noted that the student was unable to do mental sums with precision. The shadow educator used playing cards and they played a game where the student had to “mentally add up the poker cards” to win the game. T15 noticed the student’s “mental sums got a bit better”.

T16, acknowledged that “after a while, you’re gonna make them know that study is study” and there is a need to gradually reduce the reliance on games as the student needed to understand the distinction between study and play.

Another aspect of creativity was to infuse humour into the lesson. T17 emphasised the significance of humour:

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Humour is a game-changer. It's so important! Sometimes, you got to be a little silly just to get their attention. It helps relax their minds and that's when learning happens. Sadly, in mainstream schools many teachers don't have the opportunity to explore this approach.

T20 reasoned that novelty is not practiced in the student's school because even the notes provided were "just printed from the publisher" and this shadow educator lamented that it indicated that the learning in school "is just rote learning" but admitted to not knowing "how much creative things they are doing in school".

Being creative was considered one of the most effective strategies for reaching and engaging students with SEN. Creativity was deemed effective in helping students with SEN to learn and develop as well as creating intentional opportunities to meet these students' unique learning needs. Teaching in novel ways allowed students to better relate to their learning. This ability to approach teaching in a novel way might be linked to personality and competencies of shadow educators. In interviews with shadow educator participants, it was noted that those who adopted a creative approach tended to show a positive and cheerful disposition. This was noted during conversations on teaching strategies and personal experiences shared by the participants. These findings provided valuable insights on the relationship between teaching approaches, attitudes and aptitudes of shadow educators.

- **Allowing Unstructured Breaks to Support Students with SEN**

The data collected indicated that students with SEN benefitted from taking unstructured breaks during their learning sessions. T12 shared her observation:

I think what has been effective is giving the student a break, every 10 to 15 minutes or so. It took a while for me to figure out that the student can only concentrate for a

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max of 15 minutes. So, every time after being taught for 15 minutes, we'll give the student a break.

This practice allowed the student to recharge and maintain focus. However, T14 mentioned that the breaks were not strictly fixed for a student, highlighting that “the student did have a bit of break but I wouldn't say they were so fixed?” This reinforces the importance of individualising approaches for students with SEN based on their unique needs.

- **Enhancing Learning with Visuals for Students with SEN**

Incorporating visuals into the teaching process was found to be an effective strategy by some shadow educators. T19 emphasised the importance of presenting information in various visual forms, and “explaining things in many different forms and using what they like to connect for the background knowledge”. T8 also described the use of various types of concrete learning and teaching aids in her centre:

...use visual aids for the younger children, it's very important. One of my tutors bought this box and it counts from one to 100. It's very visual with the small tiles, and the tutor always print stuff. When I work with the tutee, who has reading problems, we did a lot picture books so that the student can see coz this student cannot read the words but looking at the pictures, this student can understand the story. So, it's just materials that can engage them. We gave a whiteboard to a student but the student doesn't like writing because this student cannot spell. So, we'll go outside and then we'll look for things, and we'll ask the student to spell it on the whiteboard so at least this student feels more engaged because the student really doesn't like sitting down to do work.

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Visual supports were recognised as valuable tools for helping students with SEN navigate their environment and enhance their learning experiences. The intentional use of visual supports by shadow educator participants demonstrated their understanding of the benefits and success of such approaches in supporting students with SEN.

4.5 Concerns of Shadow Educators for Students with SEN

To provide an understanding of how shadow educators play a role in the educational experience and outcomes of students with SEN enrolled in mainstream schools, it was important to examine the concerns expressed by shadow educator participants. The analysis of the data revealed that these concerns were aligned with the broader themes identified through the thematic analysis as shown in Appendix Q. Notably, the concerns can be discussed under three main factors: teachers, students and learning environment.

4.5.1 Factors Related to Teachers

- **Capacity to Accommodate Diversity of Needs for Students with SEN**

In terms of teachers, one common concern identified was the challenge of accommodating the diverse needs of students with SEN. Shadow educators recognised that different special needs required different approaches and strategies making it difficult to provide a generalised approach to support these students. For instance, T6 highlighted that the level of support provided could even include going down to the school to shadow the student in class but this largely “depends on what condition the child is in”. The shadow educator shared that students with Autism, “sometimes they may need a shadow teacher (special needs assistant)” while students with learning disabilities like Dyslexia were “able to focus” and did not require a special needs assistant in school.

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Some students may have comorbidity issues such as ADHD alongside their primary diagnosis of special needs, further complicating their learning needs. For example, T12 revealed that in addition to a student being deaf:

... the student has ADHD also, so this student cannot focus. The student goes around disturbing other people and then they kind of like move on with the lesson and they don't really stop for this student. So, the student is often lagging way behind, like you can tell from the homework... my centre head told me that there's nobody really helping this student with studies or like teaching signs. So, my centre head asked us to teach this student signs instead.

To address the varying support required, even within one category of special needs, T11 believed that "it is important to ensure that they actually get the help they need, rather than a blanket approach" where they all get the same type of help. Shadow educators recognised the need to understand and meet the specific needs of each student. For example, T15 shared that despite being trained in sign language to deaf students, the shadow educator "never needed to use my skill of sign language for the student in particular" as the student did not know sign language. Furthermore, the limitations of mainstream schools in providing sufficient support were acknowledged. T7 and T14 expressed the perspective that outside help, such as shadow education, was valuable in optimising the development of students with SEN, as mainstream schools currently lacked the capacity to have enough teachers trained in SEN and SENOs. T7 commented that there was a limit to how much a teacher could do and expressed that "outside help will always be useful" and parents wanted "more help for their kids" hence they sent their children with SEN for shadow education. T7 believed that the role could be "fully optimised for the

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development of the kid”. T14 shared that parent of a student with SEN sought for this shadow educator “to give tuition because in the student’s school, this student had problems understanding the lessons. I believe, it was taught such that it was catered to the general student population.”

These concerns that impeded the development of students with SEN were related to the capacity and willingness of mainstream school teachers to adapt their lessons to the needs of SEN students. Furthermore, T5 expressed concerns about the skills and resources available to students with SEN:

I've come across certain cases where the child needs really personalised attention and being in a mainstream school doesn't really support that kind of personalised attention, if parents insist on leaving them in the mainstream. That becomes a burden on the school, not because the school doesn't care, but it just doesn't have enough specialised teachers or the expertise or the resources to actually cater to these kinds of incidents.

This is also echoed by T7 who elaborated that teachers “need first, to be trained” and they “need the financial resources” and “also need resources in terms of timetabling and curriculum” when working with students with special needs. According to this shadow educator it is quite resource intense “to just pull out a few students to give more attention to these students”. T7 felt that a teacher needs to attend to all the students in the class and “it’s much easier if it’s homogenous”. When teachers have students with SEN in their class, this shadow educator believed that teachers’ stress levels increase when “trying to do more for these kids” and yet “they have to still do their normal lessons” with the additional stress of having “to prepare to engage these kids further”.

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The concerns raised by shadow educators highlighted the need for personalised attention, appropriate training, financial resources, and timetabling flexibility to effectively support students with SEN enrolled in mainstream schools. The experiences of shadow educators shaped their perspectives on customisation of support for their students, recognising the advantage of being able to go the extra mile and provide individualised attention that may be challenging for mainstream school teachers. For example, the analysis of data gathered from the shadow education participants revealed that the majority of shadow educators support their students with SEN individually because these students required extended time to process and understand what was being taught in school. Many of these shadow educators went above and beyond for their students with SEN, meeting them where they were and helping them cope in a mainstream school setting. T16 candidly shared her belief on why shadow educators can do this:

... they are teacher, I'm not. They are bound by something, I am not. I can go the extra mile, I can do whatever I want with my student, but they cannot. And they have to make sure that they are treating everybody equally, treating everybody as one because they are teachers, but I'm not! I can give her whatever I want. I can do whatever I like. I can let her be selfish but teachers are teachers, they have to scold.

They acknowledged the unique role they play in facilitating inclusivity in mainstream schools.

These concerns and perspectives influenced how the shadow educators tailored their support to meet the specific needs of students with SEN. Many shadow educators provided individualised support, recognising that these students need the extended time to process and understand the national curriculum. Their commitment to helping students cope in a

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mainstream school setting reflected their dedication and willingness to go beyond the limitations faced by mainstream school teachers.

The following section will focus on the goal of shadow educators in contributing to the ongoing efforts to support and complement inclusive education practices for students with SEN enrolled in mainstream schools.

- **Identifying Gaps and Challenges of Students with SEN**

The concern expressed by T18 emphasised the importance of identifying and addressing gaps in the education of students with SEN. The shadow educator shared the experience with a Primary 1 student who consistently scored below 70 marks, while most students scored between 80 to 90 marks. Recognising this gap, T18 worked diligently to remediate and close it. By Primary 4 or 5, most students experience a dip in their marks, but this student was able to score between 70 to 80 marks, which was considered a measure of the student “coping pretty well”.

This highlighted the need for individualised attention, as students with SEN may not necessarily be slower learners but may require targeted support in specific areas. T7 acknowledged the complexity of the issue, explaining that understanding the student’s specific problem is key:

It's a complex issue, because first you're trying to understand what is their problem. Every time it's trying to understand what their problem is and sometimes, they're reading and they just don't read properly. But when you realize that their need is really real, then you need to slow down. So, a lot of patience, slowing down techniques, sometimes I'll do the examples for them, to show it to them over and over again - different ways to understand it.

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T7 emphasised the importance of adapting teaching methods to meet the individual needs of students with SEN.

T17 summed up the sentiment by stating “We can't force them to do things like other non-special needs students. They need to learn at their own pace and find a method which works for them”. This highlighted the recognition among shadow educators that students with SEN require customised approaches and support tailored to their unique learning requirements.

• **Individualised Teaching Approaches for Students with SEN**

Based on the findings, it became evident that shadow educators acknowledged that schools addressed the diverse needs of students with SEN through strategies such as differentiated instruction, small-group pull-outs and one-to-one remediation. However, one major concern identified in the study was the necessity of customising learning for students with SEN. T19, for instance, expressed the challenge of helping a student with SEN comprehend the content. Despite being familiar with the requirements of the national curriculum, T19 was “more well versed in special education curriculum”. This led the shadow educator to take a different approach when teaching topics like area and perimeter, explaining the concepts in a way that suited the student’s needs, while mainstream teachers often focussed solely on delivering the lesson.

While teachers in mainstream schools did employ differentiated instructions in their lessons, T7 raised the issue of time management when accommodating students with SEN. According to T7, it would be challenging to integrate differentiated lessons into the structured curriculum time allocated for mainstream students:

the problem is to prepare a lesson for the mainstream kid and to integrate a differentiated lesson during that curriculum time, a specific time, it’s not so easy.

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Because you cannot be teaching 40 kids, a normal lesson you prepared and then suddenly stop, find time to set aside for these kids to start something extra with them. If a teacher needs to address them, the teacher's lesson must be structured such that time is not wasted. Time is optimised. The lesson prepared, will allow them to be able to get the mainstream students to work on their own while setting a little bit more time to help these kids to catch up.

The data indicates that inclusive education was widely practiced in mainstream schools with teachers receiving training in differentiated instruction. However, meeting the needs of students with SEN within the constraints of structured time required teachers to possess effective time-management skills.

- **Managing Students with SEN in Inclusive Settings**

Within the data, several responses highlighted the importance of teachers possessing the necessary skills to work effectively with students with SEN. T3 observed that teachers were unable to identify students with SEN for intervention. The shadow educator shared the experience about a student who went through the various levels without being identified because the student was “a Down syndrome child, not the one with mongoloid feature”. The student went unidentified until Primary 4, when somebody “sounded the alarm”. T5 expressed concern that some teachers lacked familiarity with special needs and therefore struggled to identify students who required support. This lack of identification could lead to a lack of necessary assistance as “mainstream teachers may think that they are more of a nuisance than giving them the necessary support”. Similarly, T12 noted that “the teachers are not very well-equipped with the skills to handle children with SEN. So sometimes it's not that they don't want to help but they don't know how to help”.

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T16 observed a student facing difficulties in a group project due to communication challenges with other group members. This issue arose because the shadow educator felt that the student “can’t really communicate” with the group members because the student was not very familiar with them. The teacher communicated to T16 that the student was having trouble with group projects but the shadow educator explained this could be the case “as long as the group is not deaf people together” then it would be hard for this student.

T19, in her interactions with teachers, discovered a tendency to prioritise academics over the holistic development of students with SEN:

...the teachers I spoke to, they are able to tell me what the child cannot do, how disruptive the child is, they always focus on what the child cannot do. And mostly it's in terms of academics, or how the child is like in terms of behaviour in class. All the other aspects, whether they are playing outside, whether they are engaged during recess, those are the kind of things they don't observe, because they don't feel it's quite important. So maybe it could be a lack of understanding, lack of observational skills in terms of that aspect, and it could also be attitude as well.

This lack of understanding, observational skills, and attitude may contribute to the limited support provided in these areas.

The data revealed that only 20% of mainstream school teachers were trained in SEN, with each school typically having one to two SENOs. This data was drawn from participants responses, including T20, who raised concerns about the accuracy of this statistic, suggesting it might not accurately reflect the reality in the school of the student being supported. This qualitative insight, supported by literature from Faragher et al. (2021), indicated that 10% to 20% of mainstream school teachers in Singapore received

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SEN training, highlights the potential challenge of having an adequate number of trained staff to meet the needs of the population of students with SEN within mainstream schools.

4.5.2 Factors Related to the Students

- **Building a Sense of Belonging for Students with SEN**

The concerns expressed by T3 highlighted the importance of acceptance and a sense of belonging for students with SEN. T3 emphasised that these students simply wanted to fit in, but often found themselves caught in a conundrum where they neither saw themselves fitting in with the brighter students nor with the average student. T3 noticed that from the years of supporting students with SEN that the students more often than not ended up associating themselves with “the loafers who don't do their homework, the ones that get into trouble. It's not nice, but it happens.”

T3 also noted that it could be challenging for neurotypical students to accept the uniqueness of students with SEN. This shadow educator shared examples of certain behaviours exhibited by some students with SEN such as one who would “sing very loudly during tuition time” and “in the toilet” as well as “going all the way down to the car” to the student's awaiting parents. These unique tendencies could sometimes lead to the other students looking at them differently or even mocking them. T3 shared how this could happen during the student's lesson session:

...sometimes what happens is, there's an overlapping period where the child which is normal is here already and the special needs, the ADHD or the mildly autistic child is coming. He is very forthcoming, very friendly with everybody, and he tends to say certain things, which is not mainstream, then you'll realise that the other kids are looking at him differently and then the mocking comes in very

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mildly. We put a rest to that kind of mocking, but we try our best not to have that kind of interaction.

T11 shared the concern about a student with Autism being misunderstood by the peers due to this student's tantrums, which the other students might not understand as "she can throw tantrums and you don't really know what the student means. I think, the peers might not understand this concept, they might bully? I think that's a concern". T14 expressed the belief that some teachers failed to address bullying, leaving the students with SEN vulnerable to continued mistreatment. T14 highlighted that mainstream schools can become unsuitable for students with SEN when "teachers are not addressing this behaviour or culture that normal students have towards them (students with SEN)."

Students with SEN often faced stigmatisation not only at school but also during group tuition sessions and between individual tuition exchanges. This stigmatisation could manifest in ostracism, name calling and condescending behaviour from their peers.

4.5.3 Factors Related to the Learning Environment

- **Promoting a Safe Learning Environment for Students with SEN**

During the interviews, the importance of a safe learning environment was highlighted by the shadow educators. T5 expressed the idea that these students should "have someone safe to go to, they have somebody whom they can trust and they feel they can be supported, whenever there is a need to". T19 pointed out that the school environment could be risky for a student with SEN, citing instances of frustration, daily meltdowns and bullying by classmates and the student simply "doesn't feel safe in that environment".

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T1 described how parents prioritised creating a safe environment for their children as “they are giving the children a space where the children would just progress at their own pace”. T1 also observed that the parents’ expectations were focussed on their children’s happiness rather than setting specific academic goals and conceded that parents “don’t have high expectations nor low expectations. They just want their child to be happy”.

The participants in the shadow educator’s subcase recognised that a safe environment played a fundamental role in supporting students with SEN and reducing behavioural issues. It is important to note that creating a safe environment goes beyond the physical surroundings and also encompasses the dynamics and interactions within that environment. In addition to physical safety, students with SEN may face various forms of bullying such as verbal, relational, physical or cyber bullying (Children’s Society, 2021).

Creating a safe environment is fundamental for the well-being and success of students with SEN. In recent research, Berchiatti et al. (2021) shed light on the detrimental effects of bullying on learning outcomes, not only for students with SEN but also for neurotypical students. The study highlighted the increased vulnerability of children with SEN such as autism, attention deficit disorder and/or hyperactivity disorder, and intellectual disability to bullying and victimisation. Hence it is imperative to address bullying in all its forms as an integral part of establishing a secure and inclusive environment for all students.

• **Time-Related Matters in Supporting Students with SEN**

The concerns regarding time in mainstream schools were raised by shadow educators. T7 pointed out that the fixed time and curriculum in schools made it challenging and “to adjust to that is not so easy” to provide individual attention to students who need more support. T10 emphasised that time played a significant role for these children: “it’s

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not only the more attention that they receive, I think time also plays a huge role”. T12 suggested that “students with special needs, they should be given more time like additional help after school in order for them to keep up with the curriculum”. T18 highlighted the need for extra time, saying “other children may be able to pick it up and then learn something within a week, but this student would need three weeks. For shadow education, we are able to provide the extra time that they need”.

Recognising the complexity of the situation, T6 acknowledged- the difficulty faced by teachers:

we have to understand the teacher, it’s actually very, very tough, you’re not having one child with special needs. You probably have some undiagnosed cases.

Especially, behaviour problem is quite tough because you have to complete the syllabus. You also have to account for the other students who wants to learn.

T14 added that teachers had multiple responsibilities and it would be challenging as the teacher “has multiple roles to do; manage the whole class, planning for next lesson, admin, meeting parents, a lot of teacher meetings. So, it's very hard to give time individually to that one student”.

T1 openly shared her experience, highlighting the challenges faced in including students with SEN in the group tuition due to time constraints:

Based on my experience, it might not be enough to talk about how I can conduct a successful lesson or have an inclusive environment because I am still unsure of on how to actually include them in the classroom itself. There are instances where our special needs student in the classroom doesn’t want to do work and there is also a timing where I have one hour only and I have to give fully. So, there were a few

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sessions in my school since I had no choice but to neglect them in a way. So, I felt like, I wasn't very sure what to do because when I ask colleagues, colleagues were still unsure what to do despite their experience.

This firsthand account sheds light on the practical difficulties mainstream teachers might encounter when attempting to create an inclusive learning environment for students with SEN.

In the shadow educator's subcase, it was reported that students with SEN often require more time to learn. Unlike mainstream schools with fixed curricula, shadow educators had the flexibility to adapt to their students' needs and allocate the necessary attention and time to help them master the content or skills.

• **Human Resources with Specialised Skills for Students with SEN**

The findings revealed that shadow educator participants expressed concern about the limited human resources available to support students with SEN. T16, who provided shadow education for deaf students, highlighted the scarcity of individuals proficient in signing, "we don't even have enough people who can do sign language decently well, to teach". The shadow educator explained that there is a shortage of resource teachers who can sign, with only three resource teachers shared across the six levels in the primary school. This information came from the student who mentioned that less attention was given as they progressed from one level to the next because the resource teachers needed to concentrate on the incoming deaf students in Primary 1. T16 believed that this limited the amount of support the student was given and resulting in the student not receiving the help needed.

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T19 also emphasised the scarcity of human resources in schools to meet the needs of students with SEN. The shadow educator mentioned the limiting ratio which made it challenging for individualised attention:

you have one or two AEDs (now known as SENOs) dealing with a whole group of students of varying needs. They are not able to help every single one or touch base with every single one.

In light of these observations, T7 expressed that “the support is very partial, and given the limited curriculum time and the number of other activities that the students have, I would say that more can be done”. The shadow educator participants agreed that while support was available in mainstream schools, it was limited.

Overall, the shadow educator participants identified the lack of trained human resources as a significant issue in meeting the diverse needs of students with SEN in mainstream schools. They believed that more could be done to improve the level of support available.

• **Coordination and Collaboration in Supporting Students with SEN**

The concerns regarding collaboration and coordination among those involved with students with SEN were raised by shadow educator participants. They expressed difficulties in working collaboratively with school personnel, citing issues such as “both are separate entities”, and shadow education “is not recognised formally” so there was no opportunity to engage in collaborative support to better help students with SEN. T3 commented that shadow education exists “only in the background and the unnecessary part of the learning journey” while T14, who collaborated closely with parents of students with SEN mentioned that “it didn't cross my mind to ask the teachers because I wouldn't have personally

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contacted the school teacher because I will actually see myself as a separate entity from them”. T5 expressed the view that “shadow education or a teacher can only do that much” and he suggested that a collective effort, such as “the many Helping Hands concept”, would be more beneficial than running “two parallel tracks”.

However, it is worth noting that not all shadow educator participants faced these challenges, as some had access to school personnel for collaboration. T5 mentioned working “with the AED/LBS (now known as SENOs) and I’ve worked with the school counsellor both full-time as well as part-time” to support of these children. T17 shared a unique situation where a teacher was open to collaborating with external support but the shadow educator believed it is not a common practice:

There was this boy who faced some difficulties, and what made it really unique was unlike the usual practice of involving only parents, there was this amazing teacher who was so open to collaborating with external support, like myself. The teacher was willing to share insights and explore ways we could work together. It was quite a rare situation, where the teacher recognised the power of collective efforts to help this boy. It's not something you experience every day.

T8 observed that collaboration with schools was not consistent, with some teachers communicating and discussing “about homework, and everything” while others “don't communicate with us”. As a community service provider, T8 expressed the uncertainty if a shadow educator should initiate collaboration because “this kind of things is between the parent and the teacher”. T8 was also uncertain “if the teacher will reciprocate what we’re asking for” if the collaboration was initiated. T19, shared the experience that professional standing as a special education teacher helped gain access to opportunities to work with schools:

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The thing is, because even though I'm a tutor, I'm also special education teacher. So that provides the opening, in that sense. I do ask the parents to just bridge the communication between myself and the teacher. And then we start roping the AEDs (now known as SENOs) in. I think being a special education teacher, it opens the door, rather than if you're just a normal tutor.

The data indicated that not all schools were receptive to collaborating with the community to support students with SEN, and it often depended on the individual teachers' beliefs and willingness to reach out to external support. Parents played a crucial role in facilitating communication between schools and shadow educators.

4.6 Additional Support for Shadow Educators to Support Students with SEN

This section focusses on the resources required by shadow educators to effectively contribute to the ongoing efforts to support and complement inclusive education practices for students with SEN enrolled in mainstream schools. The data examined the areas of professional development and collaboration with schools to enhance the support for students with SEN.

- **Professional Development for Shadow Educators Supporting Students with SEN**

Regarding professional development, most shadow educators were self-taught in the field of special needs. With the exception of teachers who had left the service, retired teachers and teachers who have special needs training, the majority of shadow educators acquired knowledge through self-guided learning in the area of special needs. T6, for instance, mentioned using the internet and various resources to expand her knowledge, "if there's something that's really bugging me, I just go into the internet and there's a lot of

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resources, and you can read about people's thesis and study". T7 believed that "tutors who are not teachers at all, they can still do the job because with the experience, and we do reflection and observe the kids, we will be able to pick up some skills on our own". T4 emphasised the importance of continual professional development and staying up-to-date in the field:

... I'm not trained, I do have some Diploma in special needs education, but it's not enough. It should be continuous, finding out what the professionals and academics are talking about, getting to hear them in conferences, I would love to be able to be subsidised to, listen to these people like the normal conference which MOE sends their teachers to?

Based on the data, it was evident that shadow educators value self-improvement and collaboration with schools to better support students with SEN. While shadow educators were engaged based on their academic ability, their competency in working with students with SEN was determined by their experience in the field and personal attributes. Since they are not members of a union or a certified professional body, access to available training is limited, and they heavily rely on self-directed learning from online resources.

• **Collaboration with School for Successful Inclusion of Students with SEN**

According to the shadow educator participants, collaboration with the schools offered advantages for students with SEN. However, due to the largely unregulated nature of shadow education industry and the primary communication channel being through parents, opinions on working with schools varied among the shadow educators.

T8 expressed the belief that information from the school would be beneficial, particularly for older students with SEN. As parents tend to be less involved at that stage,

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relying solely on the student with SEN may not be the best option because they are “not a reliable narrator”. However, T8 believed that:

...there's not a lot of communication between us and the school. You can help them on Saturdays for two hours, but you don't know what's going on for the rest of the five days they have in school...You're not sure if what you're doing on the weekend is helping and supporting what they're doing in school.

Some shadow educators mentioned that collaboration with schools is often hindered because teachers or parents do not see the need for shadow educators to work with the school. T11 expressed concerns that teachers might assert that they were, “helping them enough in school. We will handle it in school. We'll handle it with the parents”, and dismiss the need for additional support. T12 pointed out a lack of information exchange, “sort of like a lack of communication between shadow education teachers and the mainstream school teachers”. This shadow educator felt that they “don't exchange information about what we know” and recommended that parents should inform the teacher that their children were receiving tuition and to connect the shadow educators to the teachers. However, T13 revealed that some parents might be hesitant to share information with the shadow educators because the shadow educator sensed that it “might be too intrusive”. On a positive note, T19 highlighted that collaboration with the school “makes things easier” and enabled students to “truly benefit” from mainstream environment although “a lot of support still needs to be thought of”. Supportive principals were recognised as a significant factor. T19 also shared positive experiences of good collaboration between the shadow educators and schools, emphasising the importance of partnership and alignment in supporting the student:

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I believe in partnership, so I want the people in school to really feel that, there is an avenue that we are doing the same thing to support this child. In fact, quite a bit of the students I work with have issues in the school itself, in terms of coping with studies, or coping with other social aspects. So, a fair bit of the people I work with in school, we're very happy to have somebody else on board to help.

Collaboration with the school was considered valuable by shadow educators as a means to support students with SEN. However, the extent of collaboration varied across schools and shadow educators saw collaboration as a shared responsibility to help meet the needs of these students.

4.7 Conclusion

The chapter explored the perspectives of shadow educator participants' regarding their beliefs about their mediating role and contribution to the ongoing efforts to support and complement inclusive education practices for students with SEN enrolled in mainstream schools. Three key aspects emerged from the shadow educator participants: the necessity of additional support for students with SEN in mainstream schools, the importance of addressing concerns related to supporting students with SEN, and the need for enhanced support for shadow educators to work effectively with these students.

The majority of shadow educators firmly believed that additional support was essential for students with SEN enrolled in mainstream schools. They emphasised the importance of tailored interventions, individualised attention, and specialised teaching methods to help these students succeed academically and socially.

Moreover, the shadow educator participants stressed the importance of addressing concerns related to supporting students with SEN. They highlighted the variability in

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support provided by mainstream schools, which they found often fell short of meeting the individual needs of students with SEN. Time constraints, fixed curricula and limited resources posed significant challenges in creating an inclusive environment.

Furthermore, the shadow educator participants emphasised the need for enhanced support to work more effectively with students with SEN. They acknowledged that their role required a deep understanding of special needs education and continual professional development. However, as self-taught practitioners, they relied heavily on self-directed training from the internet due to lack of formal training opportunities. The shadow educator participants expressed the desire for accessible training programs and collaborative partnerships with schools to improve their knowledge and skills in supporting students with SEN.

The perspectives of shadow educator participants shed light on the challenges they face and the role they played in providing responsive support to students with SEN enrolled in mainstream schools. Their insights highlighted the need for collaborative approach that involved schools, experienced colleagues and on-going professional development to bridge the gap and create truly inclusive environments for students with SEN. The findings from the subcase 2 (parents), involving parents who engaged shadow educators for their children with SEN enrolled in mainstream schools, will be presented in the following chapter.

CHAPTER 5: SUBCASE 2 (PARENTS)

This chapter presents the findings of a subcase study that involved parents who had employed shadow educators for their children with SEN while they were enrolled in mainstream school. The study included 15 parent participants, in addition to the 19 shadow educator participants discussed in Chapter 4. The chapter commences with a summary of the participants' past engagement with shadow education for their children with SEN. Subsequently, empirical case study findings pertaining to the central research question are presented. The case is organised into five sections, as follows:

- Beliefs about inclusive education
- Purpose of shadow education for students with SEN
- Strategies to support students with SEN
- Concerns related to supporting students with SEN
- Additional support for shadow educators to support students with SEN

Throughout this chapter, quotes are utilised extensively to convey voices, beliefs, experiences and individual perspectives of the participants.

5.1 Participants' Experiences in Engaging Shadow Education

The perspectives of the parents who engaged shadow educators for their children with SEN enrolled in mainstream schools were consolidated to provide a summary of their experiences. In total, 15 parents were interviewed for the study, consisting of 14 mothers and two fathers. While only one father was a primary interviewee, P9, recruited her husband halfway through the interview recognising his ability to contribute more to the interview. For the purpose of this study, P9 and her husband were considered as a single parental unit. These interviews were conducted following the perspectival components

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outlined by Blackledge and Hunt (2019). Refer to the “Guiding Questions” section (p. 21) for details. In this study, parents predominantly engaged graduates as shadow educators with only three parents engaging undergraduates for their children with SEN. Table 8 provides a summary of the history of parental engagement with shadow education for their children with SEN, including specific categories of special educational needs and the chosen teaching contexts.

Table 8:

Subcase 2 (Parents): Participant Summary of Engagement in Shadow Education Provision for their Children with SEN

Participant Name	Highest Educational level of tutor engaged	Professional certification	Years of shadow education engaged for child with SEN	Special Needs	Teaching context	Level
P1*	Undergraduate	-	5 years	4 children with Autism	Individual	Pri to Sec
P2	Degree	-	2 years	Speech and language learning difficulties	Individual	Pri
P3	Degree	-	1½ years	Autism	Individual	Pri
P4	Degree	-	4 years	ADHD	Individual	Sec
P5	Undergraduate	-	2 years	Hearing loss	Individual	Pri
P6	Degree	-	3 years	Speech and language learning difficulties	Group	Pri
P7	Degree	Trained in special needs	10 years	Global Development Delay and Dysgraphia	Individual	Sec
P8	Degree	-	3 years	Dyslexia	Individual	Pri

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Table 8 (continued).

Participant Name	Highest Educational level of tutor engaged	Professional certification	Years of shadow education engaged for child with SEN	Special Needs	Teaching context	Level
P9	Degree	-	3 years	Autism	Individual	Pri
P10	Degree	-	5 years	ADHD	Individual and Group	Sec
P11	Undergraduate	-	3 years	Dyslexia	Individual	Pri
P12	Degree	-	8 years	1 child Dyslexia & Speech difficulties Another child Dyslexia & ADHD	Individual	Pri Sec
P13	Degree	-	Over a year	Autism	Individual	Pri
P14	Degree	-	3 years	Sensory processing disorder	Individual	Sec
P15	Degree	-	5 years	Multiple disabilities	Individual	Pri

Note. Pri = Primary; Sec = Secondary; ADHD = Attention Deficit Hyperactivity Disorder; Small group = 2 to 20 students.

* All names are coded.

The table revealed that one-third of the parent participants had engaged a shadow educator for their children for more than 5 years with two parents engaging shadow educators for a duration of 8 to 10 years. At the time of the interviews, the average tenure of the shadow educators was three years. Among the parents, only one engaged a shadow educator with a background in special needs training while the others engaged shadow educators without such training. Two-thirds of the parent participants enrolled their children in shadow education for a period of 1 to 4 years. Furthermore, two parents chose a

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small group setting for their children, while the rest opted for an individualised setting for their children with SEN.

Within this case study, the prevailing trend was to engage shadow educators without special needs training, as parents preferred to provide the necessary training themselves. Consequently, these shadow educators relied on the parents' knowledge and expertise. When asked about their preference for non-special needs trained shadow educators, parents often cited cost as a determining factor. Only one parent in the group engaged a special needs trained shadow educator, who worked with their child for a duration of ten years.

Of the 15 parents interviewed, 13 expressed a preference for individualised sessions, one preferred group shadow education; and another chose a combination of group and individualised shadow education for their children with SEN. The parent who opted for a combination mentioned being resourceful to maximise the family's budget by enrolling the child in self-help groups (Chinese Development Assistance Council (CDAC), Eurasian Association (EA), Singapore Indian Development Association (SINDA) and Yayasan MENDAKI (MENDAKI)) for group tuition, while also engaging a private shadow educator to support the child with SEN.

Similar to the subcase of shadow educators, the shadow educators employed by the parents had taught the same child with SEN for at least a year or longer, which served as an indication of their ability to support children with SEN enrolled in the mainstream school setting. Based on the data, the majority of the shadow educators engaged by the parents had taught their children with SEN enrolled in mainstream schools for a duration ranging from a year and a half to 10 years.

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Considering that the level of qualification is widely regarded as an important teaching competency, it was expected that shadow educators would possess at least a General Certificate in Education, Advance-Levels (GCE A-Levels) or equivalent qualification. According to the data, the shadow educators engaged by parents met this expectation with varying levels of qualifications, ranging from academic certifications such as the GCE A-Levels to degree levels. Only one of the shadow educators possessed a professional certification in special education teaching. This group of parents showed a preference for graduates over undergraduates and shadow educators without professional qualification. The data suggest that for the parents in this subcase, academic and professional qualifications were not significant influences in parents' selection of shadow educators for their children with SEN. Their qualifications were considered to determine whether this was a necessary criterion for the parents when engaging shadow educators to support their children with SEN enrolled in mainstream schools.

Although having qualified shadow educators could potentially benefit students more, the parents in this study prioritised affordability and emotional support over formal qualifications. To bridge this gap, educational organisations and community groups could provide training and resources to enhance the competencies of shadow educators. The impact of qualifications on parents' selection of shadow educators and their preferences is discussed in Chapter 6 (p. 201). It is highlighted that while qualifications were perceived as important in teaching competency, they did not emerge as primary criteria in the parents' decision-making process.

The common special needs supported by the shadow educators in this case study primarily aligned with the broad areas defined in the Report of the advisory panel on the

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implementation of compulsory education (IAP, 2017) as mentioned in the section “Students with Special Educational Needs” (p. 14). However, there were others such as Speech and Language Learning Disability, Dysgraphia, Global Development Delay, Sensory Processing Disorder and Multiple Disabilities, indicating that there are other types of special educational needs present in the mainstream schools beyond those commonly categorised by the Ministry of Education. This suggests that parents engage shadow educators to provide personalised support to their children’s unique needs, which mainstream schools may not be completely ready to meet.

5.2 Parents’ Beliefs about Inclusive Education

The analysis of the parents’ understanding of inclusive education highlighted their beliefs regarding the mediating role and contribution of shadow educators in supporting inclusive education for their children with SEN in mainstream school settings. The data revealed that the parents believed that children with SEN enrolled in mainstream schools required additional support beyond that provided by the school. According to P9, providing “C9 this extra tuition, does help in a way that improved the memory first, secondly, boost the confidence”. According to P9, the school teacher informed them that the level of the child’s confidence was very low, and in view of this, “C9 needs more support in terms of emotions”. The parent also shared instances where the child hesitated to ask questions in class because there were “too many (students) in a class” and that “if there’s a one-to-one or a smaller class”, the child was comfortable to do so.

Parents’ primary aspiration for inclusive education was the absence of discrimination among students in mainstream schools. For P7, it was about creating a “wholesome” environment where “people of diverse needs and backgrounds are able to

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receive a good quality education that can cater for all” because “both sides get exposure and understanding” and “there was no ‘us’ or ‘them’ concept, it was quite wholesome”.

Regarding non-discrimination, P5, believed that the school community should fully embrace learner diversity by providing:

facilities in school to meet the various needs of students (lifts, ramps, adjustable table, AT (Assistive Technology), cushioned room, exam room, user-friendly toilet etc.) modified curriculum (PE lessons), holistic approach in school process where stakeholders (other parents) would acknowledge their kids schooling with other kids with special needs.

Based on these beliefs, the parents expressed that not all their children with SEN were adapting well in the mainstream schools, leading to their engagement with shadow education. They expressed concerns about the level of support available in the mainstream schools, including the number of teachers trained in special education and the consequent student-to-teacher ratio in this respect; they were sceptical about the comprehensive nature of the training given the broad areas of special needs outlined by the MOE. Interestingly, many parents acknowledged that their children did not have access to a teacher adequately trained to meet their children’s unique needs, making this finding an intriguing contradiction, given their preference for shadow educators without specialised training. According to P11, receiving customised support was necessary to cater to the diversity of needs for children with SEN, but explained that C11 might not be receiving this support because “20% (teachers trained in special needs) that would mean maybe 20 or 30 classes have it (referring to support)”. This observation could suggest that in a school with 50 classroom teachers, on average, only 10 classes might have a teacher trained in special

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needs. P11 questioned the depth of training provided to teachers, stating that “every special need is different; Dyslexia is different from ADHD which is different from Autism, which is different from Down syndrome, which is different from anger management, which is different from PTSD (Post-traumatic stress disorder). When they say trained, I’m not sure what they mean”. The parent also discussed practical issues, such as limited resources and the challenges of addressing diverse needs:

schools now have a counsellor and when teachers cannot cope with violence in the class, they can call on the counsellor to take the child into the counselling room. But there's only one counsellor per 1500 students... And certainly, one special needs child in the class is enough. On the positive side, they can teach a lot of good qualities like being patient. On the negative side, one anger management child or autistic child who lashes out can disrupt the entire class, for the entire session regularly.

P14 echoed this perspective but was able to rationalise the constraints faced and felt that it’s “a question that’s quite difficult to solve actually”. The difficulty is attributed to “manpower issues”, and “trying to cover curriculum” according to this parent. P14 also described mainstream settings as “still very results focus rather than about skills acquisition” and students were being “measured by that score” rather than how much they have improved.

P8 generalized the type of support that was usually required by children who are neurodivergent with SEN, emphasising the importance of developing the capacity to “sustain learning in class”. This is crucial because challenges related to “processing speed, attention/focus and working memory” can vary among neurodivergent children with SEN.

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P8's insight into what it takes for neurodivergent children with SEN to succeed in a mainstream school setting was particularly powerful when the parent expressed that "a child with special needs should not be made to feel defeated because they take longer than others to complete a task". P8 explained that most special needs children "are not able to function as well in school" because "trying to keep up with the schoolwork on a daily basis, is daunting for a child like mine".

P11 shared an insight into how an issue that was not handled well, might escalate from one issue to another:

... the frustration that comes in class from name calling when you are slow or bullying because you keep the class back from recess because you haven't handed in your work or you spilt your things or you have not organised your papers properly, or you fail something or you've got less than 90% for something resulting in the class not receiving a reward is extremely detrimental to the child's feeling of belonging in the class. Especially if the child themselves is not of an assertive nature.

These beliefs shaped the parents' perspectives on the need for shadow education support for their children with SEN attending mainstream school. They believed that their children with SEN were not receiving the necessary support to thrive in the mainstream environment. The following section will delve into the parents' perspective on the purpose of shadow education for their children with SEN.

5.3 Parents' Perspectives on the Purpose of Shadow Education for Children with SEN Enrolled in Mainstream Schools

To explore the purpose of shadow education, it was important to understand the rationale parents offered for enrolling their children with SEN in mainstream school and the subsequent need for additional support through shadow education. In alignment with the theme identified in the thematic analysis “Potential of shadow education as a supplemental support for students with SEN”, Appendix R displays a sample of the data extracted from among several pages indicating reasons for choosing mainstream school placement by parents.

- **Parents' Belief in their Child's Higher Abilities**

Some parents denied or disregarded the learning difficulties faced by their children and had a different perspective of them, considering them to belong to a different category of special needs. As expressed by P14:

there are some students who may be deemed educationally sub-normal and you've got special schools to support them. However, there are other children who don't fall into that category, therefore, they have to go to mainstream schools.

Certain parents held the hope that their children with SEN would be “late bloomers” and therefore, chose to place them in mainstream schools rather than special schools. Some expressed strong opinions against placement in special needs schools, having a perspective that it's “the end”, with no future prospects, expressing constant concern about their children's opportunity to “get employment”.

Some parents believed that their children with SEN had greater abilities than those in special schools or specialised schools (see footnote in Appendix A for explanation on

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specialised schools). They felt they had “no other choice” as “they are not special needs enough” to attend these schools. For instance, P9 had the perspective of their child’s behaviour as “better off than those” in special needs schools and made the decision to enrol the child in a mainstream school. P12 proudly shared that their child with SEN “excelled academically, being in the top 25% for 3 consecutive years and top 10% for the N levels (Normal/Academic levels) as well”. Parents believed that with “extra attention”, their children with SEN could function effectively in a mainstream school setting.

• **Exploring More Post-Secondary Pathways for Children with SEN**

Most parents chose to enrol their children with SEN in mainstream schools to provide them with more options for their post-secondary education. Refer to Appendix A for the different post-secondary options. The appeal to “progress to higher education” lies in the better “career prospects” it offers to their children with SEN. P10 stated pragmatically, “when you go for an interview, you need to show in your resume, a certificate”, which may not be the case if the child was placed in a special school.

P14 expressed concern that the child with SEN would struggle to “assimilate into higher studies or workforce in future” because Singapore lacks a “special school” dedicated to higher education. P4 emphasised the need to treat children with SEN “with dignity as they will grow up with more confidence to be able to cope, as they progress to higher education”.

• **Navigating Challenges in Coaching their Children with SEN Academically**

Some parents expressed that they “did not feel qualified to teach” or they “do not know how to teach” certain subjects. For instance, P9 felt inadequate due to the lack of proficiency in English, stating “my English is actually not that good”. P10, shared that the

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spouse, who is from Nepal, was unable to coach their child because the curriculum in the country's hometown is "very different" from Singapore's. Also, there was a belief that parents have multiple roles to fulfil, and "playing the teacher role is a bit of a hit or miss", as mentioned by P11. This parent acknowledged that while you could fulfil the role "you can do it, which I did for the first three children", it would require sacrificing the "other roles as nurturer and soulmate" which the researcher sensed from the tone of the voice during the interview that the parent participant was reluctant to do.

- **Exposing Children with SEN to Authentic Real-World Environment**

Parents expressed the belief that enrolling their children with SEN in mainstream schools provided them with exposure to an authentic real-world environment where "they'll meet all kinds of different people in life, they have to adjust, they have to be patient, they have to realize different people learn in different ways". P8 highlighted the need for the child with SEN "to conform to the normal classroom where there is no special strategy for him".

- **Coming to Terms with the Abilities of their Children with SEN**

In this subcase, despite the tendency of some parents to cherish the hope that their children with SEN were late bloomers, nearly all parents accepted their children's abilities and were unconcerned if their children with SEN did not excel academically in mainstream schools. For example, P7 mentioned that C7 had only acquired very basic daily skills concepts like "learning how to count money" and "tell the time". P7 acknowledged that these skills may seem "quite trivial but monumental for us" if C7 could "compare at NTUC and Cold Storage (local supermarkets) which brand of coconut water is cheaper". Similarly, P10 expressed contentment with the child's ability to pass tests, saying "it's not a

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pass with flying colours, it's a pass". P11 explained that the additional support provided by shadow educators was necessary to help the child:

to come closer to being on level with the average student otherwise the child would in the class be the bottom, in terms of behaviour, organisation, academics, physical, ability, listening, attentiveness etc.

Based on the findings, parents believed that the additional support offered by shadow educators would play a role in the academic and social development of their children in a mainstream environment.

• **Supporting the Children with SEN**

Throughout the study, as parents shared their perspectives, they found it crucial to opt for individualised sessions to support their children with SEN. When questioned about their choice, the majority of parents shared the same perspective as P2, who explained that individualised sessions allowed their children to “concentrate better and will not be shy about clearing his doubts”. They valued having “someone to watch the child closely as this child tends to stray off after a while”.

P9 highlighted the advantages of individual attention, emphasising the ability of shadow educators to tailor the learning experience for the child with SEN:

having extra class of one-to-one shadow educator, it gives her help to firstly improve her on things that she does not know. For example, she can ask personally, since she cannot ask in class, and the educator can actually teach her one-by-one, step-by-step for her to understand and boost her confidence.

For most parents, the caring and patient nature of a shadow educator took precedence over the quality of teaching. Although some “shadow educators are unable to

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link the curriculum”, P6 believed that they demonstrated “more patience as they have only one student to focus and they are able to boost the confidence of the learning needs students compared to mainstream teachers”. P8 also emphasised the significance of the teacher-student relationship, sharing the experience:

I ended up with tutors instead, with no special background in teaching special needs kids but probably have “seen it all” in schools, adjusted themselves to be flexible in accepting what can and cannot be done with the child. In the end, after going back and forth, I realized that it is the teacher and child relationship. The best tutors were the ones who didn’t force the child to do it his way but adjusted himself so that he can build on what is comfortable with the child and use that to teach him.

From the parents’ perspective, this support was important for their children with SEN to thrive in the mainstream school environment. They believed that such assistance fostered self-esteem, boosted confidence and enhanced their children’s overall academic competence.

• **Motivating Children with SEN**

Throughout the data collection process, the parents voiced their perspectives that additional support provided for their children with SEN played a significant role in fostering motivation. According to P12, “the child picks up coping strategies to make their learning difficulties more manageable and thus is more adaptable and confident when dealing with the academic demands expected in a mainstream school.” P5 added that this support resulted in “an intrinsic reward where my child is able to internalize self-coping skills of not being seen as a special need child but having the child able to learn better and then catch up in mainstream.”.

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Parents emphasised the importance of having teachers who are “sympathetic and empathetic” towards their children with SEN. P11 explained “being sympathetic and empathetic makes it possible for the child to flourish slowly in the classroom because of affirmation of the teacher, having confidence that the teacher doesn't immediately lash out at you makes the child willing to go to school”. P2 echoed this sentiment, highlighting the significance of having “lots of patience and giving regular words of encouragement and affirming; good effort made a lot of difference”. However, P14 expressed that motivation in mainstream school was limited and inconsistent noting that positive experience depended on having teachers who were highly motivating:

for C14, fortunately, for P5 and P6 (Primary 5 and 6 respectively), C14 had teachers who were very motivating. They'll write C14 small notes, and also entertain C14's interest because C14 loves to draw... there's a science topic, on Friction in Primary 5... what C14 did was to draw a comic, explaining friction, which the teacher felt was fantastic to have the students know, and the teacher actually not just flash it out but ask C14 for permission, and C14 felt very encouraged by that.

That experience was deeply encouraging for C14, fostering motivation and a sense of accomplishment. However, P14 acknowledged that the transition to secondary school brought about different challenges due to the increased “stresses of our curriculum”.

The impact of school teachers on the self-esteem of students with SEN was evident from the sharing in the data. Nevertheless, not all children with SEN attending mainstream schools had the desired positive teacher-student relationship from the perspectives of the parents. To address this concern, parents shared that they took control by carefully selecting

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shadow educators for their children with SEN. They ensured that their children with SEN received the necessary positive reinforcement to build confidence and competence in coping with mainstream environment.

• **Providing Social-Behavioural Support for Children with SEN**

The data on social-behavioural support provided by the parents was mixed. Some parents expressed concern about their children's behaviour, while others emphasised the need for patience. P9 described C9's behaviour as "quite reserved" and noted that C9 found it difficult to express emotions. P9 observed that C9 would "rather keep it inside" and when C9 struggled with schoolwork, C9 would panic, struggle and cry. According to P9, shadow education was "the only way" to get the help of "someone who knows how to handle" children with similar challenges. P11 explained the importance of social-behavioural support, particularly for children who are not assertive by nature:

Especially if the child themselves (sic), is not of an assertive nature, the tuition helps them level up; such that in class, they can have some semblance of following the class therefore receiving the praise of the teacher and receiving the acceptance of the students around him.

P14 reported that C14 was fearful of interacting with the teachers and classmates. When C14 did not understand something, "C14 was not able to question and enquire or get further explanation". According to P14, when C14 cannot understand a certain chapter, "C14 will just stop from there because the child is lost". The involvement of a shadow educator helped C14 cope better, benefitting C14 both socially and behaviourally. P6 described how shadow education improved their child's social-behavioural skills:

C6 was a very quiet and shy student in school so indirectly it (shadow education) helped my child in school. At least now, C6 have friends that the child can talk in

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class and during recess. In term of skills, C6 is not afraid to speak up and ask the teachers if C6 did not understand the subjects. Even though the C6's voice is still very soft, it is still an achievement.

Based on these findings, parents recognised that their children with SEN often exhibit passivity in class and were reticent in expressing their needs in a class setting. This reticence may be attributed to either a lack of motivation or an apparent lack of engagement and acceptance within the broader community.

5.4 Strategies to Support Children with SEN Academically

In subcase 2 (parents), participants were asked to share the strategies employed by the shadow educators in their work with their children with SEN. According to the parents' perspectives, Table 9 presents parents' reportage of shadow educators' teaching strategies for children with SEN.

Table 9

Subcase 2 (Parents): Parental Reportage of Teaching Strategies Deployed by Shadow Educators for their Children with SEN

Approach & prevalence of application	Strategies for teaching	Application by shadow educator engaged by parent	Addresses
Understand the needs of students	<ul style="list-style-type: none">• Profile students• Pitch at the level of student's understanding	P2*, P3, P4, P5, P7, P8, P9, P10, P11, P14 & P15	Diversity of needs
<i>Prevalence of application: 73% of participants</i>	<ul style="list-style-type: none">• Pace according to student's needs		

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Table 9 (continued).

Approach & prevalence of application	Strategies for teaching	Application by shadow educator engaged by parents	Addresses
Provide customised teaching <i>Prevalence of application: 73% of participants</i>	<ul style="list-style-type: none"> • Simplify concepts • Scaffold learning • Repeat (Drill) and Reinforce (Memorise) learning • Cater to interests of students • Targeted skill acquisition 	P1, P3, P5, P7, P8, P9, P10, P11, P12, P13, & P14	Mastery of subject content
Build rapport <i>Prevalence of application: 67% of participants</i>	<ul style="list-style-type: none"> • Exercise flexibility • Have patience, empathy • Be caring, firm and consistent • Persevere 	P1, P2, P3, P5, P6, P7, P8, P9, P11 & P14	Safe environment
Collaborate with stakeholders <i>Prevalence of application: 67% of participants</i>	<ul style="list-style-type: none"> • Involve parents • Coach parents • Partner with school 	P1, P4, P5, P6, P8, P10, P11, P13, P14 & P15	Shared understanding of student
Motivate students with SEN <i>Prevalence of application: 67% of participants</i>	<ul style="list-style-type: none"> • Experience small successes • Allow breaks • Incorporate fun e.g. use humour, games • Make it relevant 	P1, P2, P3, P5, P7, P8, P9, P10, P11 & P14	Student's self-esteem and confidence
Use multiple ways to teach a concept <i>Prevalence of application: 47% of participants</i>	<ul style="list-style-type: none"> • Use manipulatives and building on student's interest • Leverage on technology • Advance teaching • Include visuals • Incorporate kinaesthetic learning activities 	P2, P6, P7, P8, P9, P13, P14,	Student's understanding of abstract concepts

* All names are coded.

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As mentioned earlier, parents shared that they did not specifically seek out shadow educators with specialised skills or knowledge to work with their children with SEN. Based on the data in Table 9, parents wanted shadow educators to understand their children's needs and use that understanding to positively impact their children's learning. The following sections presents the parents' perspectives on the approaches utilised by their shadow educators for their children with SEN.

Anecdotally, during the interviews, some parents mentioned utilising various methods to identify suitable shadow educators for their children with SEN. These methods may have included personal connections within their social networks, seeking recommendations, or engaging services from advertisements or shadow education agencies in trial and error until finding a suitable match. These anecdotal insights suggest a diversity of approaches among parents when seeking educational support for their children with SEN, emphasising the importance of personal compatibility and effective communication in the tutoring relationship.

- **Understanding the Unique Needs of Children with SEN**

Based on the collected data, it was found that over two-thirds of the shadow educators employed by parents conducted assessments to tailor lessons for their students with SEN. P2 highlighted the importance of a finding a good match between the shadow educator and C2 who “doesn't like to be shouted at” and “doesn't like to be hurried”, ensuring compatibility and understanding of the child's learning profile.

P5 emphasised the significance of shadow educators having “the ability to understand every child's learning profile as the pace of learning varies accordingly”. P8 described how C8's shadow educator accomplished this:

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I also want to say that this same tutor adjusts to go with the thought process of C8, the shadow educator looks at C8's steps and sees a pattern and just lets C8 be, as long as it makes sense, which is different from other tutors where they force a method because it gets to the answer faster. But it means C8 will never remember anyway coz the child doesn't understand that method.

P14 expressed that they didn't "look for any special skills" because they valued understanding their child's needs above all else. They checked to see if there was a connection or compatibility between the child and the shadow educator to ensure that they were "able to click" and this assessment was typically made "by the third lesson".

Parents believed that once the shadow educator had a clear understanding of their children's needs, they could customise the teaching and learning approach to suit their children's specific requirements.

- **Providing Customised Teaching to Children with SEN**

About two-thirds of the parents reported that the shadow educators customise their lessons to meet the specific needs of their children with SEN. P8 explained the importance of customised teaching for C8 to thrive in a mainstream school setting, as "a tutor helps to fill in the gaps where my child needs ... it is specific to C8's needs and not the needs of the general class population, also, specific to certain topics and certain skill set that is needed". P8 provided examples of how the shadow educator assisted C8 "to generalize and to apply the same strategy to as many types of question so there isn't a few ways to do any given number of problems". Another example highlighted how the tutor customised the teaching to meet the learning needs of C8:

The tutor would help C8 moderate the action sequences, bring some reality into the composition and add in a few emotions here and there to make the story more

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credible. C8 doesn't quite have issues with sequencing, so C8 doesn't really need to work on that issue.

P14 expressed the perspective that a shadow educator can provide "customised coaching for areas that the child may not understand". She also mentioned the notion of a "customised pace" for these children. According to P14, children with SEN often struggle academically when "the pace is too slow, the child gets bored" or "the pace is too fast and can't catch up". Achieving variation in pace can be challenging in a mainstream classroom where teachers need to go at "a pace of 40 or 30 (students in a class), rather, one person's pace".

P8 further discussed the challenges of providing customised teaching, highlighting the pedagogical approach where the shadow educator's skill lies in teaching "the way the child can learn rather than how the school/educator wants to teach". P8 also emphasised the importance of the shadow educator's disposition, stating they need to be "flexible, knowledgeable, and very patient". Moreover, P8 acknowledged the diverse needs of children with SEN, noting that "every special need child is different. Some need a quiet environment or a smaller classroom setting. Some need more time with compo (composition writing), some need more time doing math etc., it'll be very hard to manage".

The concern of parents to improve learning outcomes by providing customised teaching aligned with the individual learning needs of children with SEN is reflected in their engagement of shadow educators across multiple subject areas for their children. This highlights parents' dedication to ensuring a tailored educational experience for their children with SEN.

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• **Building Rapport and Connection with Children with SEN**

As the participants provided their insights and experiences, it was evident that about two-thirds of the parental participants' perspectives were that shadow educators invested time in building rapport with their children with SEN. The data indicated that understanding the needs of their children and gaining insights into their interests and personalities played a key role in providing customised teaching, ultimately fostering a closer teacher-student relationship. P7 explained the importance of this approach for C7, stating "C7 has a short attention span" and the child was given too "many food and water breaks" by the class teacher, which C7 does not want. Instead, C7 desired "to spend time with the teacher to talk about her personal life (she is quite *kaypoh* <local slang for busybody> and gossipy)". P7 believed that spending time with the teacher "builds trust, and C7 can open up more about her difficulties also".

P4 emphasised that shadow educators must possess "knowledge of the condition, empathy and being approachable and open minded" to establish rapport with C4. P4 also expressed a preference for "educators or tutors with special skills that can cater to this." Similarly, P12 noted that the rapport established with shadow educators was more forthcoming compared to the children's experiences in mainstream school:

the academic help rendered to my two special needs children; I don't really see much being extended to them either. I guess, school wishes to see the students go to them for help if required, and they (teachers) will not keep coming to them and asked them if they are able to catch up etc. So, my kids have to be very proactive and seek further help if they need to. I feel (tuition centre) plays a much more pivotal and important role for my children than mainstream school especially in the critical formative years in primary school.

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Building rapport is essential for children with SEN to gain confidence. However, parents described their children with SEN as forgetful, shy, reserved, frightened, not assertive and lacking in confidence and self-esteem. Parents believed that supporting these children required understanding, caring, patience and perseverance. Additionally, qualities such as compassion, empathy and persistence were seen as facilitating relationship building and enhancing their children's motivation and success.

Overall, the data indicated that building rapport with children with SEN was considered essential by parents and played a significant role in their educational journey.

- **Collaborating with Stakeholders for Responsive Support**

When participants shared their perspectives on the acquisition and maintenance of knowledge and skills, they mentioned that this required a collaborative approach among stakeholders. This approach focussed on building a shared understanding of the child through open discussions to better meet their needs. About two-thirds of the parental participants indicated that their shadow educators adopted this collaborative approach. Most parents communicated with their shadow educators through phone calls or text messages. P14 shared that C14's "tutor would message me almost immediately after class to tell me about certain parts of the assignment, that C14 may need to review or practice a little bit more".

Some shadow educators went beyond their work with the children with SEN and actively engaged with parents. P4 described C4's shadow educator as "a third party who understood, loved and accepted the child for who C4 is," and mentioned that the shadow educator even provided counselling support to the parent.

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The majority of parents directly collaborated with their children's shadow educator. P14 suggested that teachers might not want "to liaise with somebody that's external" and assumed that "there's no way that any teacher wants to liaise directly with the tutor. It's always with the parents to the tutor". However, P11 explained that communication occurred based on needs, or official circumstances:

I'm the bridge. There's no communication between the tutor and the school. In the past, they have written reports to the school to explain to them that C11's condition was an assessed one ... I think, in order to do the assessment, the tutor had to communicate with the teachers to find out, to answer the survey form about what C11's problems were in class. However, in the past I've had the tutors communicate more especially if it is a behavioural issue. Not all teachers are willing; depends on the level of comfort the school has with the tutor speaking.

On the other hand, P15 reported that C15's school had collaborated with the shadow educator since C15's primary school years. P15 considered this collaborative approach as "an integral support" for C15 "to cope in mainstream school." P15 appreciated "the willingness of the school to communicate and work with (name of tuition centre)" emphasising that this "is important".

The data indicated disparities in collaboration practices on the ground, which could be attributed to school leadership and policy. The majority of parents reported that they served as liaisons between the school and the shadow educator, highlighting the importance of effective communication channels.

- **Inspiring Learning and growth in Children with SEN**

In the process of gathering data, it became apparent that students' motivation significantly influenced their learning outcomes in terms of knowledge and skills.

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According to the parents in this subcase, children with SEN often struggled with low self-esteem. From the gathered data, it was noted that two-thirds of the parental participants reported that the shadow educators implemented various strategies to encourage their children with SEN to learn. P10 discussed how C10's child's confidence grew as a result of experiencing small successes. P10 explained that C10 received daily tests that provided an indication of C10's ability, stating, "we can know that he can pass, it's not a pass with flying colours, it's a pass". The shadow educator also motivated C10 with "a card of motivation" and encouraged C10 to "do better than that".

P3 indicated that the background of the shadow educator could also influence their approach when working with children with SEN:

The shadow educator can provide the one-to-one support that mainstream schools typically (are) unable to provide. Strategies implemented depend on the shadow educator's background. Those with ABA (Applied Behaviour Analysis therapy) background will be able to implement some ABA strategies which mainly works on reward system.

In some mainstream schools, teachers play a crucial role in supporting students with SEN through targeted motivational strategies. For example, P14 highlighted the impactful role of these teachers, emphasising they constantly collaborate with subject teachers and occasionally engaged in one-to-one motivational talks with students like C14. This proactive approach demonstrates how some teachers in mainstream schools are attuned to the unique needs of students with SEN, providing them with additional motivational support. This observation complements the support provided by shadow educators and highlights the varied strategies used in both mainstream and shadow education settings to cater to the diverse needs of students with SEN.

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The results indicated that encouraging children with SEN was not a strategy employed exclusively by shadow educators; rather, these moments of encouragement often occurred during pull-out sessions with SENOs or with teachers who demonstrated a caring disposition.

- **Employing Multiple Teaching Methods to Foster Understanding**

In addition to providing customised teaching, slightly more than a third of parental participants reported that shadow educators used multiple approaches to teach a concept. P8 emphasised the importance of adapting the teaching method, stating, “if this method don’t work for a child, you need to change.” P8 recognised that some children “are visual learners, some are kinaesthetic learners who need to touch and move things around to learn”. P14 shared a similar perspective, highlighting the need for the shadow educator to “explain it in a different way, do some parallel exercises to reinforce the learning, before moving on”. From P14’s perspective, this will help C14 to “grasp the concept”. P7 provided an insight into C7’s shadow education lesson, stating, “I was very touched that the teachers had materials that were clearly geared towards special needs children (e.g., colourful blocks, sensory stimuli, bribing kids with rewards) entertaining their whims”. P8 also explained why shadow educators were able to employ this approach effectively:

Honestly, the shadow educators are just more patient. Some may be able to explain things at the very basic level so that it is easier with a special needs child to understand. And sometimes, explaining things at the basic level requires more resources, e.g., tools, building blocks, special education materials that cost a premium that you have to order from overseas and if you try and get those for 40 kids in a class, there will be class management issues, so that it’s not practical.

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P14 observed that “there are times, when the topic is very simple”, and teachers cover “two to three chapters” at a go. In contrast, shadow educators had the flexibility and “goes into depth, rather than just, repeating”. This is important because “a lot of times, what was being taught and what’s being tested is totally different”.

P11 shared the desperation of parents to help their children with SEN cope and prepare for tests and examinations:

at P5 (Primary 5), the step-up is very, very, high. English papers - you have a whole additional section to learn the correct words. The comprehension has three pages of questions. The composition has an additional situation writing. Science - you have to write open ended question answers. If you’re dyslexic, how are you going to cope? You can't even keep up in class because you can't read what is in your book, and far less copy down and then write it out.

C11, who struggled with dyslexia, faced difficulties in keeping up with the class due to reading challenges. However, thanks to shadow education, P11 saw evident progress in reading and comprehension as C11 could “answer many questions on his own” though issues remain with “open-ended questions...because it requires spelling and grammar”.

Parents believed that effective shadow educators utilised a range of teaching approaches to accommodate different learning styles and needs. They emphasised the necessity of having a shadow educator to support their children with SEN during their learning, as they believe it is essential for adequately preparing them for tests and examinations.

5.5 Concerns Regarding Supporting Children with SEN

The concerns expressed by parents provide important insights into how they navigate the use of shadow education for their children with SEN enrolled in the

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mainstream school setting. Parents often relied on this community resource to supplement the support their children with SEN receive in mainstream schools. Various concerns influenced their decision to seek shadow education. In alignment with the theme identified in the thematic analysis “Dissonance between policy intentions and practical implementation of inclusive education”, Appendix S displays a sample of data extracted from among several pages, indicating a range of practices across schools when it came to supporting children with SEN. Parents considered factors such as time limitations, availability of human resources with specialised skills, fostering a sense of belonging and establishing safe spaces, when making decisions about seeking shadow education for their children with SEN. In addition, they highlighted the importance of providing additional support in between professional therapy sessions. They also emphasise the need for identifying learning gaps, implementing individualised teaching approaches, managing students with SEN, maintaining manageable class sizes and adapting the curriculum. These considerations were seen as necessary in providing optimal support for children with SEN enrolled in mainstream schools.

The following sub-sections outline the specific concerns expressed by parents regarding the support provided to their children with SEN in schools:

- **Time-Related Considerations in Assisting Children with SEN**

Parents highlighted the significant role that time plays in mainstream schools. P8 expressed, “most times it’s a battle against time” and provided insights into the challenges struggle C8 faced as the child had to “conform to the normal classroom where there is no special strategy for him except that he gets extra time for his exams”. P8 lamented that C8 “has to do the same amount of work and hand in within the same amount of time” and “that was too tedious for him”.

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The data indicated that parents recognised the need for more time beyond just examinations. They emphasised the importance of additional time for tasks such as “homework submission”, “copying a whole lot of things from the board”, “getting used to a new topic”, “picking up the understanding of four different subjects plus social studies, plus PE plus music plus art plus expected behaviour on their own”. Some parents raised concerns about “defined time” for teaching the curriculum which did not allow sufficient flexibility for children with SEN who required extra time for learning. P14 shared:

I think the curriculum in school does not allow for much opportunity to slow down at certain points, and repeat because with book checks, the teachers have to cover whatever’s in the curriculum, within a defined time. There's very little opportunity for them to slow down at certain points. They may slow down a little, but it's almost impossible to slow down to help watch over those students, except for holding them back after school.

Moreover, P14 acknowledged the logistical challenges of finding more time within an already packed timetable, as children often had co-curricular activities and extra lessons and “having the child stay back after school for extra coaching will be both tiring for the teacher, as well as for the student and they won't benefit very much there as well.”

As a result, parents turned to shadow educators to provide “the extra support that mainstream teachers cannot give”. They believed that their children with SEN faced time constraints in a mainstream school setting and sought the assistance of shadow educators to address this challenge.

• **Leveraging Specialised Skills for Optimal Support**

Based on the data collected, parents expressed concerns regarding the limited availability of human resources with specialised skills in mainstream schools. It was noticed that some students with complex needs required special needs assistants within the school environment. For instance, P1 shared a situation where a student who was “unable to toilet independently” had both the parents “take turns to be the shadow in the school because the school is unable to provide one specialised teacher to shadow her the entire day”.

P3 also faced a similar situation, where the school “... asked to provide shadow support (special needs assistants) from first week of primary school with the school citing lack of resources to attend to C3”. P12 provided insights into the constraints experienced by the schools, stating:

There are kids who are not diagnosed and in far greater special need, and we will still not be priority to them, due to their limited resources, training, and manpower. Also, not all secondary schools have AED (now known as SENO) as well, but they have many more counsellors instead. So, besides the recommendations made by the psychologist mentioned in the assessment reports, which the school will try to adhere to, there isn't much mainstream can do further to help.

To address the human resources issue, some schools relied on volunteers. P11 mentioned that C11's school uses volunteers in classes “to help with students who are disruptive particularly, or weak in learning, especially for Chinese”. Although “the volunteers are untrained” their interest and willingness to help, often being parents themselves, contribute to the support system.

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P14 recognised that resolving this issue is not straightforward even with proper deployment of trained personnel in schools, such as SENOs, because they “can only be deployed to classes, whereby there's a great need for support”. However, P14 also raised a valid concern “will the school then think of putting everybody that requires that kind of support in a class?” This would contradict the principle of inclusion because withdrawal and grouping with other students with SEN is not inclusion, as it fails to account for the “different abilities of the students”.

Parents acknowledged the challenging conditions under which schools operate and recognised the efforts made by schools to support their children with SEN. Schools have implemented measures such as allowing special needs assistants in classrooms and utilising volunteers. However, parents expressed the desire for trained staff and increased human resources to be allocated to schools to better cater to their children with SEN.

- **Building a Sense of Belonging for Children with SEN**

The findings revealed a range of perspectives among parents regarding the efforts of schools to create a sense of belonging for their children with SEN, based on both positive and negative experiences throughout the data gathering period. For example, P5 had a positive experience, noting that the school was “empathetic towards students with special needs and the school leader preach(ed) it through the actions of having the SPED school teachers to sit in the class and the teachers are accommodating”. P1 shared a similar sentiment, expressing that the school was commendable in exposing “the neurotypical children to how there are other children with needs and teaches them to be compassionate, if not, tolerant”.

However, some parents encountered negative experiences. P3 expressed dissatisfaction with the way teachers interacted with parents of children with SEN,

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emphasising the need to “be more tactful in speaking to parents of children with special needs. As per my experience, some teachers and even vice-principal came across as unsympathetic and just want to get rid of my child from the school”. Concerns about “stigmatisation” were also raised by certain parents. P9 expressed the need to ensure that children are not “labelled” or subjected to “cyberbullying” which was happening.

P7 shared instances of C7 being called names like “stupid” and “mushroom head”, which highlighted what P7 referred to as “systemic ignorance”. P7 explained that such behaviours:

...is going to be something pervasive, sometimes it’s not even outright bullying. It can be subtle. For example, I have seen brighter kids try to ‘help’ C7 with something simple (to the point where it is downright insulting); it’s not their fault but it really comes out of systemic ignorance that we have a lack of awareness in our schools. Teachers who are mainstream trained seldom have the aptitude to resolve this kind of problem.

P13 believed that more could be done in this area. This parent suggested that teachers “should all receive some basic training on handling special needs children” and “schools can educate other children on having special needs children in their midst and how they can help them”. Furthermore, P13 emphasised the importance of educating mainstream students about “bullying and how to support them (students with SEN)”.

Overall, the experiences shared by parents varied, highlighting the need for schools to foster a sense of belonging and address stigmatisation. Several parents expressed the desire for greater training and awareness among teachers and students to create a more inclusive and supportive environment for children with SEN.

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• **Creating a Safe and Nurturing Learning Space**

As parents shared their experiences, they expressed the belief that it was crucial for their children with SEN to feel psychologically safe in the learning environment, enabling them to engage in meaningful interactions with other students in the mainstream school setting. For instance, P15 shared the distress about C15 being seated “beside students who were under-performing” at school, which P15 considered an unsafe environment where C15 psychologically learnt to survive and “picked up their bad habits”. Establishing a safe space was seen as essential for effective learning to occur.

P7 emphasised the need for a safe space and highlighted the importance of shadow educators in filling various gaps:

it (shadow education) is quite necessary to be honest; they fill in gaps on many levels. Emotionally, they provide this additional level of support and trust, (if they're good) and with this safe space, I think learning can occur without judgement. These educators are so well endowed with skills and techniques they've picked up from experience. They know how to get to the point in an appropriate way. Most of all, they don't show signs of exasperation, it's quite a thankless job.

A safe learning environment is of utmost importance for students with SEN, as it directly impacts their learning and behaviour within a mainstream classroom setting. Providing this safe space allows them to navigate the educational environment and thrive despite their unique needs and challenges.

• **Supplementing Support for Children with SEN in between Therapy**

Sessions

P11 expressed the desperation felt by parents who were seeking ways to support their children with SEN. P11 described how these parents were “sad that their child is not

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enjoying school and is getting bullied in school and has no self-esteem in school and hate school.” When reaching their breaking point, they turned to “tuition because they don’t know what else to do and they don’t have enough money to support professional therapy for their child.” Professional therapy sessions were often limited to once or twice a week even “if you’ve got three or four different therapies” involved. To seek additional support, P11 mentioned a friend’s child has “12 tuitions a week” because the “child is very dyslexic and has got one or two other physical coordination issues”. Parents had the perspective that these frequent shadow education sessions were a way to supplement the limited therapy sessions that “only see the child once or twice a week”.

It was common for parents to arrange multiple tuition sessions for their children with SEN. Some parents in this subcase shared that their children with SEN received shadow education in multiple subjects. P10, for example, mentioned juggling the family’s budget between community-subsidized shadow education providers, self-help group shadow education providers and engaging a private shadow educator for C10. Parents considered shadow education a necessary step because “they don’t know what else to do” to support their children with SEN.

• **Identifying Gaps and Tailoring Support for Maximum Impact**

Over the period of data collection and analysis, it was found that some parents recognised the need to address learning gaps for their children with SEN. P8 explain:

C8’s probably only taking in 60% of what is being taught in school because the child can’t focus and C8’s slow. The child needs repetition too. So, C8 will learn it first at home, then reinforced at school; or learn it first at school and reinforced at home. C8 needs more time to get used to a new topic. Hence, I got a tutor for each subject to fill in the gaps.

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P3 believed that shadow education played a role that “helps to bridge the gap between the school and the students. However, this is not a long-term solution as the children will need to be independent eventually.” P13 expressed the perspective that individualised guidance provided by shadow educators was effective in “targeting on weak areas”.

P9 provided an interesting insight into the challenges of identifying and addressing learning gaps within a mainstream school environment, mentioning, “if I were to ask C9’s normal teacher that has 40 students in the class, I don’t think they can give me the breakdown of my child’s progression in the class. Unless this teacher is really, really observant”. P11 explained that:

teachers are stretched, the counsellors are stretched, the CGD (Child Guidance Division) is stretched. Even with this number of children getting a referral to see CGD, it takes six months to get a slot and then it takes another six months to receive any kind of therapy. And then you have to slot therapy to your schedule, which is also not easy. And those are the more affordable ones because you only pay \$15 or \$20. If you do privately, it’ll cost \$180 an hour. As my children went to secondary school, the bottom 5% get special help. But to have more help, it has to be one-to-one.

These concerns raised by parents underscored the need for individualised teaching approaches to cater to the specific needs of children with SEN.

• **Individualised Teaching Strategies for Children with SEN**

Parents recognised the efforts of mainstream schools in addressing the needs of their children with SEN. P2 observed that C2 had received the individualised teaching during

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the early years of primary school. The SENO “has been pulling C2 out of class to do reading and spelling and the child enjoyed this one-to-one attention”. These sessions not only “instilled confidence in C2” but also improved C2’s self-esteem. About half of the parents mentioned similar instances where their children with SEN were taken out of class to receive additional attention and support. While parents generally supported this approach, P7 also expressed concerns about potential stigmatisation if it was not done discreetly as “it doesn’t help that they obviously segregate academically good and poor students so obviously, it’s quite demoralizing”.

According to P11, individualised teaching provided the opportunity for shadow educators to “correct mistakes - mistakes are not about the grammar; it is usually a pattern and the tutor would detect that pattern and address the mistake at its root and not at its point”. By helping C11 “to comprehend the topics taught in school thus letting the child find attending school meaningful and relevant”. P7 and P8 agreed with this perspective, highlighting the importance of individualised instruction in supporting the academic development of children with SEN.

• **Effectively Managing Children with SEN**

Some parents expressed their belief that teachers should have an understanding of students with SEN. P12 shared a challenging experience, noting that some teachers are ill-equipped to help students with SEN and asked “if there is a mistake in the diagnosis, ‘how can this child be special needs etc.’” and “I realized I cannot expect much academic help from them”.

P7 provided examples of teachers who seemed to be “completely ‘out of it’, talking about complex things when C7 is obviously struggling with basic concepts

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like addition and subtraction”. The parent expressed frustration in explaining to the teachers that C7 “cannot catch up so easily” and that “even if one day C7 gets one concept right, the child can forget it the next day”.

However, there were also parents who had positive experiences. P4 reported that when the school was informed about “C4’s needs, it was the principal and team of dedicated teachers who actually listened to me, as compared to, when C4 was in primary school”. P8 was aware that the school was making efforts to address the issues. P8 mentioned:

I do know that the principal was looking into separating the students with behavioural issues from the ones with special needs and need more time to learn. They grouped both types of students into one class and it wasn’t the best solution. In the end, I believe they took the students with behavioural issues and spread them out throughout the level (this is for Primary 4). I won’t know any other details as I am not privy to such decisions or considerations as a parent. Obviously, most of these students with behavioural issues also come with some diagnosis.

Overall, parents expressed mixed sentiments about how schools treated their children with SEN. Those who had positive experiences expressed gratitude for understanding and support they received, while those who had negative experiences emphasised the importance of providing training for school staff to effectively handle children with SEN.

• **Optimal Class Size for Inclusive Education**

Based on the findings, parents identified the size of mainstream classes as a significant limitation on what teachers could do for their children with SEN. P4 reasoned

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that the large class size “is too big, even 30 students is considered big, as there may be two to three students with special needs” and this hindered individual attention. P10 acknowledged the challenge, understanding that a teacher couldn’t focus solely on one student “when there is 30 students in the class, of course, that teacher cannot focus on C10 alone”.

P2 observed a positive difference in C2 when the SENO pulled the child out of class “to do reading and spelling and C2 enjoyed this one-to-one attention. The SENO instilled confidence in C2, made the child feel better about oneself”. However, it was noted that not all students with SEN had access to such individualised attention from the SENO. P8 shared that C8’s “class has a handful of kids with special needs. Because C8 is not the most severe, my child doesn’t have access to the allied educators (now known as SENO)/counselling at school”. P4 had a negative encounter with school counsellors and the SENO “told me off that C4 is not the only one they have to care for”.

Parents recognised that the large class size in mainstream schools limited the capacity for individual customisation for children with SEN. They acknowledged that customisation, allowing children to learn at their own pace, was possible in shadow education settings due to the one-to-one interaction. P6 indicated that C6 who attended group tuition, “have improved” and “did better in her oral reading and listening comprehension”. Parents emphasised that this customisation was role played by shadow educators, who could provide one-to-one support either individually or through small group tuition, which was often unavailable in mainstream schools with larger classes. This personalised attention and tailored approach were instrumental in meeting the unique needs of children with SEN.

- **Balancing National Curriculum Rigour for Children with SEN**

Parents expressed concerns about the rigorous nature of the national curriculum. They believed that the curriculum was “diverse and intensive”, making it challenging for the children with SEN. According to the findings, there was “too much syllabus to cover,” as mentioned by P8, and “some of the topics can be really hard”. P7 shed light on the struggle faced by a child with SEN enrolled in mainstream school, explaining:

that the curriculum’s time frame is fixed. By the time one concept is taught, they quickly move to the next. C7 barely knows what is going on, and it gets progressively worse as you can imagine.

P14 acknowledged that due to the “defined time, there's very little opportunity for them to slow down at certain points. They may slow down a little, but it's almost impossible to do to slow down to help those students”. P11 described the situation as “a nightmare of too many things to do, like precision, range, depth.” This parent questioned the purpose of attending school “if you can't keep up in class, what’s the point of going to school?” Therefore, to make school “meaningful and relevant” for C15, P15 emphasised the importance of additional support from shadow educators. This support was important in helping C15 gain a “better grasp of her curriculum” and “to comprehend the topics taught in school”.

5.6 Additional Support for Shadow Educators to Support Children with SEN

Parents expressed their perspectives on the support required by shadow educators to effectively assist their children with SEN enrolled in mainstream school.

• **Essential Skills Set and Personal Qualities for Tutoring Children with SEN**

Parents emphasised the importance of specific skills when seeking shadow educators rather than primarily prioritising specialised training in special needs. The cost associated with specialised training raised concerns for many parents as expressed by P8, P10, P11 and P12. Rather than prioritising formal training, they sought for shadow educators with relevant skills such as effective communication, patience, adaptability and more, to effectively support their children with SEN in the mainstream school settings. P9 highlighted the importance of having someone:

... who knows a little bit about special needs students and how to tackle these special needs students. Luckily, for my daughter, she don't throw tantrum. Three of my colleagues, who has autistic children, and two of them, their sons really throw tantrums if they are not in a good mood or they hear rowdy sounds...Educators need to know how to handle or tackle these kinds of students, because there are educators that would like "*Alamak* (malay for 'oh my goodness!') this child got this one, *habiz* (malay for 'finished!')" you know. "I want to run or next time I don't want to teach!" ... As an educator, it's better that you have some knowledge and skills like how to tackle and just be patient with this kind of case.

Parents expected shadow educators to be patient, resilient, and knowledgeable in managing situations, as described by P7 and P13. For instance, P7 mentioned "as much as we wanted C7 to learn, we had to look for someone suitable that won't give up on the child half-way". P13 required the shadow educator to just "have relevant experience or knowledge in handling child with special needs. For example, during a child's meltdown - how to handle; how to get the child to be engaged during lesson without disruption/delay".

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In some cases, parents preferred to guide the shadow educators themselves on how to support their children with SEN rather than engaging shadow educators with specialised skills because “it will cost more”. P10 mentioned that parents “have to get involved with the teacher (shadow educator). To tell what you know, so they (shadow educators) can improve”. This approach was seen acceptable by parents, as it allowed them to share their knowledge and insights to enhance the effectiveness of the shadow educators.

Parents also expressed concerns about the commitment of shadow educators and the need for certain personality traits that would contribute to the successful support of their children with SEN. They looked for individuals who displayed dedication, resilience, and a willingness to not give up on their children halfway through.

Overall, parents prioritised the skills set and personal qualities of the shadow educators, seeking individuals who could effectively support their children with SEN based on their specific needs in the mainstream school setting.

• **Strengthening Content Knowledge for Enhanced Support**

Parents engaged untrained shadow educators, meaning they did not have formal teacher training or a background in special needs education. Consequently, one of the additional supports parents expected from these shadow educators was a strong knowledge of the content taught in mainstream schools. P8, for example, emphasised the importance of the shadow educator having a “fundamental level of understanding of each subject so they can break it down simply for the child to understand”.

P14 elaborated on the necessity of content knowledge, explaining:

content knowledge has to be there, because it's not just about sitting down there and providing encouragement. Of course, that may be necessary for some students, but

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content knowledge has to be there because otherwise what happens if the shadow educator teaches the child the wrong thing?

While acknowledging this gap, P9 mentioned that “ultimately, to me, it's also up to the child, whether after having a shadow educator, it does help her but then it depends, when you apply in school, it's two different things, you see”. P6 shared a similar sentiment, expressing concerns that if “they (shadow educators) are not teaching according to the mainstream it will be difficult for my child to apply it when in school”.

Parents recognised the significance of content knowledge in the support provided by the shadow educators and the potential contribution it could have on their children's learning and integration into the mainstream school setting.

5.7 Conclusion

In this chapter, the perspectives of parents regarding the mediating role and contributions of shadow education as a supplemental community support in contributing to the ongoing efforts to support and complement inclusive education practices for their children with SEN enrolled in mainstream schools were explored. The findings, which were organised into five sections, provided insights into the parents' perspectives and motivations for engaging shadow educators for their children.

The first section focussed on the parents' beliefs about inclusive education. Through interviews, it became clear that parents had concerns about their children's adjustment in mainstream schools due to varying levels of support provided. As a result, parents turned to shadow educators, believing that this approach would better address their children's unique needs.

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Section two examined the purposes of engaging shadow education for children with SEN. The findings revealed various motivations that guided the parents' decisions, such as enhancing their children's skills, providing more post-secondary pathways, and preventing their children with SEN from falling behind in their studies. Parents also acknowledged their own limitations in coaching their own children and valued the positive reinforcement and social-behavioural support provided by shadow educators.

The next section explored parents' perspectives on the strategies employed by shadow educators to support children with SEN. These strategies included customised teaching, building rapport, collaborating with stakeholders and using multiple ways to teach a concept. Parents reported that the shadow educators tailored their approach to accommodate their children's learning styles, identified their strengths and challenges, and established strong relationships. Collaboration with parents, shadow educators, paraprofessionals, and school staff, was seen as critical for maximising the support and ensuring consistent interventions.

The following section addressed the concerns expressed by parents regarding the in-school support provided to their children with SEN. These concerns encompassed various aspects, such as time-related matters, the availability of human resources with specialised skills, creating a sense of belonging, curriculum rigour, role and cost of shadow education, identifying gaps, individualised teaching, managing students with SEN and class size. Parents emphasised the need for more time, human resources with specialised skills and creating a safe and inclusive environment within mainstream schools. They also saw shadow education as a way to provide extra support between therapy sessions. Identifying gaps, using individualised teaching approaches, effectively managing students with SEN

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and maintaining manageable class size were believed to be essential for further progress in inclusive education for children with SEN.

In the final section, parents expressed the belief that shadow educators should receive additional support to better assist their children with SEN. Many parents engaged shadow educators without formal teacher training or specialised knowledge in special needs education. Parents advocated for training programmes to be made available to shadow educators to enhance their ability to collaborate with schools and provide optimal support for children with SEN.

Ultimately, parents focussed on giving their children with SEN a fair chance to succeed in mainstream schools while preparing them for the realities of the real world. They recognised the existing concerns with mainstream schooling but also understood the complexities involved in resolving these issues.

CHAPTER 6: CROSS-CASE SYNTHESIS

In this chapter, the synthesis and discussion of research findings from the two distinct subcases are presented: the perspectives of shadow educators providing support to students with SEN, and the perspectives of the parents who engaged shadow educators for their children with SEN. Chapter 4 examined the experiences, beliefs and the strategies employed by shadow educators to foster inclusive education. In contrast, Chapter 5 centred around the perspectives of parents regarding the provision of educational support for children with SEN in mainstream schools and how this shaped their decision to engage with shadow education providers, touching upon the broader mesosystem and exosystem influences.

Guided by the central research question, these perspectives were explored under five sections: beliefs about inclusive education, purpose of shadow education for students with SEN, strategies to support students with SEN, concerns related to supporting students with SEN, and additional support for shadow educators to support students with SEN. The synthesis of these narratives forms the groundwork for constructing an explanatory theory that elucidates the influence of shadow education on fostering inclusive education for children with SEN within mainstream Singapore schools.

Drawing from Bronfenbrenner's ecological systems theory (1979) which posits that development is shaped by interactions within and between various environmental systems, the analysis contextualises the perspectives of shadow educators and parents across different ecological levels. The microsystem captures immediate interactions within the educational setting, where shadow educators play a role in mediated support provision. The mesosystem encompasses interactions between shadow educators, parents and

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mainstream schools, influencing collaborative efforts and support strategies. At the exosystem level, support infrastructures for shadow educators play an important role, while at the macrosystem level, shadow educators function as community partners, assisting students with SEN. Policies, community attitudes and cultural beliefs at the exosystem and macrosystem levels influence the accessibility and effectiveness of this support system for students with SEN.

It is crucial to note that while Chapter 5 reported parents' perspectives on some of the strategies, employed by shadow educators, its primary focus was on understanding parents' perspectives on the provision of educational support for students with SEN enrolled in mainstream schools and how this motivates their engagement with shadow education. This distinction aligns with the recommended approach of cross-case studies, enhancing the validity of the study (Yin, 2018).

The understanding of and perspectives on inclusive education from both the shadow educators and parents involved in the two subcases were brought together and examined. Cross-case analysis employing a constant comparative method (Strauss, 1987) to uncover similarities and differences between the subcases. While shadow educators emphasised fostering inclusive support and providing targeted help at the microsystem level, parents were more concerned with the holistic development at the mesosystem level. This comparative approach highlights how each group perceived inclusive education and the strategies employed to support students with SEN in Singapore mainstream schools. These shared aspects included the shadow educators' and parents' understanding of inclusive education and the strategies used by shadow educators to support students with SEN enrolled in mainstream schools, bridging theoretical insights with empirical findings.

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The cross-case analysis yielded five themes and their respective sub-themes presented in Table 10, highlighting the collective insights and approaches shared by the shadow educators and parents in this study. It serves as a representation of the perspectives shared by the shadow educators and parents involved in the collective case-study. Throughout the two subcases, a range of both positive and negative perspectives emerged concerning the sub-themes.

Positive perspectives indicated by a plus (+), involved data that demonstrated examples on the supportive mediating role and contribution of shadow education in supporting inclusive education. Conversely, negative perspectives indicated by a minus (-), represented examples that expressed concerns about the mediating role and contribution of shadow education as a support for inclusive education. Neutral perspectives indicated by an asterisk (*) involved data that demonstrated examples that were impartial on the mediating role and contribution of shadow education as a support for inclusive education.

Table 10

Cross-Case Analysis Mapping of the Emerging Themes and Corresponding Sub-Themes

<i>Themes</i>	<i>Sub-themes</i>	<i>Case Study</i>	
		<i>Subcase 1</i>	<i>Subcase 2</i>
Factors influencing the supportive role of shadow education for students with SEN enrolled in mainstream schools	1. Fostering inclusive support	+	+
	2. Providing targeted help	+	+
	3. Enhancing holistic development	+	+
Aptitude of shadow educators in supporting students with SEN	1. Supporting academic progression	+	*
	2. Individualising support	+	+
	3. Collaborating with parents	+	+

Table 10 (continued).*Cross-Case Analysis Mapping of the Emerging Themes and Corresponding Sub-Themes*

<i>Themes</i>	<i>Sub-themes</i>	<i>Case Study</i>	
		<i>Subcase 1</i>	<i>Subcase 2</i>
Proficiency of shadow educators in supporting students with SEN	1. Demonstrating instructional expertise	+	-
	2. Targeting learning effectively	+	+
	3. Upskilling to stay relevant	-	-
Dissonance between the policy and practice of inclusive education	1. Influence of school leadership	-	-
	2. Availability of resources	-	-
	3. Alignment of training and practice	-	-
Potential of shadow education as a supplemental support for students with SEN	1. Bridges gaps on multiple levels	+	+
	2. Enhances support beyond school hours	+	+

Note. Subcase 1 = Shadow Educators; Subcase 2 = Parents.

6.1 Theme 1: Factors Influencing the Supportive Role of Shadow Education for Students with SEN Enrolled in Mainstream Schools

The first theme explored the significance of shadow education as a means of support for students with SEN, primarily focussing on the shadow educators' and parents' perspectives regarding the necessity of shadow education. This theme encompasses three sub-themes, each of which is discussed in the following sections.

- **Sub-Theme 1: Fostering Inclusive Support**

The significance of shadow educators in fostering inclusion support for students with SEN was evident in the shadow educators' and parents' perspectives about the "inclusion" of these students enrolled in mainstream schools. These perspectives

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highlighted the complexity of inclusive education, which focussed on providing all children with equal opportunities to learn. As mentioned in the section “Concepts of Inclusive Education” (p. 32), inclusion encompasses multiple facets including education for all and inclusion as participation (Fletcher & Artiles, 2005).

The data collected from the shadow educators’ and parents’ interviews indicated that their understanding revolved around these concepts. The shadow educators and parents unanimously believed that inclusive education was about including all learners regardless of ability, cultural background or socio-economic circumstances. According to T5, the key principle of inclusive education was that “as long as the child in the growing years, in whatever form, in whatever status, whatever background whichever, you know, physical or mental challenges will be included in education”. This emphasised the need to extend inclusive education to all children, ensuring access to education regardless of their characteristics or circumstances, aligning with UNESCO’s (1994) definition of inclusive education.

Both subcases shared the perspective that all learners should have their needs met in the same inclusive environment. Shadow educators emphasised the importance of creating classrooms that were free from discrimination, where learners with different abilities could learn together without being segregated. T19 expressed this perspective by stating “a child with special needs in the class is still able to learn on his own based on his own capability. He may need scaffolded learning, but still being able to understand, access the content, at the same time and not feel too threatened by the environment. The child feels safe.” This highlighted the concept of inclusive education where students with SEN learn within the mainstream school setting with appropriate support. The implementation of inclusive

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education relies on reasonable accommodations and support as mentioned in Article 24 of the Convention on the Right of Persons with Disabilities (CRPD), which advocates for inclusion for all individuals.

In addition to a discrimination-free environment, parents focussed on the importance of having appropriate supports to help their children with SEN. P5 provided an example of such support, describing how a shadow educator would “print out customized booklets to be issued as extra learning. There are stories books modified with additional props to make reading fun”. This example demonstrated the value of personalised materials in enhancing learning experiences for students with SEN.

Considering the fostering of inclusive support, T18 acknowledged that mainstream schools were “doing their best” to support students with more urgent needs. However, T18 also highlighted the potential variability in the allocation of support based on the perspective of the perceived urgency of students’ requirements. This perspective highlighted the importance of shadow educators in bridging the gap and providing regular support for students with SEN who may not be able to show a need for assistance.

This understanding was important as it influenced the shadow educators’ and parents’ responses and attitudes toward the way inclusive education was experienced by the students with SEN. These perspectives, informed by their experiences, had implications for shaping the mediating role and contributions of shadow educators as supplemental community support in contributing to the ongoing efforts to support and complement inclusive education practices for students with SEN enrolled in mainstream schools.

In the section “Indicators of Effective Inclusive Education” (p. 51), the perspectives shared by participants may not encompass all aspects of inclusive education. However, they

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do represent key areas highlighted in the existing literature that are germane to the effectiveness of inclusive education. These perspectives underscored the significance of valuing diversity and addressing concerns related to providing appropriate support. By fully embracing inclusive education, an inclusive learning environment could be created, nurturing the holistic development and success of every student, regardless of their unique needs.

- **Sub-Theme 2: Providing targeted help**

Inclusive education focussed on providing all students with access to education, ensuring that no one was excluded. However, participants in both subcases stressed the key role of targeted help for students with SEN in achieving specific goals or learning outcomes. They recognised that without adequate support in addressing the specific needs of these students such as on-task behaviour, they might become disengaged during lessons, undermining the purpose of being in a mainstream environment. In a paper for the World Bank group, McClain-Nhlapo et al. (2020) suggested that offering more targeted support for learners with disabilities could enable these students to equitably benefit and engage effectively especially during school closures during Covid-19.

Shadow educators focussed on specific skills or learning objectives for students to master when providing targeted help. P11 explained, “It (shadow education) helps to correct mistakes. Mistakes are not about the grammar; it is usually a pattern and the tutor would detect that pattern and address the mistake at its root and not at its point.” Similar examples highlighted the importance of targeted help in identifying and addressing the specific needs and challenges faced by students with SEN. This idea is not new – psychologist Lev Vygotsky first proposed this nearly a century ago. Vygotsky (1977)

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conceptualised this as instructional approach as catering to the “zone of proximal development”, delineating the tasks a learner can accomplish independently and those that require assistance (Vygotsky, 1977, p.86). Targeted teaching as advocated by this perspective, relies on the systematic gathering and utilisation of evidence pertaining to each student’s learning progress to discern optimal strategies for individual advancement. The foundational principle of leveraging evidence of learning to refine teaching strategies also forms the basis of the seminal work on formative assessment by researchers Black and William (1998).

Both shadow educators and parents expressed the need for targeted help to be provided within a mainstream school setting. However, they also acknowledged that due to the spectrum and diversity of needs, resolving this issue was not easy as there were competing demands that required the teacher’s attention. It would require highly skilled and knowledgeable teachers to attend to the specific needs of these students.

While the MOE had taken steps to improve the quality of education for students with SEN, parents’ concerns regarding the adequacy of resources and support persisted. In 2021, 3000 teachers underwent training in special needs, equipping them with knowledge and skills to support students with SEN through a certificate-level training programme. Student Development Teams (SDT) were established in all schools in 2016 to strengthen the schools’ capacity in supporting the holistic development of all students. In 2018, the MOE increased the capacity of schools’ Case Management Teams (CMT) to identify and support students with SEN, specifically in the areas of learning, behavioural, social and emotional needs. In addition, in 2020, all mainstream schools had at least one Physical Education (PE) teacher trained in Inclusive PE, enabling students with SEN to actively

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participate in PE with appropriate support. The MOE also implemented a structured professional development roadmap, including online learning modules, school-based discussions, and workshops to enhance the training of teachers in mainstream schools.

Despite these efforts, both shadow educators and parents felt that the number of SENOs assigned to each school and the number of teachers trained in special needs were insufficient to handle and support all students with SEN. According to T5, in a particular school with at least three SENOs and three school counsellors due to a high-profile background, challenges still persisted. Daily instances arose where students with SEN required attention, leading to disruptions in class.

Consequently, parents sought additional support through shadow education to ensure that their children with SEN received the necessary support to develop and cope in the mainstream environment. This reliance on shadow education reflected parents' desires to supplement the existing educational system with community-based assistance. Shadow educators played an important role in bridging the gap between available resources and the needs of children with SEN. This approach facilitated inclusion and supported the development and adaptation of these students within the mainstream school setting.

• **Sub-Theme 3: Enhancing Holistic Development**

The significance of shadow education in nurturing the holistic development of students with SEN enrolled in mainstream schools became apparent as participants shared their perspectives. MOE initiatives such as the Circle of Friends peer support programme and the "Facing Your Fears" intervention to assist students with special need were not mentioned by the shadow educators and parents. This suggested limited awareness or accessibility for students with SEN. However, participants emphasised the invaluable role

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played by shadow educators in fostering holistic development, particularly in addressing social acceptance and fostering meaningful friendships.

The issue of bullying among students with SEN has gained attention in research over the past fifteen years, as noted by McLaughlin et al. (2010). P4 reported that “when C4 was in primary school to lower secondary, this child was bullied and targeted for being a teachers’ pet in secondary school.” This incident highlighted the urgent need to address stigmatisation and bullying within schools. Interventions that addressed bullying have emphasised the significance of psychosocial aspects, such as peer relations and social skills deficits, rather than cognitive aspects (Dennehy et al., 2020; Chu et al., 2019; Rose et al., 2013). The experiences reported by participants in both subcases emphasised the need for dedicated efforts to address bullying incidents and promote an inclusive environment.

Participants also shed light on the instrumental role played by shadow educators in supporting students’ holistic development. P6 stated, “shadow education helped C6 boost confidence and self-esteem. C6 was a very quiet and shy student in school so indirectly it did help my child in school. At least now, C6 did have friends that the child can talk to in class and during recess.” This demonstrated the unique role of shadow educators in addressing the specific needs of students with SEN while also fostering their general well-being.

Shadow educators bridged the gap between available resources and the diverse needs of students with SEN, enhancing their overall development and facilitating their inclusion within the mainstream school environment. The perspectives shared by participants, coupled with the concrete experiences of bullying and the support provided by shadow educators, highlight the significance of their work in supporting the holistic development of students with SEN enrolled in mainstream schools.

6.2 Theme 2: Aptitude of Shadow Educators in Supporting Students with SEN

Shadow educators, with their valuable experience, compassionate nature and unwavering commitment, possessed an essential aptitude to support students with SEN in adapting to the mainstream school setting. This aptitude encompassed several sub-themes that empowered them to effectively support their students with SEN.

- **Sub-Theme 1: Supporting Academic Progression**

Shadow educators exhibited a distinct aptitude that went beyond their supportive role in addressing the needs of students with SEN. Within this aptitude, they showed a keen focus on supporting academic progression, bridging gaps both in academic performance and social-behavioural competence. Parent participants recognised the dedication of shadow educators provided supplementary support tailored to the specific needs of their students, fostering an environment conducive to their academic growth.

Although many shadow educators lacked formal backgrounds in special needs education or formal training to support students with SEN, their aptitude compensated for this through their willingness to adapt and be flexible with their students. For example, P6 observed that “C6 readings have improved. My child did better in the oral reading and listening comprehension. C6 enjoys reading now and the attention span is slightly better. Last round, my child did not like to focus in studies.” This finding highlighted the positive impact of shadow educators' aptitude on students with SEN.

Despite the professional limitations of shadow educators underqualified in SEN, parents chose to entrust their children's complex learning challenges to these shadow educators. The cost associated with hiring shadow educators trained in special needs often led parents to compromise on expenses, preferring to work closely with the shadow

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educators in their children's educational process. Many of the shadow educators reported making instructional decisions based on their students' learning progress despite not having professional teaching qualifications. As a result, some decisions could be inappropriate due to a lack of adequate diagnostic knowledge or informed professional practice.

In Singapore, the field of shadow education is generally unregulated, particularly for private shadow educators. Shadow education centres operating as schools registered with the MOE under the Education Act usually screen their shadow educators because of liability under the Consumer Protect (Fair Trading) Act if the shadow educators do not deliver quality services for which they were engaged. Engaging shadow educators without a background in SEN, alongside parents' demand for more specialised trained teachers, may seem contradictory in terms of delivering quality services. However, it also highlights the urgent need to provide professional training and knowledge to shadow educators, enabling them to enhance their existing skills and effectively address academic as well as social and emotional learning gaps experienced by students with SEN. As Gurria (2018) aptly states "education is the great equaliser in society," and the challenge lies in equipping all teachers, including shadow educators, with the skills and tools needed to provide effective learning opportunities for their students, particularly those with SEN.

Furthermore, the fact that some parents rely on shadow educators for advice regarding their children's academic performance and behaviour, highlights the significance of augmenting the quality and appropriateness of the advice provided. This aspect of their aptitude calls for professional development to ensure shadow educators possess the necessary expertise to effectively address the academic challenges faced by students with SEN.

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• **Sub-Theme 2: Individualising Support**

Shadow educators who serve students with SEN demonstrated the aptitude to adjust their support to meet the unique needs of these students. Their commitment to the holistic development of these students ensured that they received the individualised assistance necessary to thrive academically, socially and emotionally. Individualised support is considered an optimal intervention for students with disabilities, as it accommodates personalised learning or performance requirements (Huang et al., 2023; Ishartiwi et al., 2023; Pane, 2018).

The cross-case analysis highlights the unequivocal perspectives of both subcases on the necessity for broader systemic improvements and resource allocations in addressing the needs of students with SEN. This challenges previous findings by Ray et al. (2017), which identified no causal link between individualised learning and the closing of academic achievement and educational equity gaps. Despite this, parents maintain a firm belief in the efficacy of individual support for children with SEN. For instance, P7 noted its effectiveness for C7, stating, “Gradually, (the) one-on-one lessons with her trusted teacher gave her confidence, and today she speaks like a chatterbox without feeling embarrassed or shy.” Similarly, T17 affirmed that individualised support cultivated “a positive mindset and promote self-esteem”, fundamental for overall development of students with SEN. These examples highlight the shared conviction that tailored help from shadow educators may have a transformative impact on the confidence of students with SEN.

Students with SEN often struggle with low self-esteem and a lack confidence to participate actively in class as highlighted by Caqueo-Urizar et al. (2021). This struggle is significantly associated with learning difficulties. Parents noted a boost in confidence when

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their children with SEN had an encouraging shadow educator. Motivation, a key player in student engagement, was successfully addressed by shadow educators through the establishment of personal relationships, understanding unique needs and adapting instructions accordingly. Both shadow educators and parents independently observed that targeted help enhances students' understanding, boosts confidence and leads to greater engagement and motivation to learn. Personal bonds and empathy were identified as key factors in successful experiences described by shadow educators. Both subcases acknowledged the efforts of school teachers within constraints of time and resources, but asserted that shadow educators can create opportunities to build strong personal connections and demonstrate empathy to promote a safe and inclusive learning environment where students with SEN feel accepted and valued.

Central to the efficacy of shadow educators in supporting students with SEN is their aptitude for understanding and addressing the distinct needs of each student with SEN. By establishing rapport and developing a deep understanding of their students, shadow educators can tailor their teaching methods, instructional materials, and learning experiences to cater to individual strengths, challenges, and learning styles. This personalised approach enhances the students' understanding of the content taught, resulting in improved academic performance, increased engagement, motivation to learn, and overall well-being. Both subcases emphasised the importance of specific personality traits when working with students with SEN which could be applicable to ameliorating the learning difficulties faced. Traits such as being caring, flexible, empathetic, having a positive mindset, possessing perseverance, being approachable and being committed to staying with the student with SEN, were mentioned as having a positive impact on learning. By

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embodying these traits, understanding shadow educators can encourage students with SEN to respond better to assistance, fostering feelings of efficacy and supporting their overall well-being.

- **Sub-Theme 3: Collaborating between parents and shadow educators**

In subcase 2 (parents), it emerged that parents who chose shadow educators without specialised qualifications had specific criteria that extended beyond financial considerations. They expressed a preference for shadow educators open to understanding their child's unique needs and traits valuing adaptability over rigid professional practices.

It became evident that shadow educators possessed the aptitude to collaborate effectively with parents, demonstrating proficiency in building partnerships, valuing parents' input, empowering parents, and fostering a collaborative support system demonstrated by their proficiency as shadow educators in working with families. This collaboration played an essential role in understanding the unique needs and concerns of students with SEN, shaping the support provided and ultimately fostering inclusive education. These findings aligned with the recent research by Garcia-Melgar et al. (2022), emphasising the significance of “regular, consistent, and timely communication, practical ways of working together and shared understandings” between educators and parents. Integral to this collaborative dynamic was the role of the shadow educator in engaging parents as co-educators. This involved providing parents with essential tools and guidance to reinforce learning at home, and assigned “homework” aimed at extending and consolidating concepts covered during tutoring sessions.

Shadow educators actively engaged parents by maintaining regular communication, updates on their children's progress, and seeking input. The findings revealed that

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involving parents in the educational process led to more effective support strategies. As expressed, by P14, “the tutor would message me almost immediately after class to tell me about certain parts of a certain topic that she may need to review or practice a little bit more.” This active communication and collaboration between parents demonstrated the benefits of working together to support the student with SEN.

Collaboratively working with the parents to identify their children’s strengths and needs allowed for a responsive and tailored approach. The joint approach extended the efficacy of shadow educators’ interventions, empowering parents to actively contribute to the social and academic development of their children. Parental involvement further supported the establishment of a three-way partnership among the school, shadow educators, and parents, integrating inputs from all parties and resulting in a more cohesive and holistic support system.

Garcia-Melgar et al. (2022) also affirmed that effective teamwork in education is informed by best practices and theories in school inclusion. Despite their mutual awareness of the relatively weak academic professional base, shadow educators were committed to empowering parents to engage actively in home support for their children with SEN and parents were happy to trust and act upon advice received from their shadow educators. This collaborative partnership empowered parents to reinforce learning at home, ensuring a seamless integration of learning between school, shadow education provider and the home environment. As mentioned by T9, “I do share with the parents or the family as to how to help the child along in terms of their social needs, or, more importantly, their academic needs, because that's what I'm there for and they (the parents) do help them along...they can see the impact, they can see the effectiveness of such a technique.” Collaborative

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partnerships assured parents of their pivotal role in the academic and social development of their child with SEN while offering the potential to alleviate parental guilt by cultivating a sense of actively contributing to their child's well-being.

Through fostering open and regular communication with parents, shadow educators strengthen the support network for students with SEN, thereby ensuring a responsive and integrated approach to their education. This approach involved consistent exchange of information, collaborative decision-making, and shared responsibilities among all stakeholders. Remaining present and engaged with the student, shadow educators convey a powerful message of acceptance. Their active involvement in the student's learning journey not only enhances the potential to create an inclusive environment for students to feel supported, valued and encouraged in the mainstream school setting but also serves to empower parents.

6.3 Theme 3: Proficiency of Shadow Educators in Supporting Students with SEN

The proficiency of shadow educators in supporting students with SEN, as evidenced during the cross-case analysis phase, is substantiated by parents' perspectives. This proficiency is evident in the narratives of parents, who detailing their encounters with personally selected and employed shadow educators, provide distinct viewpoints that validate the overall efficacy of shadow educators.

The mediating role played by shadow educators in facilitating the academic and social development of students with SEN became apparent. Their expertise emerged as instrumental in furnishing requisite assistance for academic progress and fostering overall development. This unwavering commitment and skill set wielded a considerable impact on the lives of students with SEN, enabling them to overcome challenges and achieve their potential within the mainstream school setting.

• **Sub-Theme 1: Demonstrating Instructional Expertise**

The proficiency of shadow educators in demonstrating instructional expertise was a key aspect of their support for students with SEN. Within the complexities of the national curriculum, shadow educators played a facilitative role in addressing challenges related to academic performance, social-behavioural competence, and environmental supports for students with SEN.

The MOE encourages parents to enrol their children with mild SEN in mainstream schools if they have the cognitive ability to access the national curriculum and learn in large group settings (MOE, 2022b). This aligns with the concept of making education inclusive by providing opportunities for students with SEN to be included in mainstream classrooms. The mastery of the national curriculum leads to the national examinations which determine students' secondary and post-secondary educational pathways. According to the perspectives of shadow educators, the national curriculum was appropriate but demanding; T13 made the case that diluting the national curriculum for students with SEN would undervalue their education and prove more troublesome for these students in the future.

While some parents also expressed concerns about the demanding nature of the curriculum, the majority focussed on their children's ability to cope with the curriculum rather than questioning its suitability. In subcase 2 (parents), participants emphasised the importance of teachers being "flexible, knowledgeable and be very patient" with their children with SEN. They were convinced that with the right support, their child with SEN "will come closer to being on level with the average child". Recognising the constraints within which mainstream teachers operated, parents relied on the flexibility and intensity of shadow education to redress perceived mainstream shortcomings.

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Participants in both the subcases consistently emphasised the beneficial impact of manageable class sizes on effective student learning for children with SEN. This viewpoint aligned with existing literature, as reflected in a systemic review by Bondebjerg et al. (2023), where both students with SEN and staff expressed a preference for smaller class sizes. The perceived advantages included the belief that it allowed for more individualised instruction time and increased teacher attention which were deemed essential for addressing the diverse needs of students.

However, both subcase groups in the current study also suggested that smaller class-size might not suffice. This perspective stemmed from the recognition that each student with SEN had unique needs even within specific needs categories. The contention was that these diverse needs could not be adequately addressed, even in small group learning environments, necessitating a call for customised teaching methods. Participants from both subcases raised reservations about the efficacy of pull-out sessions for students with SEN enrolled in mainstream schools, emphasising the limitations of a one-size-fits all approach.

Despite the MOE's provision of SENOs to support students with SEN, the parents' perspective indicated that this support primarily focussed on behavioural issues rather than academic concerns. According to the MOE recruitment website, the SENOs roles and responsibilities include providing intervention support, offering systems consultation in the area of educational development and collaborating with stake holders to ensure ongoing support for them (MOE, 2022c). While the parents appreciated small group teaching for their children with SEN, they shared that their child's needs were not fully met still. This perceived discrepancy led to the engagement of shadow educators to provide individualised attention to their child with SEN.

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The apparent contradiction in perspectives can be understood as a nuanced view within the parents' group. While supporting smaller class-sizes, parents recognise the limitations in meeting the unique and diverse needs of students with SEN in these settings. The appreciation for small group interventions may stem from the value of behaviour modification within these groups, even though it falls short of addressing the full spectrum of academic requirement.

Participants in both subcases identified English Language proficiency as a common challenge for students with SEN, impacting their capacity to learn in other subject areas. The underlying causes varied considerably; learning difficulties associated with dyslexia manifested differently from those arising from hearing impairment, necessitating distinct and individualised approaches to mitigate the effects on learning.

The struggles faced by shadow educators in teaching the English language to hearing-impaired learners were highlighted, emphasising the complexities inherent in conveying language concepts to this group. The diverse challenges posed by various language difficulties underscored the necessity for tailored instructional approaches. The instructional expertise demonstrated by shadow educators played a crucial role in supporting students with SEN, emphasising the importance of maintaining the rigor of the national curriculum while providing individualised support to help these students cope in the mainstream setting.

• **Sub-Theme 2: Targeting Learning**

When examining the proficiency of shadow educators in supporting students with SEN, it is necessary to consider their ability to target learning effectively. Shadow educators used strategies and approaches specifically tailored to improve the learning of their students with SEN. They demonstrated instructional expertise and highlighted their

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acquired skill in targeting these instructional strategies to meet the needs of these students. These strategies included scaffolding, using manipulatives, teaching in advance, gamification, simplifying concepts and other targeted approaches that focussed at, ensuring successful learning outcomes for their students.

Ilas and Muhammad (2021), highlighted the significance of employing the right learning methods to improve students' state of learning and creativity. The study emphasised that the effectiveness of the learning model relies on the professional level of the teacher: knowledge and practical skills, and a strong focus on student performance and learning outcomes, achieved through observation, forecasting, and anticipation of group activity were identified as vital to ensure effective implementation.

This aligns with the proficiency of shadow educators, as they consider the selection of strategies and flexibility in implementing teaching techniques based on each student's unique needs. A personalised approach was necessary considering the unique challenges and learning styles of each student with SEN. Proficient shadow educators understood the importance of tailoring their instructional strategies to address specific areas of need and optimise the learning outcomes of their students.

In terms of examination skills, proficient shadow educators recognised the significance of reinforcing learning and employing multiple teaching methods. This strategic approach was not limited to classroom settings but extended to partnerships developed with parents. Collaborative efforts with parents played a crucial role in providing extra "over-learning" time for reinforcement, ensuring a responsive and well-rounded approach to skill development. Consistently repeating information helped students with SEN retain key facts and improve their ability to accurately recall information, which was important for examinations. P11 emphasised the importance of accurate spelling, stating,

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“you spell ‘magnet’ wrongly and it's two points gone”; spelling a word correctly, is a necessary exam skill that will minimize the loss of marks. Proficient shadow educators understood the importance of consistent repetition in aiding information retention and helping students with SEN remember patterns, words, and connect key concepts to answer simple recall questions.

While students with SEN may excel in memorisation, the application of learned concepts to practical scenarios often required additional support and guidance from shadow educators. Proficient shadow educators recognised this and understood the importance of relating concepts to real-life examples to foster a deeper understanding of how concepts are connected to the real world. The proficiency of shadow educators in supporting students with SEN, encompassed their ability to facilitate target learning effectively, selecting appropriate targeted teaching strategies, providing individualised support, and facilitating students in applying learnt concepts to real-world situations as they strove to optimise learning outcomes for students with SEN.

• **Sub-Theme 3: Upskilling to Stay Relevant**

When examining the proficiency of shadow educators, it is important to note the diverse range of qualifications and experiences in both the individuals in the shadow educators’ subcase and the shadow educators employed by the participants in the parents’ subcase exhibited a diverse range of qualifications and experiences. One recurring finding among the shadow educators and parents was the limited access to training and resources. Many shadow educators expressed the challenge of inadequate opportunities for professional development due to the high cost involved.

The shadow educators without professional qualifications acknowledged their lack of confidence in working with students with SEN and recognised the need for professional

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development to better understand special needs and remained informed about changes in the national curriculum. They strove to improve their ability to support students with SEN beyond relying solely on internet sources and self-directed learning, but emphasised the need for subsidised training opportunities to enhance their skills and knowledge in assisting students with SEN.

Shadow educators with professional qualifications in general education or special needs education reported being marginally better off than those without formal training. They either received training during their teacher training days or attended professional development while still employed before leaving service or retiring. However, even this group of shadow educators expressed a desire to stay updated on developments in special needs education and changes in the curriculum.

Interestingly, within the parents' subcase, there appeared to be a preference for shadow educators without formal special needs qualifications. This preference stood in contrast to their demand for mainstream school teachers to be trained in special needs. Parents believed that by guiding and shaping these untrained shadow educators according to their children's specific needs, the shadow educators would be able to provide effective support. This decision was influenced by both cost concerns and the desire for shadow educators to align with parents' preferences.

6.4 Theme 4: Dissonance between Policy Intentions and Practical Implementation of Inclusive Education

In Singapore, efforts have been made to support inclusive education, aligning with the vision of Prime Minister Lee Hsien Loong for a society that embraces inclusivity. However, a significant challenge arises from the disparity observed between policy intentions and the practical implementation of inclusive education. This dissonance

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becomes evident when examining the role of school leadership and the availability of essential resources. In this section the perspectives of the two participant groups shed light on the perceived gaps and challenges that limit the successful practical implementation of inclusive education in Singapore.

- **Sub-Theme 1: Influence of School Leadership**

In both subcases, participants emphasised the critical role of school leadership in shaping the implementation of inclusive education policies. The experiences shared by shadow educators and parents illuminated inconsistencies in how school leaders approached and supported inclusive education, revealing a dissonance between policy intentions and practical implementation of inclusive education.

T19, a shadow educator, highlighted the variations across schools attributing differences to the decisions made by school principals, SENOs and class teachers. Notably, T19 observed resistance among more experienced class teachers, underscoring the importance of leadership attitudes in determining the level of acceptance for students with autism.

Parents echoed these sentiments, offering diverse perspectives on the influence of school leadership. Positive experiences, such as that of P4, emphasised the crucial role of supportive school culture and dedicated teachers in addressing their children's needs. P4 specifically praised the principal and teachers for their responsiveness, indicating a school environment that actively listened and supported their child.

Conversely, some parents expressed disappointment with the school leadership and staff. P3 described encountering unsympathetic attitudes, with certain teachers and even the vice-principal appearing eager to remove their child from the school.

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These varying experiences underscored the significance of supportive school leadership in supporting inclusive education.

The value of supportive school leadership was explicitly articulated by P5, who appreciated the empathetic approach of school leaders and staff. P5 highlighted concrete actions, such as having Special Education teachers present in the classroom, as indicators of a school committed to accommodating students with SEN.

The impact of school leadership on the practical implementation of inclusive education cannot be overstated. Khaleel et al. (2021), emphasised the crucial role of school leaders in promoting inclusiveness and active participation in implementing successful inclusive practices. Proactive involvement by school leaders is essential to ensure the rights and needs of students with SEN are safeguarded, irrespective of budgetary constraints and available facilities. Collaborative efforts between school leaders and the broader community, including shadow educators, are integral to fostering inclusive practices and providing necessary support for the success of all students, including those with SEN. This collaborative approach aligns with the principles of inclusive education, ensuring that policy intentions translate into effective and supportive educational environments.

- **Sub-Theme 2: Availability of resources**

The dissonance between policy intentions and the practical implementation of inclusive education was also evident when examining the resources provided by MOE. According to Teng (2022b), parents of children with SEN acknowledged Singapore's progress in inclusive efforts, reflecting the country's commitment to inclusion. However, these parents expressed a desire for more support to be provided. This disparity between policy intentions and the practical implementation of inclusive education was highlighted in the two subcases.

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Firstly, parents voiced dissatisfaction with the level of human resources support provided in mainstream schools. They believed that the current “support is inadequate” to meet the needs of the students with SEN, potentially leading to disengagement during lessons, and hindering the purpose of inclusive education. The MOE has made efforts to increase support, including providing baseline support through SENOs and implementing training programmes. Nevertheless, parents still held the perspective that the number of SENOs and teachers trained in special needs was insufficient to cater adequately to all the students with SEN. Consequently, parents felt compelled to seek alternative ways to ensure their children’s well-being and development were addressed.

Parents share the profound consequences of inadequacies, revealing instances where students with SEN were unfairly blamed by their peers. This blame, stemming from the inability of students with SEN to complete their tasks or manage their belongings, leads to social ostracization and hinders their well-being. A compelling account from a parent underscored the emotional toll of such blame on the child, illuminating the urgent need for improved support systems.

The MOE has taken steps to enhance support, employing SENOs and implementing training programmes. However, parents still regarded the number of SENOs and trained teachers as insufficient, compelling them to seek alternative avenues to address their children’s well-being and development.

Shadow educators provided a nuanced perspective, acknowledging the diverse needs of students with SEN and the necessity for tailored support. T18’s insight emphasised the varying levels of support required by different students. Still, an examination of shadow educators’ strategies revealed proactive efforts in supporting

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students across academic, social and behavioural domains. This suggests an implicit recognition among shadow educators of the need for additional support beyond the current school provisions.

Time-related constraints further compound the resource challenge with participants emphasising the need for dedicated time to address the unique learning needs of students with SEN. The competing demands on teachers, including the whole-class instruction, planning, administrative tasks, parent meetings, contribute to a lack of time to attend to individual student needs. Shadow educators observed that students with SEN could fall progressively further behind as teachers were driven to cover the curriculum within a prescribed time.

Parents and shadow educators alike witnessed the impact of time constraints on the capacity of students with SEN to keep up with the pace of delivery, leading to avoidance, reduced interaction with the class teacher and eventually disengagement with learning. The unsupported struggles with learning could spill over into social ostracization, further emphasising the need for comprehensive assessments of existing resources to bridge the gap between policy intentions and practical implementation of inclusive education. Addressing these resource challenges is crucial to ensuring that students with SEN receive the requisite support to meet their educational needs and foster a genuinely inclusive learning environment.

- **Sub-Theme 3: Alignment of Training and Practice**

The challenges faced by mainstream school teachers in recognising and meeting the diverse needs of students with SEN are underscored by the inadequacies in their training, a concern echoed by both shadow educators and parents. Parents harboured reservations

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about teachers' ability to recognise students with special needs and expressed doubt regarding the adequacy of training for full-time teachers.

Faragher et al. (2021), found that approximately 10% - 20% of mainstream school teachers in Singapore received more than 100 hours of training to address the needs of students with SEN. This limited exposure has left a significant portion of teachers unprepared to cater to the varied needs within mainstream classrooms. Both shadow educators and parents reiterated these concerns, highlighting the difficulties in addressing diagnosed and undiagnosed cases of students with SEN within a classroom. The perceived lack of readiness among teachers has led parents to seek supplementary support through shadow education.

Contrary to the envisioned efficacy of inclusive education, which assumes all teachers are adequately prepared to teach all students (UNESCO, 2020), the stark reality is that merely five to ten teachers in each school attended a 130-hour certificate level course (MOE, 2022f). This scarcity in special needs training has widened the gap between policy intentions and practical implementation of support for students with SEN within mainstream schools. The number of teachers trained in special needs had a direct impact on students with SEN facing socially challenging situations, potentially leaving them academically and socially marginalised.

The disjuncture between policy intention, training and practice raises concerns about the adequacy of support for students with SEN. This emphasises the urgent need to address the disparity between policy intentions, teacher training, and the effective execution of inclusive education,

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Socially challenging situations, including incidents of stigma and bullying can exert a profound influence on the overall well-being and social integration of students with SEN. Unfortunately, these students often face discrimination and ridicule due to their learning delays and differences, as highlighted by both subcases. Such experiences further damage their self-esteem and create an environment where students with SEN may shy away from seeking clarification in class, choosing to maintain a low profile to conceal their complex learning challenges. This highlights the need for targeted interventions and support, despite training programmes being available through online, school-based and MOE workshops (MOE, 2021b).

Shadow educators believed their individualised support allowed students with SEN to confide in them, facilitating guidance through social situations and interactions. T9 candidly stated that the number one goal was to help these students to “blend in better within their mainstream setting” by helping them “through social interactions and all”. However, it is important to note that shadow educators are not part of the school community, limiting their ability to directly intervene or address bullying incidents. Considering the education and training competencies recorded in the demographic information and personal doubts of some shadow educators, there may be legitimate concerns about their professional competence to address this aspect of a student’s developmental needs and to coach and counsel parents on guiding their children.

Addressing the limited training for teachers in special needs is important to ensure that students receive the necessary support to integrate into the mainstream school setting. Bridging the gap between policy intentions and the practical implementation is necessary to ensure that all students, including students with SEN, receive the expertise required for their holistic development and successful inclusion within the school community.

6.5 Theme 5: Potential of Shadow Education as a Supplemental Support for Students with SEN

The main focus of the study was to understand the perspectives of shadow educators and parents regarding shadow education as a supplemental community support and its role in the educational experience and outcomes of students with SEN who are enrolled in Singapore mainstream schools. While exploring the various themes, the data revealed prominent issues related to relationships, communication and collaboration among members of both subcases. Participants, representing both shadow educators and parents, acknowledged the assistance provided by shadow educators to students with SEN, but they struggled to discuss the specifics of the role of shadow educators. This inability could potentially be attributed to their lack of professional training, resulting in unfamiliarity with pedagogical terms and a limited understanding of how students with SEN acquire their learning.

• **Sub-Theme 1: Bridging Gaps on Multiple Levels**

In both subcases, participants emphasised the significant role played by shadow educators in supporting students with SEN. This sentiment is reflected in participants' perspectives, such as acknowledging the essential emotional and skill-based support provided by shadow educators. These shadow educators are seen as fulfilling crucial gaps and creating a safe space for non-judgemental learning. The valued role of shadow educators is considered fundamental in both subcases, particularly within the parents' subcase.

Furthermore, a prevailing belief shared by the majority of participants from both the subcases is that the impact of shadow educators goes beyond imparting knowledge. This

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belief is evident in perspectives like emphasising commitment, pedagogy, rapport-building and understanding the individual child. Participants expressed the view that shadow educators contribute to the child's development of values, understanding of the world, and acceptance. These shared perspectives reflect a consensus within both subcases regarding the broader role of the shadow educators, which encompasses not only academic instruction but also establishing personal connections and facilitating the student's integration into in the wider community.

- **Sub-Theme 2: Enhancing Support beyond School Hours**

Participants unanimously highlighted the diverse and effective strategies employed by shadow educators to enhance supplemental help beyond school hours for students with SEN. These strategies encompassed providing extra time, employing motivational techniques, reinforcing concepts through constant repetition and utilising multiple teaching approaches.

T7 highlighted the necessity of patience and the exploration of different tutoring methods. This shadow educator also articulated that the practice becomes instinctive, involving observation and experimentation with various approaches until a suitable method was found. This observation underscores the shadow educator's profound comprehension of the role and a keen understanding of how students with SEN acquire content knowledge.

T7's insightful statement, "trying different ways until they get it" reflects an understanding that students with SEN learn in diverse ways. The shadow educator respects the individuality of learning styles and recognises shadow educators' ability to adjust their teaching strategies and interactions to support content mastery, indicating their role in understanding the unique learning needs of students with SEN.

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Furthermore, fostering a strong partnership with the student's micro environment (Bronfenbrenner, 1979) was necessary to facilitate learning. This approach ensures that all stakeholders needed to be aware of how learning occurs for the student with SEN and how it can be further encouraged. Collaborative approaches, as supported by Garcia-Melger et al. (2022), enhances awareness, recognition of each other's contributions and establish effective communication and practical ways of working in support of inclusion. A culture of partnership allowing the exchange of resources and expertise, enhances supplemental community support for students with SEN beyond regular school hours.

This perspective underscores the importance of collaboration in supporting students with SEN. Moreover, the partnership approach recognises the micro-environment surrounding the student, including the wider community, influences the learning experience of the student with SEN. For a discussion on collaborative efforts, please refer to Theme 2, sub-theme 3 (p. 194), where partnership dynamics were explored.

By implementing these effective strategies and cultivating a collaborative and inclusive environment, shadow educators enhanced supplemental help beyond school hours, playing an important role in facilitating content mastery and skill development for students with SEN.

6.6 Conclusion

To conclude, this chapter consolidates the findings and insights gleaned from the exploration of the mediating role and contribution of shadow education in supporting inclusive education for students with SEN in mainstream school settings, as detailed in Chapter 4 and Chapter 5. It serves as a comprehensive analysis, laying the groundwork for the subsequent discussion and presentation of the findings.

CHAPTER 6: CROSS-CASE SYNTHESIS

Beginning with a review of the research objectives, the chapter integrated and aligned findings from the diverse data sets collected from two independent subcases. This meticulous process ensures consistency in laying the groundwork for the development of a local theory. The analysis incorporates qualitative insights derived from interviews. The research design ensured that membership of the two subcases was independent; that is, none of the shadow educators in subcase 1 was employed by the parents of subcase 2. This aspect of the research design had two advantages: first, there was no conflict of interest or collusion between members of the two subcases; second, subcase 2 had the double advantage of garnering parents' perspectives on shadow education for students with SEN in mainstream schools and collecting data about the educational practices of a second group of shadow educators, albeit from the perspectives of their employer clients. Valuable insights emerged from the cross-case analysis of these two distinct databases regarding the role of shadow education in supporting students with SEN

It becomes evident that shadow education filled the gaps left by mainstream education, offering tailored assistance to help these students manage their unique challenges. Despite the lack of formal training, shadow educators exhibited adaptability in their instructional strategies and their proficiency in behaviour modification and social training extended beyond academic instruction, contributing significantly to the overall development of students with SEN. This holistic approach not only facilitated academic progress but also enhanced social skills, fostering better inclusion in mainstream settings for these students.

In considering the ideal concept of inclusive education, the supports put in place by the MOE and the practical realities on the ground, there are shortfalls in the way MOE policy is implemented and is able to be implemented. These shortfalls, as perceived by both

CHAPTER 6: CROSS-CASE SYNTHESIS

subcases, appear related to the challenges of human resources to meet the intersecting demands of mainstream curriculum and students with SEN. This identification emphasises another potential source of support that could be leveraged to enhance the competence of shadow educators in contributing to the implementation of inclusive education practices. Acknowledging the potential of shadow education as a supplemental support source for students with SEN is crucial. However, this poses a multifaceted challenge. While it may address some existing gaps, it also introduces new considerations such as how this impacts the collaboration and functioning of shadow education in the broader context is complex and remains an intricate consideration.

Drawing on Bronfenbrenner's ecological systems theory (1979), the analysis contextualised the perspectives of shadow educators and parents across different ecological levels, from direct interactions (microsystem) to the influence of policies and cultural beliefs (exosystem and macrosystem). The cross-case analysis revealed both common and differing views on inclusive education between shadow educators and parents, emphasising the importance of targeted help at the microsystem level and holistic development at the mesosystem level.

The cross-case analysis has been thoughtfully integrated with relevant literature in the field, reinforcing the credibility of the perspectives. This deliberate integration highlights the value of drawing upon existing knowledge to contextualise the findings. These findings establish the foundation for the development of a local theory based on the unique perspectives of the research participants. The chapter emphasises the mediating support provided by shadow education, paving the way for the ensuing discussion and presentation of the findings in the subsequent chapter.

CHAPTER 7: THEORY AND DISCUSSION

This chapter delves into the theoretical underpinnings that emerged from a collective case study exploring the collaborative dynamics between parents of children with SEN and community-based shadow educators. Grounded in the acknowledgement of the necessity for tailored educational support, this theoretical framework serves as a guide to understanding the multifaceted relationship between these stakeholders and its impact on the educational experiences of students with SEN within mainstream school settings.

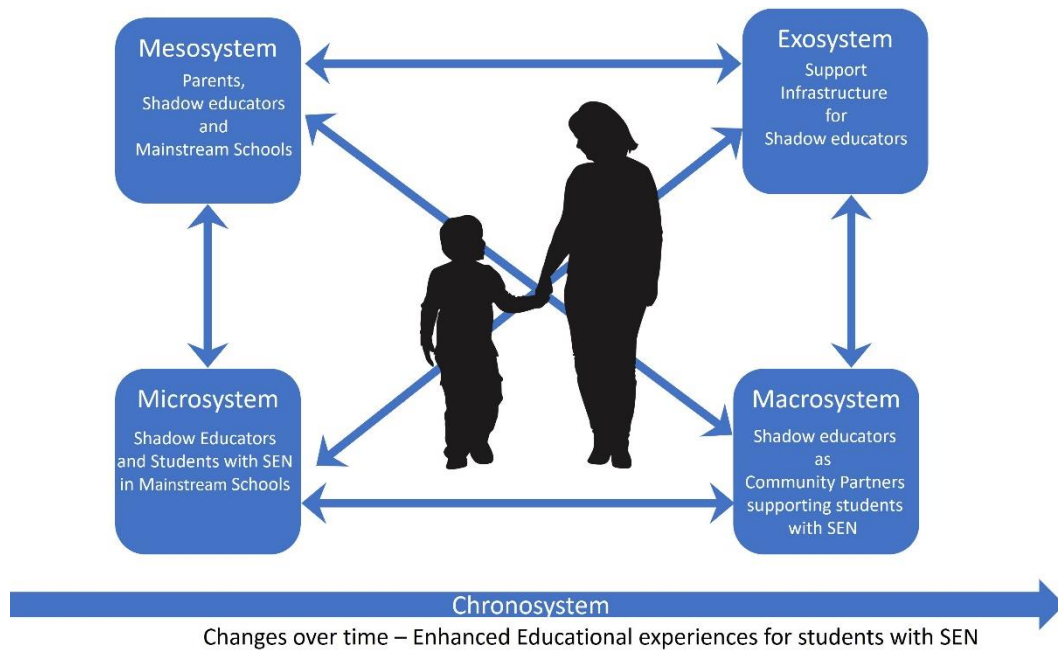
The chapter synthesises and discusses the research findings to answer the guiding questions. By addressing each question, an understanding on the impact of shadow education on the inclusion of students with SEN in mainstream schools in Singapore. This highlights the interrelatedness of various levels in the ecological system and the influence of the support provided to these students.

7.1 The Collaborative Partnership: A Theoretical Framework

In Singapore, a symbiotic relationship maybe initiated by parents with shadow educators who provide supplementary tutoring and support for their children with SEN who attend mainstream schools. The collaborative partnership between parents and shadow educators is propelled by a shared belief in the essential role of tailored educational support for students with SEN enrolled in mainstream school settings. This collaboration encompasses three dimensions: the intrinsic motivations of parents, the perspectives of shadow educators on the nature and value of their support services, and the complementary views of both parties regarding the customised educational needs of students with SEN.

Figure 1:

The Collaborative Partnership



Note: The collaborative partnership. Own work. This figure illustrates the multi-levels and interconnected nature of the collaborative relationship among parents, shadow educators and mainstream schools. The arrows in the figure demonstrate the interconnected and reciprocal nature of the collaborative relationship, with each component influencing and supporting the others in enhancing the inclusion and educational success of students with SEN.

The theoretical construct revolves around Bronfenbrenner’s ecological systems theory (1979), which contextualises the findings within the microsystem, mesosystem and the macrosystem.

The collaboration between parents and shadow educators operates primarily within the microsystem, directly impacting the students with SEN. However, this relationship extends into the mesosystem, where interactions between home and school environments are facilitated by shadow educators and further into the macrosystem, where broader societal attitudes towards inclusive education are reflected.

CHAPTER 7: THEORY AND DISCUSSION

Specifically, it emphasises:

- The perspectives of parents and their inherent need to seek supplementary support from community resources to enhance the assistance provided in the existing educational system and to facilitate the successful integration of their children with SEN into mainstream schools;
- The perspectives of the shadow educators, shedding light on the nature of the support services that they provide; and
- The complementary perspectives of shadow educators and parents, acknowledging the need for tailored approaches within shadow education to facilitate the meaningful inclusion of students with SEN in mainstream school settings

7.2 Synthesis of Findings

The chapter will proceed by synthesising the research findings, integrating them into the proposed theoretical framework. Table 11 addresses the guiding questions, components of perspectives with key findings, supporting evidence, contextual perspectives and implications.

Table 11*Synthesis of research findings on shadow education for students with SEN*

Components of Perspectives	Key Findings	Supporting Evidence	Contextual Perspectives	Implications
(a) Aims and intentions	To provide tailored support for academic performance, social integration and overall development and to supplement mainstream education due to perceived inadequacies schools.	Mainstream schools do not fully meet the needs of students with SEN.	Insights into the parental expectations and shadow educator views highlighted the gap in mainstream education.	Indicates the need for comprehensive support systems in mainstream schools to reduce reliance on shadow education
(b) Strategies employed	Use of individualised teaching approaches, continuous assessment, and targeted interventions.	Cater to unique learning profiles to ensure each child's specific needs are met.	Strategies were customised based on individual assessments and continuous feedback ensuring that interventions were responsive and adaptive.	Suggests Mainstream schools could adopt more flexible teaching methods to support diverse learners.

Table 11 (continued).

Components of Perspectives	Key Findings	Supporting Evidence	Contextual Perspectives	Implications
(c) Significance	Targeted individualised support enhance academic and social outcomes.	Address gaps in mainstream education and supports holistic development	The holistic development of students with SEN in Singapore mainstream schools was emphasised.	Highlights the need for inclusive practices in mainstream education tailored to individual needs.
(d) Expected outcomes	Enhanced academic and social skills, better integration into mainstream schools and greater overall development.	Improvement observed in academic and social skills.	Positive outcomes generally noted by shadow educators and parents suggesting shadow education plays a role in the development of students with SEN.	Appropriate support facilitates the integration and success of students with SEN in Singapore mainstream school setting.

This overarching theory serves as a theoretical framework, with subsequent propositions derived from the collective case study's two subcases and cross-case analysis, contributing to the study's aim of exploring the phenomenon of shadow education in Singapore, and developing an understanding of the supplemental community support for students with SEN within mainstream schools.

The concept of supplemental community support from shadow educators emerged as the main idea during data analysis drawing on Bronfenbrenner's (1979) ecological systems theory. This theory supplies the context for the discussion of the local theory generated from this study, divided into three main propositions. Through cross-case

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analysis of subcase 1 (shadow educators) and subcase 2 (parents), common themes and patterns emerged, contributing to the understanding of the substantive role and contribution of shadow educators, and the motivations of parents in seeking their services for inclusive education. These findings served as the foundation for developing Proposition One, Proposition Two, and Proposition Three.

Proposition One, derived from the analysis of subcase 1 (shadow educators), highlights three elements substantiating their role and contribution: bridging the skills gap to facilitate student participation as fully and efficiently as possible in the inclusive in the inclusive mainstream school environment, customising teaching strategies to meet individualised learning needs, and fostering confidence and self-esteem.

Proposition Two, resulting from the analysis of subcase 2 (parents), explores the factors driving parents' inclination to seek shadow education for their children with SEN enrolled in mainstream schools. These include the desire to improve academic performance to an acceptable level in class, the opportunity to access more post-secondary pathways and secure a mainstream qualification for future career prospects, as well as enhancing "inclusion" in mainstream classes by modifying social and behavioural attributes through shadow education.

Proposition Three identified a shared agenda among shadow educators and parents to enhance the experience and outcomes for students with SEN enrolled in mainstream schools, focussing on formal recognition of the role of shadow educators in facilitating inclusive education for students with SEN, opportunities for greater collaboration with mainstream schools, opportunities for professional development, and access to relevant curriculum materials as well as resources.

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By linking the findings to these specific propositions, the study provides insight into shadow education as a supplemental community support for students with SEN enrolled in mainstream schools. This chapter describes the relationship that develops between shadow educators and parents' favourable response to their mediating role and contribution in facilitating the academic and social-behavioural skills development for students with SEN. Furthermore, it discusses how the theory of supplemental community support from shadow educators for students with SEN applies to inclusive education practices.

7.3 Bronfenbrenner and Supplemental Community Support

During the analysis phase of this study, the importance of integrating additional community support alongside existing assistance for students with SEN enrolled in mainstream schools became evident. As discussed in Chapter 2 (p. 50), Bronfenbrenner's ecological systems theory offers valuable insights into the role of supplemental community support, such as shadow educators, in enhancing the educational experiences of these students. Bronfenbrenner's theory (1979) emphasises the interconnectedness between various systems – microsystem (immediate environment), mesosystem (interactions between microsystems), exosystem (indirect influences), and macrosystem (broader cultural beliefs) – and their influence on individual development within educational contexts.

In mainstream school settings, parents play a critical role of primary decision-makers when seeking extra support for their children. They initiate and facilitate engagements with community resources, including shadow educators, to support their children's educational experiences effectively.

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Recognising parents as key players of their children's educational experiences highlights their proactive role in leveraging microsystem resources to meet the academic and socio-emotional needs of their children with SEN. Moreover, collaboration among parents, shadow educators, teachers and other professionals strengthens connections across mesosystems, promoting holistic support for these students within the mainstream school environments.

In applying Bronfenbrenner's theoretical framework, the study acknowledges the reciprocal influences and interdependence inherent in educational systems. Shadow educators, through their collaborative efforts with teachers and families, contribute significantly to enhancing students' developmental outcomes with these interconnected systems.

7.4 Proposition 1: Shadow educators make a substantive contribution to the integration of students with SEN in inclusive mainstream school settings

The theoretical underpinning of this study is rooted in the construct of inclusive education as an avenue for active participation in both academic and social aspects of the mainstream environment for students with SEN. This construct is collaboratively shaped by the shared beliefs of shadow educators and parents highlighting the role of tailored educational support for students with SEN within mainstream school settings.

Shadow educators make a substantive contribution to the integration of students with SEN in inclusive mainstream school settings in three ways:

- **Bridging the Skills Gap to Cope in Mainstream School Environment**

Microsystem: Shadow educators and students with SEN in mainstream schools

The first element corresponds to parents' intrinsic motivation, and the perspectives of shadow educators, with a focus on enhancing students' ability to navigate and succeed in mainstream educational settings. Numerous studies (Padilla-Munoz et al., 2013; Schwartz et al., 2021; Wasielewski, 2016), have raised concerns about the academic lag of students with SEN compared to their peers. These challenges include keeping pace with the curriculum, communication and social integration with peers, and managing daily classroom routines. Alim et al. (2017) pointed out that teacher education programmes tend to assume a one-size-fits-all approach, leaving any student who does not fit the mould to be accommodated with just one minor adjustment.

Through tailored educational interventions, shadow educators address the skills gap for students with SEN, constantly adjusting their practices to meet the students at their zone of proximal development (Vygotsky, 1977). This approach aligns with the concept of over-learning, advocated by shadow educators and supported by research literature on retention (Bebko et al., 2017; Indarsari & Utomo, 2022; Kuti, 2011; Zhan et al., 2018). By implementing these strategies, shadow educators play an important role in empowering students to cope with the demands of mainstream school environments, echoing the collaborative partnership envisioned in the broader theoretical framework.

- **Customising Teaching Strategies to Meet the Individualised Learning Needs**

Mesosystem: Parents, shadow educators and mainstream schools

The second element reflects the collaborative views of shadow educators and parents regarding the customised educational needs of students with SEN. In addressing the

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educational needs of students with SEN, a crucial mesosystem focus involves the collaboration between shadow educators, parents and mainstream teachers. This collaborative effort ensures that teaching strategies are customised to meet each student's individual learning needs and styles. Shadow educators play a role in adapting teaching strategies, tailoring instructions and making necessary adjustments based on their student's individual learning needs and styles. Despite challenges such as class size and resource limitations – highlighted by the median class size of 32 in primary schools and 36 in secondary schools (MOE 2022d) – this personalised approach maximises learning outcomes in inclusive learning environments. Participants collectively emphasised the need for more concerted efforts to ensure that students with SEN receive customised instructional intervention aligned with their individualised learning needs. The discussion emphasises the importance of one-to-one attention and reinforces the collaborative effort to provide consistent and necessary additional support from the community.

- **Building Confidence and Self-Esteem of Students with SEN**

- Macrosystem: Shadow Educators as community partners supporting students with SEN**

The third element, complementing the first two by highlighting the important role of community engagement, including the contributions of shadow educators in supporting students with SEN. Shadow educators play a role in enhancing the learning environment and contribution to student's confidence and self-esteem. This support is crucial in addressing challenges such as stigmatisation and bullying, which can affect the students with SEN confidence and self-esteem. Positive peer relations, facilitated through inclusive practices, provide essential social support and promote engagement in positive social activities (Zweers et al., 2021). The positive connections established by shadow educators

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outside the mainstream classroom further aligned with Bandura's social cognitive theory (1977), emphasising the significance of positive interactions in shaping students' self-perception and belief in their abilities. By extending these positive influences beyond the classroom, community engagement helps reinforce inclusive practices and fosters broader societal acceptance and support for students with SEN.

7.5 Proposition 2: Parents' predispositions for seeking shadow education for students with SEN enrolled in mainstream schools are informed by a complex cluster of motivations

Parents who opt for mainstream education for their children with SEN enrolled in mainstream schools, are driven by various motivations influenced by a range of factors including societal pressures, personal experiences, and aspirations for their children's future. Through an exploration of the perspectives and motivations of both parents and shadow educators, this study has led to the development of a theory that explains the significance of shadow education within the context of mainstream education for students with SEN in Singapore. This framework integrates these elements seamlessly:

- **Improving Academic Performance to an Acceptable Level in Class**

Microsystem: Shadow educators, and students with SEN in mainstream schools

Parents recognise the challenges their children with SEN encounter in mainstream classrooms and understand the need for extra support to improve academic performance. Students with SEN enrolled in mainstream schools are expected to possess the cognitive abilities and adaptive skills necessary to access the national curriculum and thrive in a mainstream environment (MOE, 2022e). Insights from several studies (Padilla-Munoz et al., 2013; Schwartz et al., 2021; Wasielewski, 2016) suggest that parents believe that

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targeted attention and support can address perceived shortcomings, potentially improving academic performance to an acceptable level in the mainstream settings. This understanding motivates parents to engage shadow educators, who are perceived to be more flexible in adapting teaching strategies, as evidenced in subcase 1, to meet the unique learning of their children with SEN. For instance, shadow educators use various methods, including visual aids, to enhance understanding and engagement. This proactive approach by parents reflects their role in advocating for personalised educational interventions that support their children's academic progress within mainstream school educational settings.

- **Promoting social adaptation and fostering a sense of belonging and self-confidence for students with SEN enrolled in mainstream schools**

Mesosystem: Parents, shadow educators, and mainstream schools

Parents of children with SEN expressed a strong desire to enhance the social adaptation of their children into the neurotypical world. Their overarching goal was to ensure that their children could fit in socially, avoid bullying, and feel comfortable being themselves. By choosing mainstream schools, parents' intention was to equip their children with the skills and education needed to succeed in the job market and lead fulfilling lives as valued members of society, supporting the broader goal of inclusive education.

Central to this goal is the collaborative relationship between shadow educators and mainstream schools. Shadow educators are pivotal in partnering with schools to implement tailored strategies that support students with SEN in developing social skills and navigating the academic curriculum effectively. By leveraging their experience, shadow educators contribute significantly to enhancing the inclusive and supportive learning environment where students with SEN can succeed academically and socially. This collaborative approach highlights the mesosystem dynamics, highlighting the coordinated efforts among

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parents, shadow educators and schools to meet the diverse needs of students with SEN within mainstream educational settings.

- **Enhancing "inclusion" in mainstream classes by modifying social and behavioural attributes through shadow education**

Macrosystem: Shadow educators as community partners supporting students with SEN

Parents recognised the importance of therapy for their children's development and education. Facing challenges in accessing regular therapy sessions, they turned to shadow education as an alternative way to support their children with SEN. While shadow education did not fully replace formal therapy sessions, it provided more regular and consistent support, reducing long wait times between therapy sessions. This is consistent with the broader parental expectations and limitations, emphasising the role shadow educators beyond academic teaching and reinforcing the collaborative partnership embedded in the theoretical construct.

In mainstream schools, although students with SEN received support from SENOs, subject-specific content intervention may not be fully addressed by the school system or professional therapists. In this context, shadow educators played an integral role in bridging the learning gap by providing tailored academic support across subjects. The affordability, regularity, and adaptability of shadow education made it an attractive option for parents seeking responsive support for their children with SEN. This affirms the effectiveness of the regular intervention provided by shadow educators, demonstrating gradual progress and advancements by these students over time, in line with the theoretical construct's vision of a collaborative partnership between parents and shadow educators.

7.6 Proposition 3: Shadow educators and parents articulated a common agenda in enhancing support for students with SEN enrolled in mainstream schools

Shadow educators and parents advocate for greater collaboration between mainstream schools and shadow educators. The elements for facilitating greater collaboration include providing professional development opportunities, as well as accessing relevant curriculum materials and resources. This collaborative partnership reflects a common commitment to enhancing support for students with SEN enrolled in mainstream schools.

• **Facilitating Opportunities for Greater Collaboration with Mainstream Schools**

Mesosystem: Parents, shadow educators, and mainstream schools

The push for collaboration between mainstream schools and shadow educators is based on the partnership outlined in the explanatory theory. This collaborative approach, centred on the belief in tailored educational support, emphasises strong partnerships. Meadan and Monda-Amaya (2008) suggest that this collaboration involves consistent communication, shared information, and joint planning to cultivate inclusive and supportive environments. The theoretical construct explicitly supports this approach, highlighting the need for unified efforts to ensure responsive and integrated support for students with SEN enrolled in mainstream schools.

In Singapore, the strategic management of various educational support options reflects the nuanced perspectives of stakeholders, potentially yielding positive effects on the equitable distribution of collaborative resources. This highlights the intricate interplay of factors within the educational environment. Recent developments indicating a growing demand for free shadow education among parents, in response to the high cost of living (Lianhe Zaobao, 2024), further highlights the complexity of the situation. According to

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Hajar and Karakus (2024), shadow education is identified as a major instrument for maintaining and exacerbating social inequalities. The practice of private tutoring, which can be more prevalent among certain socioeconomic groups, may result in unequal access to educational resources and opportunities. These concerns about inequality in opportunity and the potential undermining of the public school system were also noted by Bray (2010) and Exley (2021). However, the availability of shadow education provided by non-profit and religious organisations or higher education student groups to nominal fee-paying services offered by self-help groups in Singapore's educational landscape may mitigate some of the concerns.

- **Providing Opportunities for Professional Development**

- Exosystem: Support infrastructure for Shadow Educators**

Continuous professional development for shadow educators is supported by external frameworks and collaborative initiatives involving educational authorities, professional development providers and relevant stakeholders. These efforts ensure that shadow educators receive ongoing training and resources aligned with the diverse needs of students with SEN in mainstream educational settings. The collaborative design of professional development as identified by Voogt et al. (2015), reflects the theoretical framework's vision of educators working together and sharing knowledge. The situative perspective as articulated by Greeno et al. (1998) and the application of third-generation activity theory developed by Engeström (1987) further underscore the importance of collaborative design fostering a sense of community among educators. By leveraging external support infrastructure, shadow educators are better equipped to provide tailored educational support and guidance that promotes inclusive practices within schools.

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- **Accessing Relevant Curriculum Materials and Resources**

Exosystem: Support infrastructure for shadow educators

The emphasis on access to mainstream resources, which shadow educators can tailor for their students with SEN, reflects the collaborative partnership outlined in the explanatory theory. This joint endeavour, rooted in the shared belief in the importance of tailored educational support, recognises the need for a diverse range of resources. The availability of relevant curriculum materials and resources as highlighted by UNESCO (2017), aligns with government initiatives encouraging lifelong learning. Government support plays a crucial role in fostering continuous professional development for educators of students with SEN, aligning explicitly with the collaborative nature of these efforts. By supporting these initiatives, inclusive learning environments are promoted, meaningful participation is encouraged, and academic and social development are facilitated, closely aligning with the theoretical framework.

7.7 Conclusion

This chapter presents a local explanatory theory to illuminate the intricate landscape of shadow education for students with SEN enrolled in Singapore's mainstream schools. Built on Bronfenbrenner's ecological systems theory, the theory explores how different systems influence individuals, drawing insights from data gathered from shadow educators and parents in a collective case study. This theory examined the mediating role and contribution of shadow educators and the motivations of parents for employing shadow education as a supplementary community support for their children with SEN enrolled in mainstream schools.

Central to this construct is the emphasis on customised teaching strategies and the provision of responsive support, addressing the skills gap and boosting students'

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confidence and self-esteem. The framework acknowledges parents' multifaceted motivations, ranging from improving academic performance to promoting inclusion. This theoretical lens highlights the interconnectedness of individual, relational and societal factors, providing a comprehensive understanding of the dynamics at play.

In summary, this theoretical framework offers an explanatory theory for the prevalence of shadow education among students with SEN enrolled in Singapore mainstream schools. By applying Bronfenbrenner's ecological systems theory (1979), this research highlights the importance of tailored educational support and the need for collaborative efforts between mainstream schools and shadow educators. Understanding these intricate dynamics empowers educators and policymakers to collaborate effectively, creating an inclusive educational ecosystem that prioritises the optimal development and well-being of students with SEN. This research provides practical insights for those involved in shaping the educational landscape for students with SEN in Singapore.

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This research delved deeply into the complex environment of shadow education for students with SEN enrolled in the mainstream schools of Singapore. By interviewing both shadow educators and parents of children with SEN, this study aimed to provide insight on the indirect mediating role and contribution of shadow education in facilitating inclusive practices. This perspectival collective case study, based on symbolic interactionism, provides an understanding of the lived experiences of two key stakeholders within the inclusive education landscape in Singapore.

8.1 Original Contribution to Knowledge

As indicated in the discussion of the context and justification for completing this study, research into the challenges of appropriate inclusion of students with SEN in mainstream schools in Singapore is scarce (Lim et al., 2014; Yeo et al. 2016; Strogilos et al., 2021). This study makes an original contribution to knowledge in the specific context of Singapore by a collective case study of the perspectives of shadow educators and parents across different educational levels and curricula on the role and contribution of shadow educators in the inclusion of students with SEN in mainstream Singapore schools. The research design of the two subcases ensured that qualitative data was acquired from independent groups, minimising any potential conflicts of interest if the shadow educators worked for members of the parents' subgroup. This rigorous methodology enhances the findings' credibility and reliability.

One of the study's strengths is its contextual relevance. It delves into the complexities of mainstreaming students with SEN in Singapore's unique educational and cultural environment. The cross-case analysis of data from the collective case study yields a

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local formed explanatory theory that sheds light on the challenges of inclusive education in these unique settings. While the findings are based in the Singaporean context, they potentially offer valuable implications in other settings. The detailed subcase analysis and cross-case analysis give a wealth of information that readers may extrapolate and apply to their own educational environments. The challenges and strategies identified in this study can inform stakeholders in different countries who are working to enhance inclusive education for students with SEN.

Moreover, the study's findings emphasise the importance of tailored support, collaborative partnerships between parents, shadow educators, and mainstream schools, as well as the need for supportive educational policies aimed at fostering inclusive learning environment. The audit trail establishes the credibility of the findings and offers the opportunity for other researchers to replicate the study in their own contexts. By adapting the study's methodology and insights, researchers and educators in different countries can develop strategies to support the inclusion of students with SEN in mainstream schools.

The mainstreaming of students with SEN is acknowledged to be a challenging endeavour (Ainscow, 2020; Barshay, 2023; Haug, 2017; Leijen et al., 2021; Mitchell, 2015). The evidence in this study indicated that individual students have unique needs, frequently complicated by comorbidities, that necessitates personalised shadow education to mitigate their impacts on educational and social opportunities for inclusion offered by mainstream schooling. Many of these needs necessitate extended time on task for students with SEN to process information, understand concepts, engage in repeated practice of essential skills and produce evidence of learning that cannot be provided in the regular curricular structures of mainstream schools. The collective case study presented in this

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this thesis makes an original contribution to the understanding of the intensive investment of time, skills and resources, required to benefit students with SEN from the policies of inclusion, which is claimed to be beyond the realistic resources of mainstream schools.

By highlighting these needs, this study highlights the important role of the shadow educators and the importance of tailored educational support. Furthermore, the findings have broader implications for global educational practices, offering insights for stakeholders in other countries who aim to enhance inclusive education for students with SEN.

8.2 Implications for Theory and Professional Practice

At the outset, it is crucial to recognise the nuanced and contentious nature of inclusive education policy intention and implementation. The study's findings highlight the key areas that require attention and action to enhance the effectiveness of inclusive education for students with SEN in Singapore mainstream schools. Table 11 provides a visual representation of the alignment between the propositions derived from this study and the corresponding implications, elaborated in the following discussion.

Table 12

Alignment between Propositions and Implications

Propositions	Implications
<p><i>Proposition 1</i></p> <p>Shadow educators make a substantive contribution to the integration of students with SEN in inclusive mainstream school settings in three ways:</p> <ol style="list-style-type: none"> 1. Bridging the skills gap to cope in mainstream school environment 2. Customising teaching strategies to meet the individualised learning needs 3. Building the confidence and self-esteem of students with SEN 	<p>First, fostering a closer partnership between shadow educators and schools is important to ensure that shadow education and inclusive education practices are aligned. This can be achieved through collaborative efforts supporting students with SEN in meeting the national curriculum and the developing adaptive skills for mainstream inclusion.</p> <p>Second, providing additional support to shadow educators, such as training and access to relevant curriculum resources enhances their capacity to effectively bridge the skills gap, customise teaching strategies, and build confidence and self-esteem of students with SEN.</p>

Table 12 (continued).

Propositions	Implications
<p><i>Proposition 2</i></p> <p>Parents' predispositions for seeking shadow education for students with SEN enrolled in mainstream schools are informed by a complex cluster of motivations:</p> <ol style="list-style-type: none"> <li>1. Improving academic performance to an acceptable level in class <li>2. Promoting social adaptation and fostering a sense of belonging and self-confidence for students with SEN enrolled in mainstream schools <li>3. Enhancing "inclusion" in mainstream classes by modifying social and behavioural attributes through shadow education 	<p>Third, addressing the challenges posed by parents' motivations it is essential for schools to focus on creating a safe and inclusive environment. This involves proactively addressing issues such as bullying from peers and teachers, which can hinder the social adaptation and self-confidence of students with SEN.</p> <p>Furthermore, supporting educators' personal and professional growth is necessary for effective implementation of inclusive education. This support can include training programmes that enhance the educator's understanding and competencies in meeting the diverse needs of students with SEN particularly in the context of promoting social adaptation and fostering a sense of belonging.</p>

Table 12 (continued).

Propositions	Implications
<p><i>Proposition 3</i></p> <p>Shadow educators and parents articulated a common agenda in enhancing support for students with SEN enrolled in mainstream schools. The common agenda includes:</p> <ol style="list-style-type: none"> 1. Facilitating opportunities for greater collaboration with mainstream schools 2. Providing opportunities for professional development 3. Accessing relevant curriculum materials and resources. 	<p>To enhance the experience and outcomes for students with SEN, collaboration between shadow educators and mainstream schools should be actively promoted. This collaboration can involve regular communication, sharing of information and resources, and joint planning to create inclusive and supportive environments.</p> <p>In addition, both shadow educators and mainstream school teachers must have access to professional development opportunities. These opportunities serve to enhance the competency and proficiency of educators in addressing the diverse needs of students with SEN, cultivating a more inclusive educational landscape. Prioritise access to essential curriculum materials and resources to bolster inclusive education practices. This entails the provision of adapted and differentiated materials tailored to accommodate the diverse learning needs of students with SEN. Ensuring equitable access to the curriculum and providing support for academic progress are integral components of this prioritisation.</p>

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The study emphasises the potential value of perceiving and understanding the alignment between shadow education and inclusive education practices. Notably, the motivation observed among shadow educators and parents emphasises their commitment to supporting students with SEN within the national curriculum and fostering adapt to the mainstream environment. The alignment can be strengthened by leveraging existing efforts, such as funding and structures provided by the government and the MOE. Specific provisions and programmes, as outlined in the “Background and Context to Study” (p. 2).

Second, the study recognises that funding and structures alone are inadequate without additional support and a shift in the school community’s perspectives on inclusive education. Establishing a genuine connection to students with SEN and embracing diversity within the entire school community is deemed essential. The implementation of processes and programmes should go beyond mere compliance and focus on building meaningful relationships and fostering a sense of inclusion. The study suggests that efforts should be made to help the school community connect with these students and create a safe and inclusive environment within the various platforms available in the school community.

Third, the study highlights the tension between the priorities of inclusive education and academic and non-academic achievements. Educators in mainstream schools often grapple with conflicting demands and ambivalence in balancing limited resources and time available to attend to students with SEN while meeting desired outcomes. This is especially pertinent in Singapore context where paper qualifications are highly prized, as to a certain extent, they can decide the future of a child based on post-secondary pathways available. Addressing this tension strategically involves minimising conflict, supporting teachers in finding internal coherence and recognising the shared experiences of shadow educators and

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parents regarding students with SEN feeling excluded or unsafe due to bullying from fellow students and, in some instances, even teachers.

Fourth, the study underscores the importance of educators' personal and professional development in effectively implementing inclusive education. A thorough awareness of educators' values, beliefs, strengths and talents, passions and interests, life experiences and specific needs will enable shadow educators to support these students in their own self-discovery and development. Prioritising educators' well-being and providing adequate support is fundamental for nurturing a flourishing school community.

Lastly, the study highlights the need for each school to contextualise inclusive education within its unique identity and strengths. While inter-school learning and experimentation with diverse programmes are encouraged, schools must critically evaluate their inclusive education efforts, identify limitations and weaknesses and adapt strategies to meet the school's specific needs. Table 11 provides a visual representation of the alignment between the propositions derived from this study and their corresponding implications.

8.3 Theoretical Implications

This study offers theoretical implications that extend beyond professional practice. By situating the findings within Bronfenbrenner's ecological systems theory (1979), this research advances the understanding of how various systems interact to influence the inclusive education of students with SEN. The integration of shadow education within this framework highlights the interconnectedness of individual, relational, and societal factors. Specifically:

1. **Microsystem level:** The direct interactions between students and shadow educators emphasise the importance of personalised educational support and the immediate environments that shape educational experiences.

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2. Mesosystem level: The collaborative partnerships among parents, shadow educators and mainstream schools illustrate the interconnections between different microsystems, highlighting the need for seamless integration and communication.
3. Exosystem level: The role of support infrastructure and professional development opportunities highlights the influence of external environments on immediate educational context.
4. Macrosystem level: The broader societal and policy influences, including government funding and cultural attitudes towards inclusion, create the framework within which inclusive education practices are implemented. These factors also shape the roles of shadow educators, who, as community partners, provide essential support to students with SEN, aligning their efforts with the overarching goals of inclusive education

8.4 Regulation of Shadow Education

An aspect that warrants attention is the regulation of the shadow education (private supplementary tutoring) sector on educational equity. The rapid expansion of shadow education globally has significant implications for equity and quality of in education. As highlighted by Bray and Hajar (2023), shadow education can exacerbate social inequalities if left unchecked, as access to private shadow education is often limited to families with higher socioeconomic status. Bray (2023b) also emphasised the need for regulatory measures to address disparities and ensure equitable access to educational support. Zhang (2023) discusses various regulatory responses worldwide, suggesting that effective measures can help mitigate these inequalities and ensure that shadow education complements rather than undermines the public education systems.

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In many contexts, ensuring that private shadow education services are accessible to all students, including those from lower income families, is essential. This could involve supporting non-profit and community-based tutoring programmes that provide affordable or free services. Such initiatives help create a more level playing field and ensure that all students, regardless of their socioeconomic background, have access to the benefits of shadow education.

In summary, the implications drawn from the study provide valuable insights into both the theory and professional practice of inclusive education for students with SEN enrolled in Singapore mainstream schools. By addressing the alignment, implementation, tensions, professional development, access to relevant resources, and contextualisation aspects, schools can enhance their inclusive education practices and create an environment that supports the diverse needs of all students, in line with the shared agenda of collaboration, professional development and access to curriculum materials and resources. These implications serve as a foundation for future research and action in the field of inclusive education offering theoretical advancements that can be applied in various international contexts. In addition, the study highlights the importance of regulating the shadow education sector to ensure equitable access thereby supporting inclusive goals.

8.5 Limitations and Suggestions for Future Research

The study set out to understand the roles and contributions of shadow education as a supplemental community support and its role in the educational experience and outcomes of students with SEN enrolled in Singapore mainstream schools. The robustness of the study was ensured by carefully selecting participants and employing a collective case study approach. The study delved into two subcases: shadow educators and parents, ensuring a

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diverse range of participants representing various backgrounds, including different lengths of experience, age groups, and diverse special needs. Criteria for selecting shadow educators included a minimum of one year of experience supporting students with SEN in mainstream schools. Similarly, parents included in the study had engaged shadow educators for their children with SEN for a minimum of one year. These criteria ensured that participants possessed the necessary knowledge to provide valuable insights into the aim of the research.

It is important to note that this study did not directly address the perspectives of students with SEN. Future research endeavours should consider incorporating their viewpoints, along with teachers teaching these students or SENOs in mainstream schools. Additionally, supplementing the qualitative nature of this study with a quantitative approach could offer further insights. Furthermore, there is potential for study into shadow educators that cater to specific special needs categories.

The study identified a substantial gap in the existing body of knowledge, particularly concerning the integration of shadow education into established inclusive education programmes within mainstream schools. The pivotal role of parents in recruiting and financing shadow education for their children with SEN has been underscored, emphasising the need for future exploration.

Future studies should delve deeper into the dynamics of collaboration, including potential shifts in roles and responsibilities among school, parents, and shadow educators. This research holds particular value for schools with existing inclusive programmes seeking to incorporate shadow education into their support framework for students with SEN.

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The study's findings emphasised the mediating role and contribution of shadow education as a form of supplemental community support in facilitating the educational experience and outcomes for students with SEN in mainstream school settings. This raises questions about the function and significance of supplemental community support, particularly through the avenue of shadow education. Subsequent research should explore this further by investigating the nature of shadow educators' practice, and the outcomes of their interventions.

Further research might explore the effectiveness and application of different models of supplemental community support. For example, exploring group shadow education for specific special needs categories or individualised shadow education for students with moderate SEN enrolled in mainstream schools. Such investigations would contribute to an understanding of how shadow education as a supplemental community support can play a role in supporting and complementing inclusive education practices for students with SEN.

Several studies have focussed on whole school approaches to inclusive education (Ferrante, 2017; Sailor, 2002; Yeo et al., 2013) highlighting the achievement that can be made. However further research is needed to explore supplementary support beyond the school community. This study has shed light on the tensions that can arise between schools and shadow educators as well as the need for effective support. Understanding how strategic congruence and integration of school priorities can be achieved through supplementary help from shadow educators from non-profit organisations and undergraduate shadow educators would be valuable.

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The study's explanatory theory emphasises the importance of supplemental support from the community for students with SEN enrolled in mainstream schools. Future research should explore the possibilities of collaborations between shadow educators, parents, and mainstream schools, as well as how schools can brand and integrate inclusive education as part of their identity and ethos.

Finally, this study strives to inspire further research in Singapore but also in other contexts. It emphasises on the experiences of shadow educators, who play a role in supporting inclusive education. Additionally, given the limited research on shadow education for students with SEN, further collaboration with shadow educators and researchers is recommended to examine the non-profit shadow education groups that provide shadow education services specifically for students with SEN in Singapore. Gathering perspectives from students with SEN, allied professionals and policy makers in the MOE would yield valuable insights. Furthermore, research should extend beyond students' experiences during their time in school to explore the lasting impact and benefits of shadow education after they have transitioned out of mainstream education. Ultimately, society should recognise that the true value of education lies not only in academic achievement but in the holistic development of individuals whose capacities to lead productive and fulfilling lives are enhanced.

8.6 Conclusion

This study sought to explore the phenomenon of shadow education for students with SEN enrolled in mainstream Singapore schools through the perspectives of the key stakeholder groups of their parents and shadow educators. By giving voice to the experiences of both shadow educators and parents, this research offers an understanding of the potential role of shadow education in supporting students with SEN.

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The insights derived from this research have significant implications for inclusive education and practice and can inform future studies and guide action to further enhance inclusive education practices and support systems. Further research is warranted to deepen understanding of the motivations, strategies, and challenges faced by shadow educators, and explore effective approaches for schools to collaborate with them in a mutually beneficial manner. Continued exploration of these areas can contribute to the ongoing improvement and refinement of inclusive education practices and ensure the success of students with SEN enrolled in mainstream schools.

This study stands out from existing research in two significant ways. First, it adopts a qualitative approach focussing on the perspectives of shadow educators and parents of students with SEN enrolled in Singapore mainstream schools. Second, this study goes beyond the common research focus on shadow education by highlighting the diverse range of special needs present in mainstream schools and the existing processes and structures in place to support this diversity. The study examines how shadow education complements and supplements these existing efforts, offering valuable insights into the potential roles and contributions of shadow educators in supporting students with SEN and how schools can effectively engage with shadow educators to establish a responsive approach to supporting students with SEN within the school community.

To the best of the researcher's knowledge, there is no existing study that combines these two features – qualitative exploration of shadow education perspectives in the context of Singaporean mainstream schools and an understanding of the diversity of special needs and existing support structures. By bridging these gaps, this research contributes to the existing literature and provides actionable insights for schools, educators, and policymakers

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seeking to enhance support for students with SEN and promote inclusive education practices.

The study also offers theoretical implications by situating its findings within Bronfenbrenner's ecological systems theory (1979), highlighting the interconnectedness of various systems influencing inclusive education. This highlights the importance of customised support (microsystem), effective communication and integration (mesosystem), support infrastructure (exosystem), and the impact of societal and policy influences (macrosystem) on the educational experiences of students with SEN.

Regulation of the shadow education sector is important to ensure educational equity. The rapid expansion of shadow education can exacerbate social inequalities if left unchecked. Effective regulatory measures and support for non-profit community-based tutoring programmes can help ensure that all students, regardless of socioeconomic background, benefit from shadow education.

To conclude, this study offers a unique and valuable contribution to the field, shedding light on the experiences and perspectives of shadow educators and parents of students with SEN in Singaporean mainstream schools. By exploring the role of shadow education within the broader context of existing support structures, this research lays the groundwork for further studies and informs future initiatives aimed at fostering collaboration, understanding, and holistic support for students with SEN.

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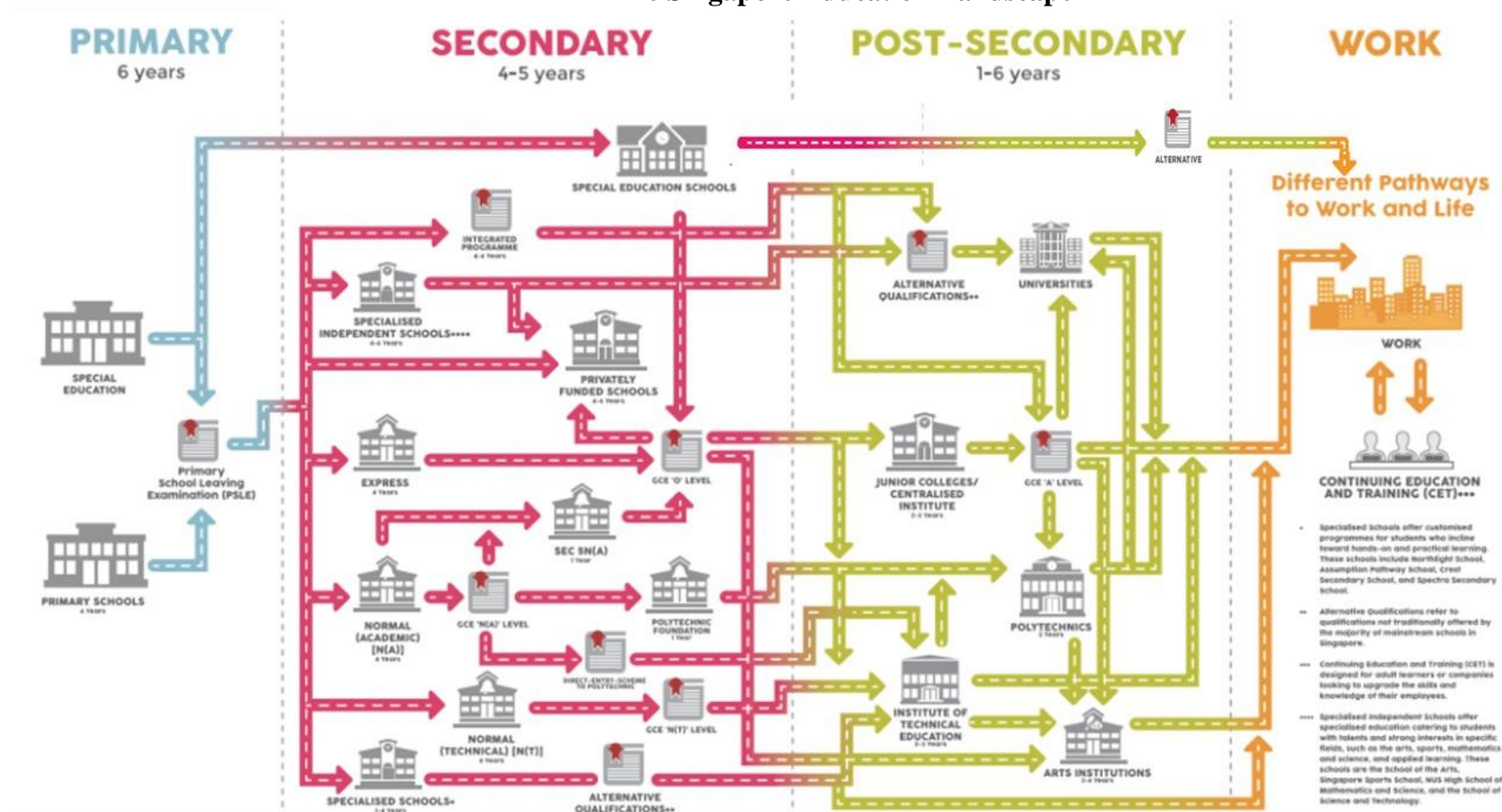
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The Singapore Education Landscape

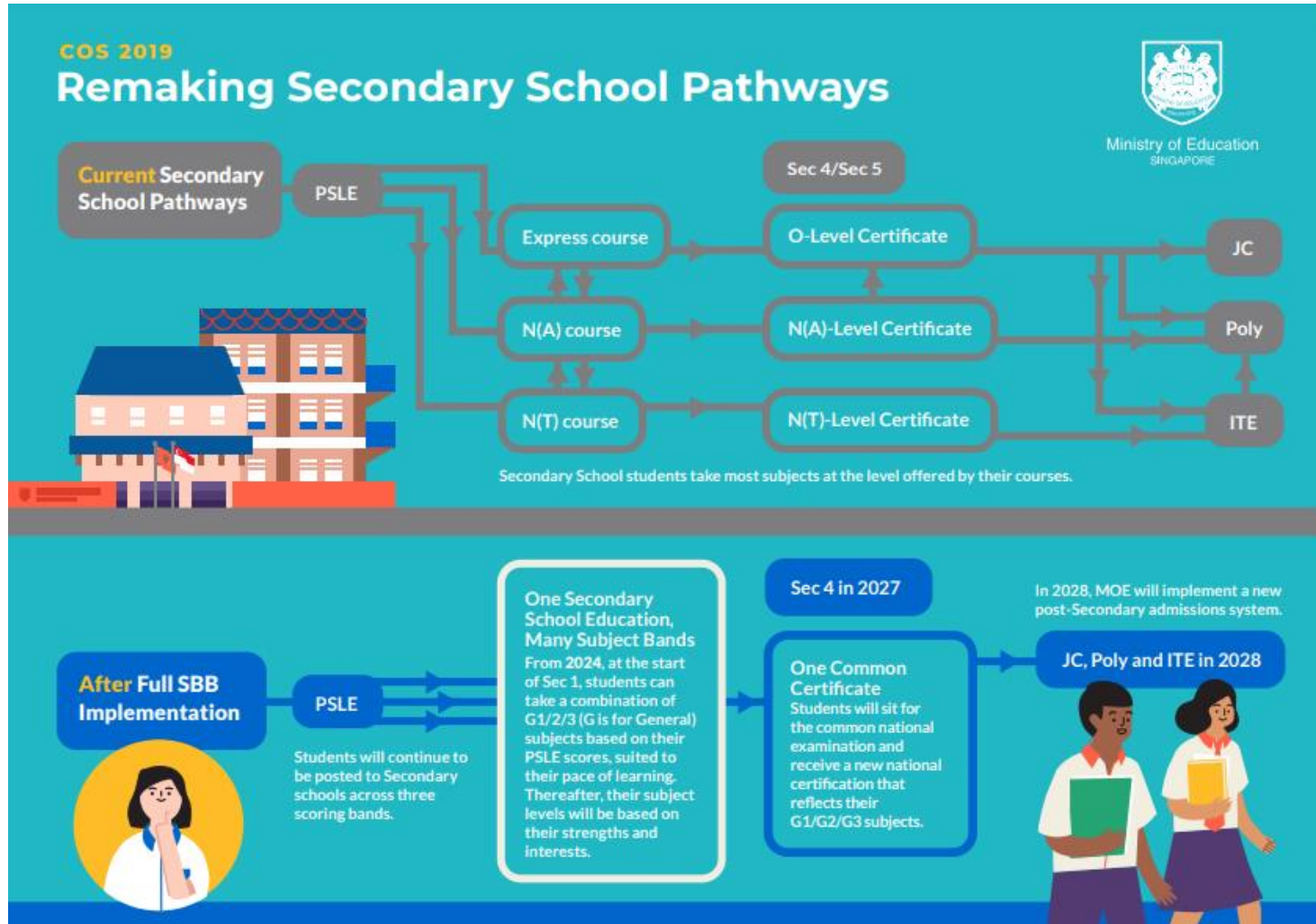


Footnote:

- * Specialised Schools offer customised programmes for students who incline toward hands-on and practical learning. These schools include Northlight School, Assumption Pathway School, Crest Secondary School, and Spectra Secondary School
- ** Alternative Qualifications refer to qualifications not traditionally offered by the majority of mainstream schools in Singapore.
- *** Continuing Education and Training (CET) is designed for adult learners or companies looking to upgrade the skills and knowledge of their employees.
- **** Specialised Independent Schools offer specialised education catering to students with talents and strong interests in specific fields, such as the arts, sports, mathematics and science, and applied learning. These schools are the Schools of the Arts, Singapore Sports School, NUS High School of Mathematics and Science, and the School of Science and Technology.

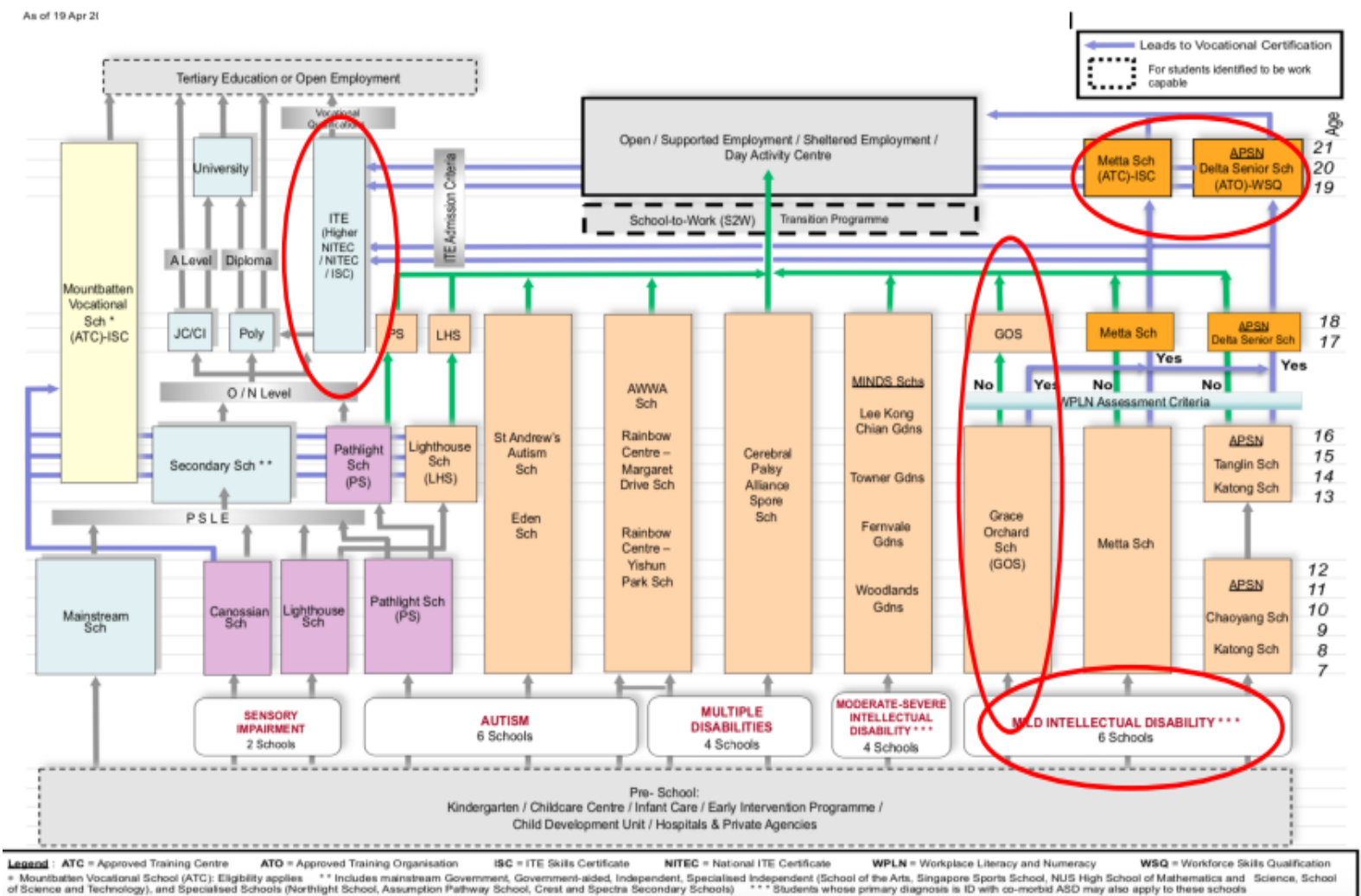
See footnote.

Remaking Secondary School Pathways



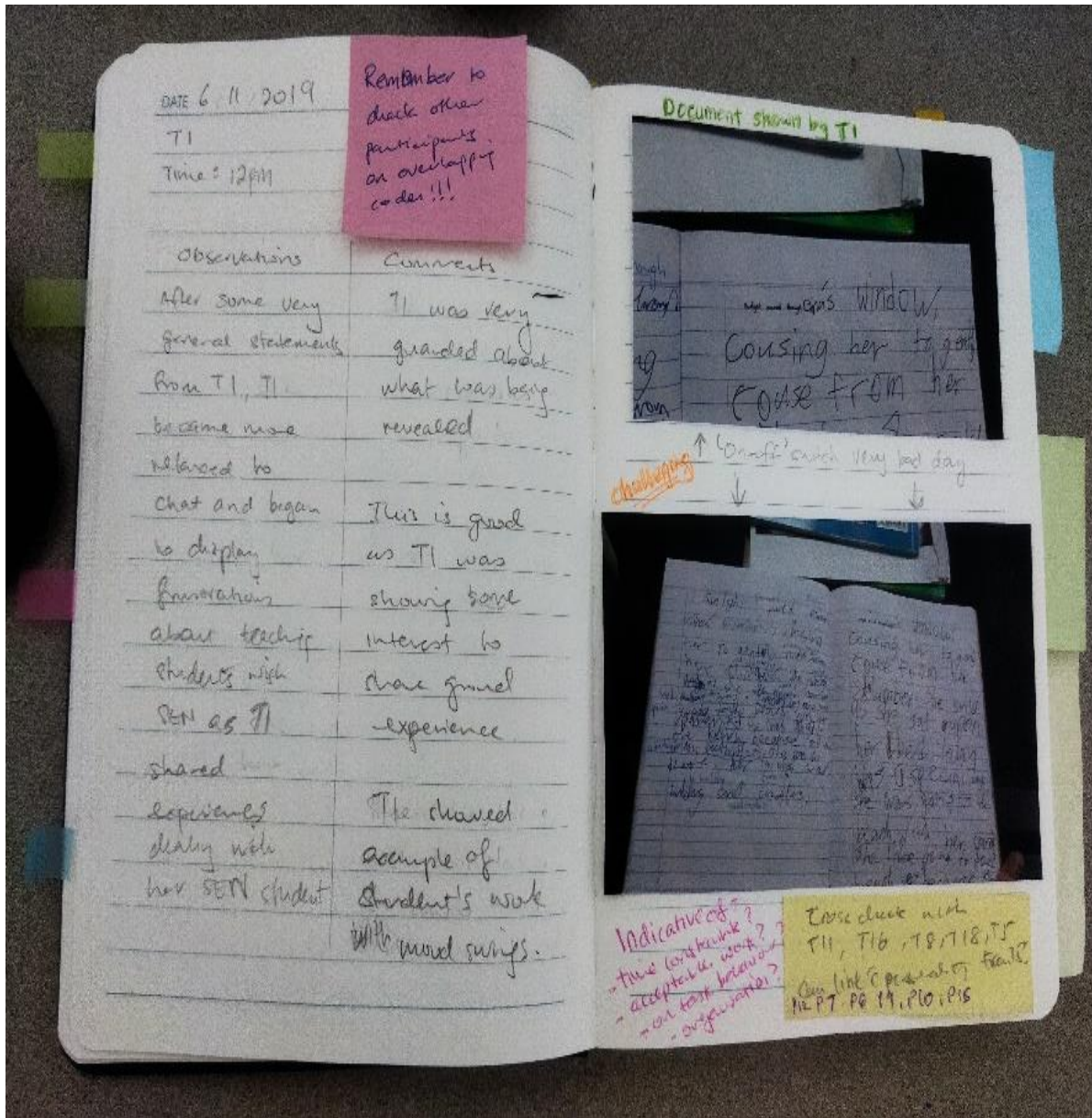
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Pathways for Educational Placement of Students with SEN



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Excerpt from Research Diary



The diary served as a record of the researcher's thought process, observations and progress during the study

Interview Schedule for Shadow Educator

PREAMBLE

Shadow Educator: Name, years in service, needs of students worked with

Thank you for participating in this interview. I'm interested in the perspectives of shadow educators on the role and contribution of shadow education for children with mild special educational needs enrolled in mainstream schools. I'm going to ask you a few questions to do with the intentions, strategies, significance and outcomes of the work you do. The interview shouldn't last more than 1 hour. This interview will be audio-recorded, do let me know if you are uncomfortable with this arrangement. Do you have any questions before we begin?

Intentions of shadow educators in supporting students with special educational needs.

1. What is your understanding of inclusive education?	<p><u>Prompts:</u></p> <ul style="list-style-type: none"> • So you define it as • Okay, is there anything more you'd like to add to that? <p><u>Probe:</u></p> <p>Do you think other people might describe it in different ways?</p>
2. Describe what inclusive education looks like based on your experience working with a child with mild special educational needs enrolled in mainstream school?	<p><u>Prompt:</u></p> <ul style="list-style-type: none"> • Tell me more about why you feel that... <p><u>Probe:</u></p> <p>So, to clarify, what do you think might be the intent of including children with mild special educational needs enrolled in mainstream school?</p>
3. In your opinion, do you think a child with mild special educational needs requires a shadow education to support him/her in mainstream school?	<p><u>Prompt:</u></p> <ul style="list-style-type: none"> • What might influence your decision about this... <p><u>Probe:</u></p> <p>Have you worked as a support person in government schools? In your opinion/experience, how adequate is the level of support it is possible to provide to the special needs students in the government school context?</p> <p>Based on your experience, are there any situations / cases where you feel that mainstream placement would be unsuitable for a student with mild special educational needs?</p>

APPENDICES

Strategies shadow educators have for realizing their intentions

4. What are the most effective things that you do in terms of supporting the student with mild special educational needs?

Prompt:

- What might be some examples you can share?

Probe:

Do you chart/monitor the progress of your student? How do you use the results?

Do you have much opportunity to provide feedback to the parents? What use are they able to make of this kind of information? Do you feel as if your efforts are supported by the parents?

5. Do you use any particular strategies to support students with mild special educational needs?

Prompt:

- Could you be more specific with the strategies....

Probe:

What specific strategies do you feel are necessary to help students with mild special educational needs?

6. What skills do you have in supporting students with mild special needs in inclusive education?

Prompt:

- Are there any examples you can share?

Probe:

What are some of the challenges that you have had to face?

Significance of intentions and strategies

7. In what ways were you prepared to work with students with special educational needs in inclusive educational settings?

Prompt:

- Anything else?

Probes:

What do you think would be the best way to prepare shadow educators to work with children with mild special educational needs in inclusive education settings?

8. Would you say your work with your students have helped them better included in the mainstream school?

Prompt:

- Any examples?

Probe:

How much knowledge/skill do you have about implementing inclusive practices?

APPENDICES

Outcomes shadow educators expect from pursuing their intentions.

9. What are your thoughts on inclusive education practices in your student's school having seen/experience it through your student with mild special educational needs?

Prompt:

- Do you want to say a little bit more about...

Probe:

What do you perceive as drawbacks or concerns related to mainstream support for children with mild special educational needs?

10. How would you describe the role of shadow education in relation with mainstream education in supporting students with mild special educational needs?

Probe:

To what extent do you think shadow education will meet your student parent's expectations in terms of helping their child with mild special needs assimilate better in the mainstream school?

Thank you, these are all the questions I have for you today.

1. Is there anything else you would like to add, which you feel that it haven't been covered?
 2. Is there anything you would like to ask me?
 3. Due to the nature of qualitative research sometimes there might be other things that arise over the course of the research that may not be covered today – if that's the case, will it be alright for me to contact you again?
-

Interview Schedule for Parent

PREAMBLE

Parent: Name, Name of child with special educational needs, age of child, when child started with shadow education

Thank you for participating in this interview. I'm interested in the perspectives of parents on the role and contribution of shadow education for their child with special educational needs studying in mainstream schools. I'm going to ask you a few questions and the interview shouldn't last more than 1 hour. This interview will be audio-recorded, do let me know if you are uncomfortable with this arrangement. Do you have any questions before we begin?

Intentions of parents in providing shadow education for their child with mild special educational needs enrolled in mainstream schools.

1. What is your understanding of inclusive education?

Prompts:

- So you define it as
- Okay, is there anything more you'd like to add to that?

Probe:

Do you think other people might describe it in different ways?

2. Describe what inclusive education for students with mild special educational needs looks like in your child's school?

Prompt:

- Tell me more about why you feel that...

Probe:

So, to clarify, what is the intent of including students with special educational needs enrolled in mainstream school?

3. Why did you decide to start your child on shadow education?

Prompt:

- What might influence your decision about this...

Probe:

Based on your experience, are there any situations / cases where you feel that mainstreaming was unsuitable for a student with special educational needs?

APPENDICES

Strategies parents of children with special educational needs enrolled in mainstream schools have for realizing their intentions

4. What are the most effective things that shadow education has provided for your child in terms of supporting him/her in her special educational needs?

Prompt:

- What might be some examples you can share?

Probe:

Do you chart/monitor the progress of your child? How do you get feedback from the tutor (shadow educator) about your child's progress? Do you ask your child about the work that they do and how they feel about it?

5. Are there any particular strategies that mainstream school provided for your child that were not working well to meet the needs of your child?

Prompt:

- Could you be more specific with the strategies....

Probe:

How different are the strategies employed by shadow education and mainstream schools for students with mild special educational needs?

6. What skills should the shadow educator have to support your child with mild special needs in inclusive education?

Prompt:

- Are there any examples you can share?

Probe:

How did you decide on the type of skills a shadow educator should have to work with your child? How did you find/choose the particular shadow educator/provider for your student?

Significance of intentions and strategies

7. How do you think shadow education would benefit your child?

Prompt:

- Anything else?

Probes:

What are the benefits of the shadow education to your child, if any?

8. Would you say that shadow education have helped your child to be better included in the mainstream school?

Prompt:

- Any examples?

Probe:

How much knowledge/skills do you think your shadow educator have about implementing inclusive practices?

APPENDICES

Outcomes parents with mild special educational needs children expect from pursuing their intentions.

9. What are your thoughts on inclusive education practices in your child's school having seen/experienced it through your child?

Prompt:

- Do you want to say a little bit more about...

Probe:

What do you perceive as drawbacks or concerns related to mainstream support for children with mild special educational needs?

10. How would you describe the role of shadow education in relation with mainstream education in supporting students with mild special educational needs?

Probe:

To what extent did shadow education meet your expectations in terms of helping your child with mild special needs assimilate better in his/her mainstream school?

Thank you, these are all the questions I have for you today.

1. Is there anything else you would like to add, which you feel that it haven't been covered?
2. Is there anything you would like to ask me?
3. Due to the nature of qualitative research sometimes there might be other things that arise over the course of the research that may not be covered today – if that's the case, will it be alright for me to contact you again?

Literature Review Synthesis Matrix

Scan Focus: Historical development of inclusive education		
Source	Synopsis of key points	Relevance to study
United Nations. (1948). <i>The Universal Declaration of Human Rights</i> . United Nations.	<ul style="list-style-type: none"> • The right to a more inclusive education is covered in several significant international declarations. 	The understanding of having a right to education for all can guide the concept of an approach to an inclusive education that
United Nations. (1959). <i>Declaration of the Rights of the Child</i> . Child Rights International Network.	<ul style="list-style-type: none"> • The recognition of rights resulted in the Special Education Needs and Disability Act in 2001 from the United Kingdom (UK) and in 2004, The Individuals with Disabilities Act (IDEA) from the United States of America (USA). 	meet the needs of students with SEN enrolled in mainstream schools.
United Nations. (1975). <i>Declaration on the Rights of Disabled Persons</i> . United Nations Human Rights		
United Nations Human Rights. (1989). <i>Convention on the Rights of the Child</i> . United Nations.	<ul style="list-style-type: none"> • To move towards the greater goal of inclusion, employment and deployment of teacher assistants and other special needs personnel to support the needs of individual learners. 	
United Nations Human Rights. (1990). <i>World Declaration on Education for All</i> . United Nations Human Rights.		
UNESCO. (1994). <i>The Salamanca Statement and Framework for Action on Special Needs Education</i> . UNESCO.		

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UNESCO. (2000). *The Dakar Framework of Action*. UNESCO.
Special Education Needs and Disability Act 2001.

Individuals with Disabilities Education Act 2004.

UNESCO. (2005). *Guidelines for Inclusion: Ensuring Access to Education for All*. United Nations Educational, Scientific and Cultural Organization

Blatchford, P., A. Russell, & R. Webster. (2012). *Reassessing the Impact of Teaching Assistants: How Research Challenges Practice and Policy*. Routledge.

Sharma, U., & Salend, S. J. (2016). Teaching Assistants in Inclusive Classrooms: A Systematic Analysis of the International Research. *Australian Journal of Teacher Education* 41 (8): 118–134. doi:10.14221/ajte.2016v41n8.7.

Webster, R., & Boer, A. A. (2022). *Teaching Assistants, Inclusion and Special Educational Needs. International Perspectives on the Role of Paraprofessionals in Schools*. Routledge.

APPENDICES

Scan Focus: Concepts of inclusive education

Source	Synopsis of key points	Relevance to study
Barshay, J. (2023, January 9). Proof points: New Research review questions the evidence for special education inclusion. The Hechinger Report. https://hechingerreport.org/proof-ponts-new-research-review-questions-the-evidence-for-special-education-inclusion/	<ul style="list-style-type: none"> The basic concept of inclusive education is that all students, irrespective of their individual strengths and weaknesses study in a common classroom. 	To explore a possible concept of inclusive education that helps students with SEN to be part of the learning community and not apart from it.
Leijen, A., Arcidiacono, F., & Baucal, A. (2021). The Dilemma of Inclusive Education: Inclusion for Some or Inclusion for All. <i>Frontiers in Psychology</i> , 12, 1-10. https://doi.org/10.3389/fpsyg.2021.633066	<ul style="list-style-type: none"> No country has yet succeeded in constructing a school system that lives up to the ideals and intentions of inclusion, as defined by different international organisations. 	
Ainscow, M. (2020). Inclusion and equity in education: Making sense of global challenges. <i>Prospects</i> , 49, 123-134. https://doi.org/10.1007/s11125-020-09506-w	<ul style="list-style-type: none"> Parents feel that more can be done for Singapore students with SEN enrolled in mainstream schools. 	
Mitchell, D. (2015). Inclusive education is a multi-faceted concept. <i>CEPS Journal</i> , 5(1), 9-30.	<ul style="list-style-type: none"> Operationalising inclusive education in Singapore for students with SEN should focus on developing the potential of the student with SEN. 	
Wong, M. E., Ng, Z. J., & Poon, K. (2015). Supporting inclusive education: Negotiating home-school partnership in		

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Singapore. *The International Journal of Special Education*, 30(2),1-12.

Lien Foundation. (2016). *Inclusive Attitudes Survey*

Poon, K. (2016, March). *Inclusive Education for All Students*. SingTeach.

Haug, P. (2017). Understanding inclusive education: ideals and reality. *Scandinavian Journal of Disability Research*, 19(3), 206–217.

Poon, K. (2022). Inclusive Education for Children with Special Educational Needs in Singapore Schools. In: Lee, YJ. (Eds.). *Education in Singapore. Education in the Asia-Pacific Region: Issues, Concerns and Prospects*, vol 66. Springer. https://doi-org.libproxy.nie.edu.sg/10.1007/978-981-16-9982-5_3

Sarton, E., & Smith, M. (2018). *UNICEF Think Piece Series: Disability Inclusion*. UNICEF Eastern and Southern Africa Regional Office, Nairobi

APPENDICES

Scan Focus: Inclusive education in practice

Source	Synopsis of key points	Relevance to study
<p>Faragher, R., Chen, M., Miranda, L., Poon, K., Rumiati, & Chang, F.-R., & Chen, H. (2021). Inclusive Education in Asia: Insights From Some Country Case Studies. <i>Journal of Policy and Practice in Intellectual Disabilities</i>, 18(1), 23–35.</p>	<ul style="list-style-type: none"> • Countries around the world are committed to providing inclusive education. • Practices varies according to prevailing contexts such availability of resources and different beliefs/attitudes concerning inclusion. • Lack of expertise/knowledge in implementing inclusive education • Ideals of inclusive education to reach out to all presents complexities associated with diverse needs of students with SEN. • Inclusive education continues to be an on-going process in all countries. 	<p>To explore a model of practice in supporting inclusive education by collaborating with the community of shadow educators who are supporting students with SEN enrolled in mainstream school.</p>
<p>Johnstone, C. J., & Chapman, D. W. (2009). Contributions and constraints to the implementation of inclusive education in Lesotho. <i>International Journal of Disability, Development and Education</i>, 56(2), 131-148.</p>		
<p>Kearney, A., & Kane, R. (2006). Inclusive education policy in New Zealand: Reality or ruse? <i>International Journal of Inclusive Education</i>, 10(2/3), 201-219.</p>		
<p>Liasidou, A. (2008). Critical discourse analysis and inclusive educational policies: The power to exclude. <i>Journal of Education Policy</i>, 23, 483-500</p>		
<p>UNESCO. (2020.) Global Education Monitoring Report. https://education-profiles.org/europe-and-northern-america/canada/~inclusion</p>		

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Grimes, P., Sayarath, K., & Outhaithany, S. (2011). The Lao PDR inclusive education project 1993–2009: Reflections on the impact of a national project aiming to support the inclusion of disabled students. *International Journal of Inclusive Education*, 15(10), 1135-1152.

Kurniawati, F., Minnaert, A., Mangunsong, F., & Ahmed, W. (2012). Empirical study on primary school teachers' attitudes towards inclusive education in Jakarta, Indonesia. *Procedia-Social and Behavioral Sciences*, 69, 1430-1436.

Hosshan, H., Stancliffe, R. J., Villeneuve, M., & Bonati, M. L. (2019). Inclusive schooling in Southeast Asian countries: A scoping review of the literature. *Asia Pacific Education Review*, 21(1), 99–119. <https://doi.org/10.1007/s12564-019-09613-0>

Jelas, Z. M., & Mohd Ali, M. (2014). Inclusive education in Malaysia: Policy and practice. *International Journal of Inclusive Education* 18(10), 991-1003.

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Scan Focus: Inclusive education in Singapore

Source	Synopsis of key points	Relevance to study
Teng, A. (2015, July 5). Tuition Nation. <i>Asiapone</i> .	<ul style="list-style-type: none"> • There is no formal definition of inclusive education. 	Support in school will be an important step towards an inclusive education for
Poon, K., Musti-Ra, S. & Wettasinghe, M. (2013). Special education in Singapore: History, trends, and future directions. <i>Intervention in School and Clinic</i> , 49(1), 59-64.	<ul style="list-style-type: none"> • Students with the cognitive abilities and adaptive skills to access the national curriculum and learn in large-group settings receive education 	our students with SEN.
Horn, E., & Kang, J. (2014, February 24). <i>Supporting Young Children With Multiple Disabilities: What Do We Know and What Do We Still Need To Learn?</i> National Center for Biotechnology Information.	<ul style="list-style-type: none"> • More than 80% of students with special education needs access their learning in inclusive classroom 	Support in school will be an important step towards an inclusive education for
Ng, J. Y. (2016, May 30). S'poreans support inclusive education but do not walk the talk: Study. <i>Today</i>	<ul style="list-style-type: none"> • More than 80% of students with special education needs access their learning in inclusive classroom settings, which can be found in all mainstream schools. The other 20% 	Support in school will be an important step towards an inclusive education for
Grosse, S. (2016, November 11). More special needs children attending school due to early assessment, intervention: Experts. <i>Channel News Asia</i>	<ul style="list-style-type: none"> • More than 80% of students with special education needs access their learning in inclusive classroom settings, which can be found in all mainstream schools. The other 20% 	Support in school will be an important step towards an inclusive education for
Sim, C. (2016). <i>Primary School Leaving Examination</i> .	<ul style="list-style-type: none"> • More than 80% of students with special education needs access their learning in inclusive classroom settings, which can be found in all mainstream schools. The other 20% 	Support in school will be an important step towards an inclusive education for

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Ng, C. M. (2017). *MOE FY 2017 Committee of Supply Debate Speech*. Singapore: Ministry of Education.

Ibrahim, M. F. (2018). *Parliamentary motion "Education For Our Future"* Response by Senior Parliamentary Secretary for Education A/P Muhammad Faishal Ibrahim.

Puthucheary, J. (2018, March 5). *MOE FY2018 Committee of Supply Debate Response by Senior Minister of State for Education, Dr Janil Puthucheary*.

Ministry of Education. (2021, November 8). *Full subject-based banding*.

Rajah, I. (2018). *Keynote Address by Ms Indranee Rajah, Second Minister for Education, at the 2018 SPED Conference*

Choo, C. (2019, September 30). The Big Read: Where kids with and without special needs learn together — and it's not in S'pore. *Today online*.

Davie, S. (2019, March 6). Subject-based banding to replace streaming in schools. *The Straits Times*.

Sin, Y. (2019). Do more to support special needs kids in schools, say parents. *The Straits Times*.

- All teachers in mainstream schools are equipped with a basic understanding of special education needs. Students with SEN enrolled in mainstream schools are also supported by specialized by specialised personnel, such as Special Educational Needs Officers (SENOs), who are trained in providing learning and behavioural support for students with SEN and Teachers trained in Special Needs (TSNs), who have been equipped to use differentiated strategies for diverse learning needs

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Lim, L., Poon, K., & Thaver, T. (2022). Inclusion of Students with Special Educational Needs in Singapore. In: Beamish, W., Yuen, M. (Eds.). *The Inclusion for Students with Special Educational Needs across the Asia Pacific. Advancing Inclusive and Special Education in the Asia-Pacific*. Springer, Singapore.

APPENDICES

Scan Focus: Shadow Education

Source	Synopsis of key points	Relevance to study
<p>Yu, J., & Zhang, R. (2022). A review of shadow education. <i>Science Insights Education Frontiers</i>, 11(2):1579-159. https://doi.org/10.15354/sief.22.re058</p> <p>ReportLinker. (2021, July 15). Global Private Tutoring Market to Reach \$201.8 Billion by 2026. GlobeNewswire. https://www.globenewswire.com/news-release/2021/07/15/2263310/0/en/Global-Private-Tutoring-Market-to-Reach-201-8-Billion-by-206.html</p> <p>Subedi, K. R. (2018). Shadow Education: A Role of Private Tutoring in Learning. <i>International Journal of Humanities and Social Sciences</i>, 1(2), 29-42</p> <p>Boudreau, E. (2021, May 6). The Rapid Rise of Private Tutoring. Harvard Graduate School of Education. https://www.gse.harvard.edu/ideas/news/21/05/rapid-rise-private-tutoring</p> <p>Yung, K.W. (2020). Comparing the effectiveness of cram school tutors and schoolteachers: A critical analysis of students' perceptions. <i>International Journal of Educational Development</i>, 72,</p>	<ul style="list-style-type: none"> • Research indicates that shadow education (private tutoring) is a growing phenomenon in the world. • When educational needs are not fully met, shadow education is a sought-after alternate as it complements mainstream education. • Shadow education can enhance a student's performance or help at-risk students to improve their academic performance. • Research raised the concern with inequality of educational opportunities. • In Singapore, shadow education is on the increasing trend. • Parents of child(ren) with SEN enrolled in mainstream school felt that more can be done and many turn 	<p>The increasing trend raises questions about both its position and function: the position that shadow education occupies in the educational system and the meaning students and educators attach to shadow education.</p> <p>To understand the need for shadow education and how this can inform practice in helping students with SEN enrolled in mainstream schools.</p>

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<https://doi.org/10.1016/j.ijedudev.2019.10.2141>

to shadow education as a means of additional support for their child.

Liao, X., & Huang, X. (2018). Who is more likely to participate in private tutoring and does it work? Evidence from PISA (2015). *ECNU Review of Education*, 1(3), 69-95.

<https://doi.org/10.30926/ecnuoe2018010304>

Bray, M. (2022). Shadow Education in Asia and the Pacific: Features and Implications of Private Supplementary Tutoring. In *International Handbook on Education Development in Asia-Pacific*. Springer. https://doi.org/10.1007/978-981-16-2327-1_10-1

Bray, M., & Kwo, O. (2014). *Regulating private tutoring for public good: Policy options for supplementary education in Asia*. UNESCO.

Kimura, H. (2018). Data-based discussion on education and children in Japan 2: Analysing Juku – Another school after school. Children Research Net. https://www.childresearch.net/projects/data/Japan/2018_02.html

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Feng, S. (2021). The evolution of shadow education in China: From emergence to capitalisation. *Hungarian Educational Research Journal*, 11(2), 89-100.
<https://doi.org/10.1556/063.2020.00032>

Kwo, O., & Bray, M. (2014). Understanding the nexus between mainstream schooling and private supplementary tutoring: Patterns and voices of Hong Kong secondary students. *Asia Pacific Journal of Education*, 34, 403–416.

Cayubit, R. F. O., Castor, J. Y. S., Divina, E. J. S., Francia, R. M. S., Nolasco, R. T. P., Villamiel, A. J. E....Zarraga, M. T. J. (2014). A Q analysis on the impact of shadow education on the academic life of high school students. *Psychological Studies*, 59, 252–259.

Chee, S.W., Walker, Z. M., & Rosenblatt, K. (2015). Special Education Teachers' Attitudes toward including Students with SEN in Mainstream Primary Schools in Singapore. *Asia Pacific Journal of Developmental Differences*, 2(1). 63 -78.

Davie, S. (2015, July 4). 7 in 10 parents send their children for tuition: ST poll. *The Straits Times*.

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Teng, A. (2016, January 16). Needy students get more private tuition help from centres, religious and college groups. *The Straits Times*

Choi, H., & Choi, Á. (2016). Regulating private tutoring consumption in Korea: Lessons from another failure. *International Journal of Educational Development, 49*, 144–156.

Otto, B., & Karbach, J. (2019). The effects of private tutoring on students' perception of their parents' academic involvement and the quality of their parent-child relationship. *Educational Psychology, 39*(1), 1-18.
<https://doi.org/10.1080/01443410.2019.1610725>

Oliver, K. G., & Schwanenber, J. (2019). A two-level study of predictors of private tutoring attendance at the beginning of secondary schooling in Germany: The role of individual learning support in the classroom. *British Educational Research Journal, 46*(2), 437-457.
<https://doi.org/10.1002/berj.3586>

Sriprakash, A., Proctor, H., & Hu, B. (2016). Visible pedagogic work: Parenting, private tutoring and educational advantage in Australia.

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Discourse: Studies in the Cultural Politics of Education, 37, 426–441.

Wang, D., & Bray, M. (2016). When whole-person development encounters social stratification: Teachers' ambivalent attitudes towards private supplementary tutoring in Hong Kong. *The Asia-Pacific Education Researcher*, 25, 873–881.

Wong, P. T. (2021, August 16). The Big Read: Singapore's endless love affair with private tuition just got deeper with COVID-19. *Channel News Asia*.

Bray, M. (2017). Schooling and its supplements: Changing global patterns and implications for comparative education. *Comparative Education Review*, 61, 469–491.

Kobakhidze, M. N. (2018). *Teachers as tutors: Shadow education dynamics in Georgia*. Springer.

Heng, M. (2019, July 27). Meritocracy still key principle for recognising individuals in Singapore, says Ong Ye Kung. *The Straits Times*.

Seah, K. (2019, September 30). Tuition has ballooned to a S\$1.4b industry in

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Singapore. Should we be concerned?
Today.

Yuen, S. (2019, May 27). Do more to support special needs kids in school, says parents. *The Straits Times*.

Hajar, A., & Abenova, S. (2021). The role of private tutoring in admission to higher education: Evidence from a highly selective university in Kazakhstan. *Hungarian Educational Research Journal*, 11(2), 124-142.
<https://doi.org/10.1556/063.2021.00001>

Berberoğlu, Giray and Tansel, Aysit, Does Private Tutoring Increase Students' Academic Performance? Evidence from Turkey. IZA Discussion Paper No. 8343, Available at SSRN:
<http://dx.doi.org/10.2139/ssrn.2475311>

APPENDICES

Scan Focus: Challenges in inclusive education

Source	Summary of key points	Relevance to study
Kazmi, A. B., Kamran, M., & Siddiqui, S. (2023). The effect of teacher's attitudes in supporting inclusive education by catering to diverse learners. <i>Frontiers in Education</i> , 8, 1-10. https://doi.org/10.3389/educ.2023.1083963	<ul style="list-style-type: none">• The process of inclusion proves to be challenging in many countries.• Some of the challenges surfaced by research includes the lack of resources, insufficient training of educators, lack of knowledge and skills of educators, attitude towards disability, lack of involvement of stakeholders amongst others.• Students with SEN face low expectations or suffer under social situations like exclusion or bullying which can result in low self-esteem or social isolation amongst others.	Challenges can hamper the effective implementation of inclusive education. It can also present opportunities to work with the other stakeholders in the community (in this case, the shadow educators) who can provide the additional support to the student with SEN to narrow or bridge the gap of inclusive education.
Kurowski M., Černý M., & Trapl F. (2022). A review study of research articles on the barriers to inclusive education in primary schools, <i>Journal on Efficiency and Responsibility in Education and Science</i> , 15(2), 116-130. http://dx.doi.org/10.7160/eriesj.2022.150206		
Florian, L. (2008). Inclusion: Special or inclusive education: future trends. <i>British Journal of Special Education</i> , 35(4), 202-208. https://doi.org/10.1111/j.1467-8578.2008.00402.x		
Brownell, M. T., Sindelar, P. T., Kiely, M. T., & Danielson, L.C. (2010) Special Education Teacher Quality and Preparation: Exposing Foundations, Constructing a New Model. <i>Exceptional Children</i> , 76 (3), 357-377		

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Hudgins, K. S. (2012) Creating a Collaborative and Inclusive Culture for Students with Special Education Needs. *McNair Scholars Research Journal*, 5(1), Article 8.

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Scan Focus: Indicators of effective inclusive education

Source	Summary of key points	Relevance to study
Schuelka, M. (2018). <i>Implementing Inclusive Education</i> . Helpdesk reports.	<ul style="list-style-type: none">• Assessment helps to identify strengths and opportunities for development in inclusive education.	Indicators can be used to assess the targeted practices to suggest ways forward in helping students with SEN enrolled in mainstream schools.
Booth, T., & Ainscow, M. 2002. <i>Index of Inclusion: developing learning and participation in schools, Bristol</i> . Centre for Studies on Inclusive Education (CSIE)	<ul style="list-style-type: none">• Indicators can be helpful in addressing the continuum of needs of students with SEN.	
Hollenweger, J., & Haskell, S. (Eds.) 2002. <i>Quality Indicators in Special Needs Education: an International Perspective</i> . Lucerne Edition SZH/SPC	<ul style="list-style-type: none">• Indicators can drive improvement in inclusive education	
Peters, S., Johnstone, C., & Ferguson, P. (2005). <i>A Disability Rights in Education Model for evaluating inclusive education</i> . Michigan State University, East Lansing, MI, USA. Taylor & Francis		
Loreman, T., Forlin, C., & Sharma, U. (2014). Measuring indicators of inclusive education: A systematic review of the literature. In C. Forlin & T. Loreman (Eds.). <i>Measuring Inclusive Education</i> (pp. 165-187). Emerald.		

Participant Information Form for Shadow Educators



THE UNIVERSITY OF
**WESTERN
AUSTRALIA**

Dr Marnie O'Neill
Senior Honorary Research Fellow
Graduate School of Education , M428
The University of Western Australia
35 Stirling Highway, Crawley WA 6009
Tel: 0419988845
Email: Marnie.O'Neill@uwa.edu.au
www.education.uwa.edu.au

Participant Information Form

Research study: Inclusive education in Singapore: A collective case study of shadow education for students with special educational needs from mainstream schools.

This research is being conducted as part of the doctoral program at The University of Western Australia.

Chief Investigator: Dr Marnie O'Neill, Senior Honorary Research Fellow, Graduate School of Education. Principal Researcher: Ms Patricia Ho See Mei.

What is the aim of the study?

The overall aim of the proposed research is to generate a local theory from the perspectives of parents and shadow teachers on the role and contribution of shadow education for students with mild special educational needs within Singapore's mainstream schools. It is hoped that the findings of this project will:

- offer relevant information to the Ministry of Education, the shadow education industry, for trainers and professional development providers by identifying what parents consider to be the requisite knowledge base, skills and attitudes for providing better support for students with mild special education needs to be successful in mainstream schools;
- prompt further research on shadow education for students with special educational needs in mainstream schools;
- provide an understanding of the contextual reality in the words of parents and shadow teachers in Singapore; and
- provide the research participants with an opportunity to reflect on the ways in which support for inclusive education is spoken about by practitioners which may allow them to appraise and judge the discourse.

Why have you been chosen?

You have been invited to participate because you are

- A shadow educator providing tuition support to students with special educational needs in mainstream schools; and
- have had at least one year of experience working in this field

What would the study involve?

The researcher, Ms Ho, will conduct a semi-structured interview of about an hour with each participant. If the participant agrees, the interview will be audio-recorded and transcribed. The researcher will ask participants to discuss the following:

- intentions in providing students shadow education for their child with mild special educational needs in mainstream school
- strategies to realise these intentions
- significance of these intentions and strategies

The University of Western Australia
M459 Perth WA 6009 Australia

T +61 8 6488 3703
M +61 000 000 000

E humanethics@uwa.edu.au
CRICOS Provider Code 00128G

- outcomes expected from pursuing these intentions

Participants are welcome to bring any documentation related to the student's school experiences or school policies and practices.

There are no foreseeable risks in taking part in this research.

How will confidentiality be maintained and what will happen to the data collected?

The research will adopt the following process:

- If participants agree, interviews will be recorded using an audio-recording device.
- Participants will receive a summary copy of the transcribed interview to check for accuracy and to amend, if they want to.
- Names will be anonymised during the transcription of these recordings (e.g. Shadow teacher 1/ Parent 1). The transcribed material will ultimately be a 'public document' once the research is completed. However, any names, personal details, the names of schools or workplaces and any information which may identify them will have been completely anonymised.
- The research data will be kept securely in password protected files for seven years, and then destroyed.

What happens if I do not want to take part or if I change my mind?

You are absolutely not obliged to take part in the research. It is also absolutely fine if you wish to participate in only certain parts of the research. If you do choose to participate and you wish to withdraw at any point, then you may do so and you will not be asked to explain your decision. Your records will be destroyed, unless you agree that Ms Ho may retain and use the information obtained prior to your withdrawal. The only exception is if the data has already been deidentified and incorporated in the analysis and cannot be separated.

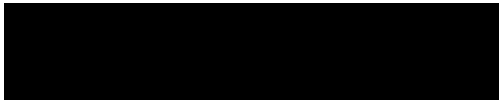
Contact for further information

If you would like any further information or have any questions please contact the researcher using the contact details below:

Ms Patricia Ho See Mei
Graduate School of Education
The University of Western Australia
Phone: +65
Email: Patricia.Ho@research.uwa.edu.au

Dr Marnie O'Neill
Senior Honorary Research Fellow
The University of Western Australia
Phone: +61 0419 988 845
Email: Marnie.ONeill@uwa.edu.au

Thank you for taking the time to read this and for considering participating in this research.



Approval to conduct this research has been provided by The University of Western Australia, in accordance with its ethics review and approval procedures. Any person considering participation in this research project, or agreeing to participate, may raise any questions or issues with the researchers at any time. In addition, any person not satisfied with the response of researchers may raise ethics issues or concerns, and may make any complaints about this research project by contacting the Human Ethics office at UWA on +61 8 6488 4703 or by emailing to humanethics@uwa.edu.au. All research participants are entitled to retain a copy of any Participant Information Form and/or Participant Consent Form relating to this research project.

Participant Information Form for Parents



Dr Marnie O'Neill
Senior Honorary Research Fellow
Graduate School of Education, M428
The University of Western Australia
35 Stirling Highway, Crawley WA 6009
Tel: 0419988845
Email: Marnie.O'Neill@uwa.edu.au
www.education.uwa.edu.au

Participant Information Form

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- offer relevant information to the Ministry of Education, the shadow education industry, for trainers and professional development providers by identifying what parents consider to be the requisite knowledge base, skills and attitudes for providing better support for students with mild special educational needs to be successful in mainstream schools;
- prompt further research on shadow education for students with special educational needs in mainstream schools;
- provide an understanding of the contextual reality in the words of parents and shadow teachers in Singapore; and
- provide the research participants with an opportunity to reflect on the ways in which support for inclusive education is spoken about by practitioners which may allow them to appraise and judge the discourse.

Why have you been chosen?

You have been invited to participate because you are

- A parent currently engaging private tutors to support your child with mild special educational needs in mainstream schools; and
- You have provided your child with mild special educational needs in mainstream schools with additional support through shadow education for at least one year.

What would the study involve?

The researcher, Ms Ho, will conduct a semi-structured interview of about an hour with each participant. If the participant agrees, the interview will be audio-recorded and transcribed. The researcher will ask participants to discuss the following:

- intentions in providing students shadow education for their child with mild special educational needs in mainstream school
- strategies to realise these intentions

The University of Western Australia
M459 Perth WA 6009 Australia

T +61 8 6488 3703
M +61 000 000 000

E humanethics@uwa.edu.au
CRICOS Provider Code 00128G

- significance of these intentions and strategies
- outcomes expected from pursuing these intentions

Participants are welcome to bring any documentation related to the student's school experiences or school policies and practices.

There are no foreseeable risks in taking part in this research.

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The research will adopt the following processes:

- If participants agree, interviews will be recorded using an audio-recording device.
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- Names will be anonymised during the transcription of these recordings (e.g. Shadow teacher 1/ Parent 1). The transcribed material will ultimately be a 'public document' once the research is completed. However, any names, personal details, the names of schools or workplaces and any information which may identify them will have been completely anonymised.
- The research data will be kept securely in password protected files for seven years, and then destroyed.

What happens if I do not want to take part or if I change my mind?

You are absolutely not obliged to take part in the research. It is also absolutely fine if you wish to participate in only certain parts of the research. If you do choose to participate and you wish to withdraw at any point, then you may do so and you will not be asked to explain your decision. Your records will be destroyed, unless you agree that Ms Ho may retain and use the information obtained prior to your withdrawal. The only exception is if the data has already been deidentified and incorporated in the analysis and cannot be separated.

Contact for further information

If you would like any further information or have any questions please contact the researcher using the contact details below:

Ms Patricia Ho See Mei
Graduate School of Education
The University of Western Australia
Phone: +65 97452819
Email: Patricia.ho@research.uwa.edu.au

Dr Marnie O'Neill
Senior Honorary Research Fellow
The University of Western Australia
Phone: +61 0419 988 845
Email: marnie.oneill@uwa.edu.au

Thank you for taking the time to read this and for considering participating in this research.



Approval to conduct this research has been provided by The University of Western Australia, in accordance with its ethics review and approval procedures. Any person considering participation in this research project, or agreeing to participate, may raise any questions or issues with the researchers at any time. In addition, any person not satisfied with the response of researchers may raise ethics issues or concerns, and may make any complaints about this research project by contacting the Human Ethics office at UWA on +61 8 6488 4703 or by emailing to humanethics@uwa.edu.au. All research participants are entitled to retain a copy of any Participant Information Form and/or Participant Consent Form relating to this research project.

Participant Information Form for Shadow Educators/Parents Recruited through Organisations



Dr Marnie O'Neill
Senior Honorary Research Fellow
Graduate School of Education, M428
The University of Western Australia
35 Stirling Highway, Crawley WA 6009
Tel: +61 0419 988 845
Email: Marnie.ONeill@uwa.edu.au
www.education.uwa.edu.au

<Addressee's name and address>

Participant Information Form

I am seeking your support for the following research project: **Inclusive education in Singapore: A collective case study of shadow education for students with special educational needs from mainstream schools.**

This research is being conducted as part of the doctoral program at The University of Western Australia.

Chief Investigator: Dr Marnie O'Neill, Senior Honorary Research Fellow, Graduate School of Education.

Principal Researcher: Ms Patricia Ho See Mei.

What is the aim of the study?

The overall aim of the proposed research is to generate a local theory from the perspectives of parents and shadow teachers on the role and contribution of shadow education for students with mild special educational needs within Singapore's mainstream schools. It is hoped that the findings of this project will:

- offer relevant information to the Ministry of Education, the shadow education industry, for trainers and professional development providers by identifying what parents consider to be the requisite knowledge base, skills and attitudes for providing better support for students with mild special education needs to be successful in mainstream schools;
- prompt further research on shadow education for students with special educational needs in mainstream schools;
- provide an understanding of the contextual reality in the words of parents and shadow teachers in Singapore; and
- provide the research participants with an opportunity to reflect on the ways in which support for inclusive education is spoken about by practitioners which may allow them to appraise and judge the discourse.

Your support:

We are approaching organisations such as yours, for assistance. Specifically, we are seeking permission to put a recruitment poster up on your noticeboards to inform potential participants of the opportunity to participate in this research. The poster (refer to attached document) will contain contact details for the researcher, Ms Patricia Ho See Mei, so that parents can contact her directly if they wish to participate, or if they have questions they would like to have answered before deciding. Your association thus has no responsibility for recruitment or obtaining informed consent; that responsibility rests with Ms Patricia Ho See Mei.

Taking part in this research is completely voluntary. Participants have the right to withdraw at any time without a need to explain why and without prejudice. Should they do so, information they have supplied will also be withdrawn unless permission is given for Ms Ho See Mei to retain it. The exception is that in the case of late withdrawal, it may not be possible to withdraw data if it cannot be identified or extracted from the wider body of research data/information that has been collected.

The University of Western Australia
M459 Perth WA 6009 Australia

T +61 8 6488 3703
M +61 000 000 000

E humanethics@uwa.edu.au
CRICOS Provider Code 00128G

What would the study involve?

The researcher, Ms Ho, will conduct a semi-structured interview of about an hour with each participant. If the participant agrees, the interview will be audio-recorded and transcribed. The researcher will ask participants to discuss the following:

- intentions in providing students shadow education for their child with mild special educational needs in mainstream school
- strategies to realise these intentions
- significance of these intentions and strategies
- outcomes expected from pursuing these intentions

Participants are welcome to bring any documentation related to the student's school experiences or school policies and practices.

There are no foreseeable risks in taking part in this research.

How will confidentiality be maintained and what will happen to the data collected?

The research will adopt the following processes:

- If participants agree, interviews will be recorded using an audio-recording device.
- Participants will receive a summary copy of the transcribed interview to check for accuracy and to amend, if they want to.
- Names will be anonymised during the transcription of these recordings (e.g. Shadow teacher 1/ Parent 1). The transcribed material will ultimately be a 'public document' once the research is completed. However, any names, personal details, the names of schools or workplaces and any information which may identify them will have been completely anonymised.
- The research data will be kept securely in password protected files for seven years, and then destroyed.

If you have any questions you may use the following contact details:

Ms Patricia Ho See Mei
Graduate School of Education
The University of Western Australia
Phone: +65 97452819
Email: Patricia.ho@research.uwa.edu.au

Dr Marnie O'Neill
Senior Honorary Research Fellow
The University of Western Australia
Phone: +61 0419 988 845
Email: marnie.oneill@uwa.edu.au

Thank you for taking the time to read this and for considering supporting this research.



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Tutor Recruitment Flyer



Dr Mamie O'Neill
Senior Honorary Research Fellow
Graduate School of Education, M428
The University of Western Australia
35 Stirling Highway, Crawley WA 6009
Tel: 0419988845
Email: Mamie.O'Neill@uwa.edu.au
www.education.uwa.edu.au

TUTORS SUPPORTING STUDENTS WITH SPECIAL EDUCATIONAL NEEDS IN MAINSTREAM SCHOOLS NEEDED FOR RESEARCH STUDY!!!

Researcher Ms Patricia Ho Sei Mei is seeking volunteers to participate in a perspectival study of the role and contribution of shadow education in supporting children with mild special educational needs in mainstream schools.

You are invited to participate if you have:

- provided tuition support to students with special educational needs in mainstream schools
- had at least one year of experience working in this field

This study involves:

- one interview lasting between 45 mins to an hour
- the researcher will travel to meet at a place convenient to the participant.

For further information, or if you would like to participate, please contact Ms Patricia Ho at: patricia.ho@research.uwa.edu.au

Approval to conduct this research has been provided by The University of Western Australia, in accordance with its ethics review and approval procedures. Any person considering participation in this research project, or agreeing to participate, may raise any questions or issues with the researchers at any time. In addition, any person not satisfied with the response of researchers may raise ethics issues or concerns, and may make any complaints about this research project by contacting the Human Ethics office at UWA on +61 8 6488 4703 or by emailing to humanethics@uwa.edu.au. All research participants are entitled to retain a copy of any Participant Information Form and/or Participant Consent Form relating to this research project.

The University of Western Australia
M459 Perth WA 6009 Australia

T +61 8 6488 3703
M +61 000 000 000

E humanethics@uwa.edu.au
CRICOS Provider Code 00128Q

Parent Recruitment Flyer



Dr Mamie O'Neill
Senior Honorary Research Fellow
Graduate School of Education, M428
The University of Western Australia
35 Stirling Highway, Crawley WA 6009
Tel: 0419988845
Email: Mamie.O'Neill@uwa.edu.au
www.education.uwa.edu.au

PARENTS ENGAGING TUTORS TO SUPPORT CHILDREN WITH SPECIAL EDUCATIONAL NEEDS IN MAINSTREAM SCHOOLS NEEDED FOR RESEARCH STUDY!!!

Researcher Ms Patricia Ho See Mei is seeking volunteers to participate in a perspectival study of the role and contribution of shadow education in supporting children with mild special educational needs in mainstream schools.

You are invited to participate if you have:

- engaged tutors to support your child with special educational needs in mainstream schools
- provided tuition for your child with special educational needs for at least one year

This study involves:

- one interview lasting between 45 mins to an hour
- the researcher will travel to meet at a place convenient to the participant.

For further information, or if you would like to participate, please contact Ms Patricia Ho at: patricia.ho@research.uwa.edu.au

Approval to conduct this research has been provided by The University of Western Australia, in accordance with its ethics review and approval procedures. Any person considering participation in this research project, or agreeing to participate, may raise any questions or issues with the researchers at any time. In addition, any person not satisfied with the response of researchers may raise ethics issues or concerns, and may make any complaints about this research project by contacting the Human Ethics office at UWA on +61 8 6488 4703 or by emailing to humanethics@uwa.edu.au. All research participants are entitled to retain a copy of any Participant Information Form and/or Participant Consent Form relating to this research project.

The University of Western Australia
M459 Perth WA 6009 Australia

T +61 8 6488 3703
M +61 000 000 000

E humanethics@uwa.edu.au
CRICOS Provider Code 001260

Informed Consent Form for Organisation



Dr Mamie O'Neill
Senior Honorary Research Fellow
Graduate School of Education, M428
The University of Western Australia
35 Stirling Highway, Crawley WA 6009
Tel: 0149988845
Email: Mamie.ONelli@uwa.edu.au
www.education.uwa.edu.au

Organisation Consent Form

Research study: Inclusive education in Singapore: A collective case study of shadow education for students with special educational needs from mainstream schools.

I, _____ (name of participant), representing _____ (name of organisation) have read the information provided and any questions I have asked have been answered to my satisfaction. I agree to support this activity, realising that I may withdraw at any time without reason and without prejudice.

I understand that all identifiable (attributable) information that I provide is treated as strictly confidential and will not be released by the investigator in any form that may identify me or my organisation. The only exception to this principle of confidentiality is if documents are required by law.

I have been advised as to what data is being collected, the purpose for collecting the data, and what will be done with the data upon completion of the research.

I agree posters inviting potential participants to contact the researchers may be displayed on our organisation's noticeboards.

Representative's name

Date

Signature

Approval to conduct this research has been provided by The University of Western Australia, in accordance with its ethics review and approval procedures. Any person considering participation in this research project, or agreeing to participate, may raise any questions or issues with the researchers at any time.

In addition, any person not satisfied with the response of researchers may raise ethics issues or concerns, and may make any complaints about this research project by contacting the Human Ethics Office at The University of Western Australia on +61 8 6488 3703 or by emailing to humanethics@uwa.edu.au


All research participants are entitled to retain a copy of any Participant Information Form and/or Participant Consent Form relating to this research project.

The University of Western Australia
M459 Perth WA 6009 Australia
V1.0 - 2018

T +61 8 6488 3703
M +61 000 000 000

E humanethics@uwa.edu.au
CRICOS Provider Code 00128G

Informed Consent Form for Participants

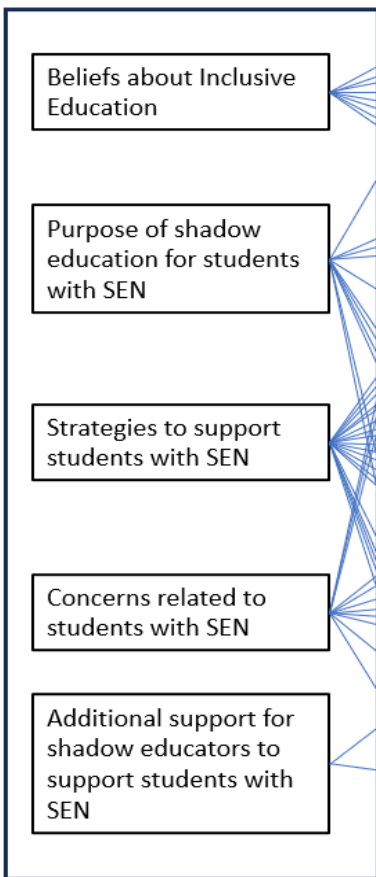
 <p style="margin: 0;">THE UNIVERSITY OF WESTERN AUSTRALIA</p>	<p style="margin: 0;">Dr Maimie O'Neill Senior Honorary Research Fellow Graduate School of Education, M428 The University of Western Australia 35 Stirling Highway, Crawley WA 6009 Tel: 0149988845 Email: Maimie.ONell@uwa.edu.au www.education.uwa.edu.au</p>
<h3 style="margin: 0;">Participant Consent Form</h3>	
<p>Research study: Inclusive education in Singapore: A collective case study of shadow education for students with special educational needs from mainstream schools.</p>	
<p>I, _____ (name of participant), have read the information provided and any questions I have asked have been answered to my satisfaction. I agree to participate in this activity, realising that I may withdraw at any time without reason and without prejudice.</p>	
<p>I understand that all identifiable (attributable) information that I provide is treated as strictly confidential and will not be released by the investigator in any form that may identify me. The only exception to this principle of confidentiality is if documents are required by law.</p>	
<p>I have been advised as to what data is being collected, the purpose for collecting the data, and what will be done with the data upon completion of the research.</p>	
<p>I agree (please tick)</p>	
<p><input type="checkbox"/> to participate in an interview of approximately one hour with Ms Patricia Ho See Mei</p>	
<p><input type="checkbox"/> that my interview may be recorded for later transcription</p>	
<p><input type="checkbox"/> that I will receive a summary copy of the transcribed interview to check for accuracy and to amend if I wish</p>	
<p><input type="checkbox"/> that research data gathered for the study may be published provided my name or other identifying information is not used.</p>	
<p>_____ Participant's name</p>	<p>_____ Date</p>
<p>Parent/Guardian/Shadow teacher (Please circle)</p>	
<p>_____ Signature</p>	
<p><i>Approval to conduct this research has been provided by The University of Western Australia, in accordance with its ethics review and approval procedures. Any person considering participation in this research project, or agreeing to participate, may raise any questions or issues with the researchers at any time.</i></p>	
<p><i>In addition, any person not satisfied with the response of researchers may raise ethics issues or concerns, and may make any complaints about this research project by contacting the Human Ethics Office at The University of Western Australia on +61 8 6488 3703 or by emailing to humanethics@uwa.edu.au</i></p>	
<p><i>All research participants are entitled to retain a copy of any Participant Information Form and/or Participant Consent Form relating to this research project.</i></p>	
<p>_____ The University of Western Australia M459 Perth WA 6009 Australia V1.0 - 2018</p>	<p>_____ T +61 8 6488 3703 M +61 000 000 000</p>
<p>_____ E humanethics@uwa.edu.au CRICOS Provider Code 001280</p>	

Sample of Interview Transcript with Initial Codes

Time Stamp	Transcript (Raw data)	Note	Initial Codes	Explanation of how initial codes were assigned
00:06:06	<p>Interviewee:</p> <p>The school most often will give it to them. But the problem is in a class of 40 or 35 children. The child doesn't get the extra time of support that's needed. So that's where the parents go out there to the tutoring industry. It's so unregulated, that's where you can get the wrong people. And then people are just there to make money. But what happens is this, among these parents, they are quite close-knit community, so they know who to look for. Some tutors, the phone numbers are shared and these parents, most of them are willing to help other children because they know what the parents go through. Some of these children, even the parents need some sort of counselling.</p>	8	<p>Support</p> <p>Extra time</p> <p>Class size</p> <p>Tuition industry unregulated</p> <p>Coaching parents</p>	<p>Support</p> <ul style="list-style-type: none"> The school most often will give it to them – indicates the school will provide support when possible. The child doesn't get the extra time of support that's needed – highlights the need for additional support, which may not be adequately available within the classroom. Parents go out there to the tutoring industry – indicates parents seek external support to address their children's needs. Some tutors, the phone numbers are shared – indicates a sense of community support among parents, where they share information about reliable tutors. Most of them are willing to help other children because they know what the parents go through – empathy and support among parents who understand the challenges of raising children with SEN. Some of these children, even their parents need some sort of counselling – additional support may also extend to counselling both children and parents. <p>Extra Time</p> <ul style="list-style-type: none"> The child doesn't get the extra time of support that's needed – indicates the need for additional time and support that may not be available within the classroom. <p>Class size</p> <ul style="list-style-type: none"> The problem is in a class of 40 or 35 children – indicates the challenges of providing the necessary individualized support and attention to each student. <p>Tuition industry unregulated</p> <ul style="list-style-type: none"> It's so unregulated, that's where you can get the wrong people – indicates concerns about the lack of regulation where tutors may not have the necessary qualifications or are providing services for financial gain. <p>Coaching parents</p> <ul style="list-style-type: none"> Even the parents need some sort of counselling – suggests that some parents may require guidance, counselling or emotional support
00:06:57	<p>Interviewer:</p> <p>Yes.</p>			
00:06:58	<p>Interviewee:</p> <p>When they are at their wits end, because of the behaviour of the children sometimes. What happens is that a tutor has to support the parents mentally also. But it is not the parents alone, it's the grandparents, sometimes a supportive uncle or aunts. You have your nay sayers in the family also, but most of the time, they have no bragging rights during Chinese New Year, reunion dinner, but something is there. You can get promoted to P4 P5, do the PSLE, go to Normal Tech, hopefully Normal Tech pass, not to go the Pathlight (special school) not to Northlight (specialised school), not to those schools</p>	9	<p>Streaming/Banding</p> <p>Meeting academic expectations</p> <p>Unacceptable behaviour of children with SEN</p> <p>National exam</p> <p>Coaching parents</p>	<p>Streaming/Banding</p> <ul style="list-style-type: none"> Go to Normal Tech, hopefully Normal Tech pass, not to go to the Pathlight (special school) not to Northlight (specialized school) not to those schools – suggests other possible educational pathway for students <p>Meeting academic expectations</p> <ul style="list-style-type: none"> You can get promoted to P4, P5, do the PSLE, go to Normal Tech, hopefully Normal Tech pass, not go to the Pathlight (special school) not to Northlight (specialized school), not to those schools – reflects the basic expectations associated with academic progression, including promotion to the next level and meeting expectations required in the PSLE to avoid special and specialised schools. <p>Unacceptable behaviour of children with SEN</p> <ul style="list-style-type: none"> When they are at their wits end, because of the behaviour of the children – suggests the challenges and frustrations faced by parents due to the behaviour of their children with SEN indicating hard to manage behaviour. <p>National Exam</p> <ul style="list-style-type: none"> You can get promoted to P4, P5, do the PSLE, go to Normal Tech, hopefully Normal Tech pass, not go to the Pathlight (special school) not to Northlight (specialized school), not to those schools – suggests the significance of PSLE in determining the educational pathway for students, including the possibility of attending non-mainstream schools such as special or specialized schools. <p>Coaching parents</p> <ul style="list-style-type: none"> What happens is that a tutor has to support the parents mentally also, But it is not the parents alone, it's the grandparents, sometimes a supportive uncle or aunts – indicates the provision of mental and emotional support to the child's family members, coaching them in how to deal with the behavioural challenges presented by the child with SEN.

Sample Display of Coded Data

Raw data collected according to the following components of perspectives:



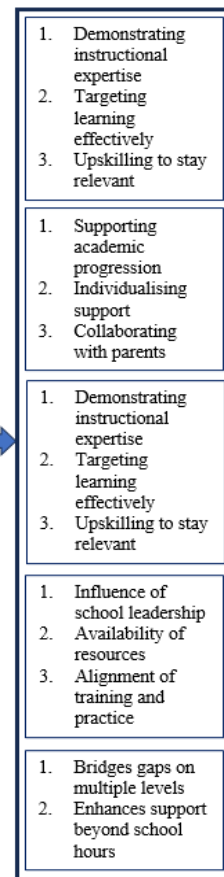
Sampling of codes based on raw data:

- No discrimination
- Support
- Curriculum
- Pull-out
- Parent’s choice
- Integration
- Diversity
- Streaming/Banding
- Help beyond school
- Ability to cope
- Socialisation
- Improvement
- Repetition
- Motivation
- Small group setting
- Parents’ involvement
- Check for understanding
- Understanding the child’s needs
- Relationship with student
- Customised learning
- Tutors approach differently
- Visual
- Tracking progress
- Social-behavioural
- Social exclusion
- Updates from tutors
- Profiling
- Meeting academic expectations
- Ability to cope
- Teacher training
- Untrained tutors
- Training/ Self-improvement
- Experience
- Specialised skills
- Sharing experience with other teachers
- One-to-one
- Class size
- Bridge gap
- Crucial/essential

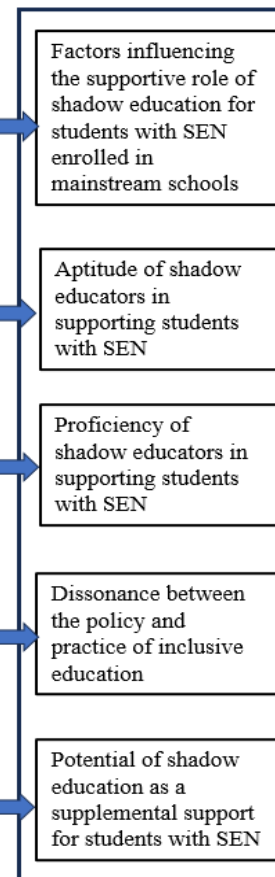
Categories generated based on codes:

- Integration
- Acceptance
- Targeted Teaching
- Impartiality
- Academic rigour
- Curriculum
- Educationally appropriate setting
- Social acceptance
- Support
- Human resources
- School
- Peer
- Parents
- Financial
- Resources
- Individualised teaching
- Specialised skills
- Training
- Teaching Strategies
- Personality
- Relationships
- Competence
- Learning behaviour
- suitability

Sub-themes arising from categories:



Themes arising from sub-themes:



Sample of a list of Categories and Codes Aligned to the Sections According to the Guiding Questions

Guiding Question:

- (a) What are the aims and intentions of parents and shadow educators in providing shadow education for their child/student with SEN in mainstream schools? What are the reasons for these aims and intentions?

Components of perspectives	Categories	Codes	Case study	
			Subcase 1: Shadow Educator Quotes	Subcase 2: Parent Quotes
Beliefs about inclusive education	Impartiality	No discrimination	<p>Although they may have certain difficulties with participating in activities and interacting with their peers or keeping up, we do not deny them of any opportunities to grow and progress. We see them as equals. And, yes, I believe that is the essence of it. So not only we provide equal opportunities, we also see them as equals in the classroom.</p> <p style="text-align: right;">Tutor 9, Note 1</p>	<p>A top-down approach of full embrace of diverse learners with equipped facilities in school to meet the various needs of students (lifts, ramps, adjustable table, AT, cushioned room, exam room, user-friendly toilet etc.) modified curriculum (PE lessons), holistic approach in school process where stake holders (other parents) would acknowledge their kids schooling with other kids with special needs.</p> <p style="text-align: right;">Parent 5, Note 1</p>
Beliefs about inclusive education	Impartiality	Diversity	<p>Well, for me, I would see it as to be able to accommodate students of different abilities. Inclusive in terms of academic abilities, also inclusive can be also the social background of the students that they come from various groups and income levels and all that so we talk about inclusive education to</p>	<p>I think in a mainstream setting, people of diverse needs and backgrounds are able to receive a good quality education that can cater for all. Of course, this is theoretical, in reality it is quite different. Sometimes it isn't all a bad thing, I used to study with special needs friends when I was in</p>

APPENDICES

Components of perspectives	Categories	Codes	Case study	
			Subcase 1: Shadow Educator Quotes	Subcase 2: Parent Quotes
			<p>look at social, economic background all the students' academic abilities.</p> <p style="text-align: right;">Tutor 7, Note 1</p>	<p>primary school (name of primary school). The good thing is that both sides get exposure and understanding, when I was younger there was no 'us' or 'them' concept, it was quite wholesome. Of course, there are those who bully them, and it goes on unmitigated. It really depends on what kind of friends!</p> <p style="text-align: right;">Parent 7, Note 1</p>
Beliefs about inclusive education	Academic rigour	Ability to cope	<p>I think a lot of factors come into play - it's not just a class size, it's not just the teachers, curriculum. I think it's a dynamic balance among all these factors. Because each kid comes with a certain characteristic and then their cognitive ability really does play a part on whether they can cope with the mainstream or not. Ideally, if you can go according to the kid's needs, I mean if we do have the resources and we have the manpower and expertise, we can do that. So, when I talk about kids who can cope, I really do mean that he can cope in the class size of 40.</p> <p style="text-align: right;">Tutor 18, Note 8</p>	<p>So, with dyslexia at P5, the step-up is very very high. English papers, you have a whole additional section to learn the correct words. The comprehension has three pages of questions. The composition has an additional situation writing. Science, you have to write open ended question answers. So, if you're dyslexic, how are you going to cope? You can't even keep up in class because you can't read what is in your book and far less copy down and then writes it out. You spell 'magnet' wrongly and it's two points gone. Of course, I could you could let him be and then he would simply be borderline or fail. And he</p>

APPENDICES

Components of perspectives	Categories	Codes	Case study	
			Subcase 1: Shadow Educator Quotes	Subcase 2: Parent Quotes
				<p>would just give up and say ‘Okay, I’m happy where I am and if he were to go to a normal, to a school just for that then like for example a low class any secondary school, that’s fine however, I do know from the experience of my older children that it just takes them time to understand what’s going on. So, you got to balance the ability with the environment that the school gives, if you can’t keep up in class, what’s the point of going to school? So hence the home tuition and now he’s with online learning now, because of the previous tuition he had, he’s able to read everything that the school is offering. And he’s semi-able to answer questions. The writing, of course, is still -Yeah, the writing, what I observe is that he understands the reading now. He can read it as well as understand what he’s reading, and he can answer many questions on his own. Is the open-ended questions that he will still have problem answering because it requires spelling and grammar. Parent 11, Note 8</p>

APPENDICES

Components of perspectives	Categories	Codes	Case study	
			Subcase 1: Shadow Educator Quotes	Subcase 2: Parent Quotes
Beliefs about inclusive education	Academic rigour	Meeting academic expectations	<p>I would say, in terms of understanding the child's understanding is way below what the material that's presented. At a point of time that student is just reading sight words, by memory. The number skills is only from 1 up to 10 and with the other things he does not understand, and there's a lot of frustration and he doesn't feel safe in that environment. And there is always meltdowns every day in school. And of course, he gets bullied by his classmates. So that felt like not a safe environment - safe and happy environment for the child. So somehow the parents could not see it at that point of time.</p> <p style="text-align: right;">Tutor 19, Note 12</p>	<p>The reason why we have tuition is because we are trying to get the students to be on par with the rest of the other students and not being labelled. Because currently, I realized most of the developing kids are being labelled, which I think is not right. Then you realize cyberbullying is happening right now as well.</p> <p style="text-align: right;">Parent 9, Note 27</p>
Beliefs about inclusive education	Academic rigour	Help beyond school	<p>I can see, the common theme is English is very low. Like it's not even those deaf kids; those hard of hearing also. So, I believe tuition really help, especially for stuff like English per se. Because I think the concept behind is English is quite hard. Teaching English is okay but making them understand like all</p>	<p>Okay, for me, I find that giving her this extra education, tuition, does help her a way that improve her memory first. Secondly, like boost up her confidence, because she can't - what the teacher in her school told me was that her confidence level was very low. So, she needs more support in terms of</p>

APPENDICES

Components of perspectives	Categories	Codes	Case study	
			Subcase 1: Shadow Educator Quotes	Subcase 2: Parent Quotes
			<p>the past tense and then how to write a story - it's also actually very hard especially in sign language. Maths to their level is actually quite okay because from what I see is, it's quite structured in a way. Like the word problem that I normally see them getting, like my kid especially, it doesn't really change that much. And then they tend to not get the whole word problem, they tend to just see the one line and then ask them to remember how to do than, it's okay. Science is more using diagrams to teach. So that's why English is quite hard, because is quite abstract.</p> <p style="text-align: right;">Tutor 13, Note 15</p>	<p>like emotions. That one, of course as a parent, you have to do at home. But then for giving her extra tuition, it helps her like to boost up her confidence where, once she can do she was like, 'Oh okay, actually I can do', you know. So, because in school she don't dare to ask because I always asked her, "You better ask", but then she don't dare to ask firstly because she said "It's too many in a class" – if let's say there's a one-to-one or a smaller class, she's okay to ask actually. So that's why I felt that giving her an extra tuition, because she herself actually wanted it also because I asked her "Do you think you need extra help in your Math?" And she said "Yeah, I need a Math tutor." She was the one who tell me that. So, I said "Okay, then I find for you one."</p> <p style="text-align: right;">Parent 9, Note 12</p>
Beliefs about inclusive education	Academic rigour	Pacing	<p>We can't force them to do things like other non-special needs students. They need to learn at their own pace & find a method which works for them.</p>	<p>The thing is that, in a sense, it's like customized learning. Because in school, whether you understand it, or you don't understand it, they just move on. There are points where</p>

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Components of perspectives	Categories	Codes	Case study	
			Subcase 1: Shadow Educator Quotes	Subcase 2: Parent Quotes
			Tutor 17, Note 8	certain topics and certain subjects where she may be very good at, and she doesn't need – and then in class, she gets bored. Likewise, there are certain things whereby is new, she's not able to grasp the concept, the tutor or in terms of shadow education, we are able to either slow down, explain it differently, do some parallel exercises to reinforce the learning, before moving on. So is more a customized kind of learning for the child, yeah. Parent 14, Note 12
Beliefs about inclusive education	Academic rigour	Retained in standard	For example, the tutee I had last year, he's already 17 but he don't look 17, he looks like 11. He has physical disabilities. So, I guess if you have too many disabilities compounded into one, I think just having one is already hard enough, imagine having multiple. So, if you have multiple than can consider pulling out from mainstream. Another is, if I think he got re-take several levels before, so that's why if you retake several times, you still can't pass I don't think mainstream	The school really didn't give any attention to my daughter until PSLE (Primary School Leaving Examination) year, so she retained for 1 year. The principal recommended not to continue to let her retain because she is 'wasting time'. We were quite pissed because our child was a poor performer that 'dragged' down school results overall. I think the general attitude displayed is quite concerning. Parent 7, Note 6

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Components of perspectives	Categories	Codes	Case study	
			Subcase 1: Shadow Educator Quotes	Subcase 2: Parent Quotes
			<p>is suitable for him. It's like they can do what they do with people with autism - go specialised vocational schools. No, I think the confusion is I believe he was kept in mainstream school only until like 13 or 14 but after that is still shifted to a specialised school but they still teach mainstream related stuff.</p> <p style="text-align: right;">Tutor 13, Note 18</p>	
Purpose of shadow education for students with SEN	Support	Support	<p>Not all schools have facilities that caters to students with special needs. But let me tell you about this one school that really stood out. They were all about inclusive education, and it was awesome! They had this whole mindset that everyone can learn, no matter what. So, they made sure every student had an equal shot at education, regardless of their needs. They didn't believe in separating kids with special needs, oh no! They found ways to accommodate their unique learning styles. They would give them extra help, like explaining things in different ways or having other students help out. It was a fantastic environment where</p>	<p>All the students with needs are split up into different classes so that they are spread out. for academic classes, they are pulled out to different classes that cater to their learning needs, so non-academic classes they learn together with their neurotypical peers the special needs child will go to whichever class that caters to their learning needs. I have high, mid and low learning ability among my children, so I see that the mainstream school prioritises the academic over non-academic.</p> <p style="text-align: right;">Parent 1, Note 3</p>

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Components of perspectives	Categories	Codes	Case study	
			Subcase 1: Shadow Educator Quotes	Subcase 2: Parent Quotes
			everyone was included, and adjustments were made to make it work. Tutor 17, Note 7	
Purpose of shadow education for students with SEN	Support	Improvement	Academic wise, they do better but I noticed that after I, if I stopped teaching him, his grades will drop back down again, I think because he lost the support he needed to keep up in class. But it is more like the fact that there's someone there to always address questions that he has and to check his level - what level he's at of his understanding? Yeah, so actually, I'm not sure because I never talked to the school before. But I would think that if there was a teacher that was keeping track of his progress, and	Her readings have improved. She did better in her oral reading and listening comprehension. She enjoys reading now and her attention span is slightly better. Last round, she did not like to focus in her studies. Parent 6, Note 4

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Components of perspectives	Categories	Codes	Case study	
			Subcase 1: Shadow Educator Quotes	Subcase 2: Parent Quotes
Purpose of shadow education for students with SEN	Support	Improvement	<p>then maybe like, seeing him for a while every day, to maybe like, check on his work, see if he's understanding, like give him a bit more like questions to do and bring back the next day. I think these kinds of consistent checks on him would actually have helped supported him to be able to cope with his academics, yeah.</p> <p style="text-align: right;">Tutor 14, Note 38</p>	

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Components of perspectives	Categories	Codes	Case study	
			Subcase 1: Shadow Educator Quotes	Subcase 2: Parent Quotes
Purpose of shadow education for students with SEN	Support	Structure	<p>Okay, the only experience I had when you talk about many helping hands; in the secondary school, I was in the all-boys school whereby what I see then was having the different people coming together and then having discussion and meeting about guiding the kids in different special needs in the classroom itself, both to create awareness for the subject teachers or the form teachers as well as to form a team to really understand what this special needs kids need in the classroom and to cater by the different teachers or counsellors supporting the child.</p> <p style="text-align: right;">Tutor 5, Note 28</p>	<p>However, I know schools now have got a counsellor and when teachers cannot cope with violence in the class, they can call on the counsellor to take the child into the counselling room. But there's only one counsellor per 1500 students. Yeah, mission school, I'm not sure what the situation is in government schools, maybe they have more allied educators. So, we do have allied educators, but the percentage of special needs children seem to be quite high. And certainly, one special needs child in the class is enough to - on the positive side, they can teach a lot of good qualities like being patient. On the</p>

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Components of perspectives	Categories	Codes	Case study	
			Subcase 1: Shadow Educator Quotes	Subcase 2: Parent Quotes
Purpose of shadow education for students with SEN	Support	Structure		<p>negative side, one anger management child, autistic child who lashes out can disrupt the entire class, for the entire session regularly. So, it's good that the teachers are aware and therefore, now, I've a 23-year-old child and a 10-year-old child. And compared to my 23-year-old primary school days, he's a boy, more teachers are familiar with special needs. But mainly the younger ones who have possibly come from government schools or just come out of NIE training programs.</p> <p style="text-align: right;">Parent 11, Note 3</p>

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Components of perspectives	Categories	Codes	Case study	
			Subcase 1: Shadow Educator Quotes	Subcase 2: Parent Quotes
Purpose of shadow education for students with SEN	Support	Homework	<p>It's more like I was just there to help with the homework he had and to help teach him the concepts that were covered in class. So, there wasn't really much communication with the parent except feedback on how he did during the mini test or worksheets that he was given in class.</p> <p style="text-align: right;">Tutor 14, Note 16</p>	<p>A child with special needs should not be made to feel defeated because they take longer than others to complete a task. In most cases these special needs children probably have a higher IQ than their atypical classmates but are not able to function as well in school. The standard of education and the sheer volume of information we need to learn doesn't need to be so high. If you have an intelligent child, you should require him to be of SERVICE to OTHERS and not raise the standards to keep them engaged. A child with special needs ALSO needs to learn service, but half the time they are trying to</p>

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Components of perspectives	Categories	Codes	Case study	
			Subcase 1: Shadow Educator Quotes	Subcase 2: Parent Quotes
				keep up with the schoolwork! Too much homework on a daily basis although good for other kids, is daunting for a child like mine. Parent 8, Note 2
Purpose of shadow education for students with SEN	Support	Crucial	Because our mainstream educational system, in terms of manpower, curriculum, and structure cannot cater to each individual's learning needs. And yet again, because we want our children to be successful, we want our children to access the general education and to also have a future. So, coming in, as a support, to the	I think (tuition centre) is there for the kids and parents more than the school. School is sceptical of the psychological reports as if we have paid thousands of dollars just to get mother tongue exemptions. School did not really help the parents and instead create layers and layers of hurdles for me instead. As for the academic help rendered to my 2

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Components of perspectives	Categories	Codes	Case study	
			Subcase 1: Shadow Educator Quotes	Subcase 2: Parent Quotes
			<p>mainstream educational system as a role of a shadow educator or tutor is very important because we come in to fill in the gaps that the mainstream education currently is not able to, given its capacity, yeah.</p> <p style="text-align: right;">Tutor 18, Note 32</p>	<p>special needs girls, I don't really see much being extended to them either. I guess, school wishes to see the students go to them for help if required and they will not keep coming to them and asked them if they are able to catch up etc. So, my kids have to be very proactive and seek further help if they need to. Sometimes, they asked their (tuition centre) educational therapist for help instead. I feel (tuition centre) plays a much more pivotal and important role for my girls than mainstream school especially in the critical formative years in primary school.</p> <p style="text-align: right;">Parent 12, Note 15</p>
Purpose of shadow education for students with SEN	Support	Non-essential	<p>I don't think that it is absolutely essential to have like a shadow educator to guide him through his learning process in a mainstream school. I feel like as long as he has a supportive family as well as a supportive learning environment in the school, it'll be sufficient to guide him through the education processes in school. I feel like additional guidance or education,</p>	<p>It's really how the main teacher wants to put in effort to help the child when they entered mainstream primary school, the decision to have a shadow educator was not made by me. The school deployed AED for them because they are worried the main classroom teacher cannot cope with the class size and a special needs child. I have seen others with</p>

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Components of perspectives	Categories	Codes	Case study	
			Subcase 1: Shadow Educator Quotes	Subcase 2: Parent Quotes
			<p>just supplements this process but it's not essential. What's important is that the people around the child knows what is best for the child and helps the child along the way. And there's a lot of understanding that is required.</p> <p style="text-align: right;">Tutor 9, Note 5</p>	<p>special needs in my school and my husband's school basically, if you can comply and learn to follow basic instructions, you won't really need a shadow educator.</p> <p style="text-align: right;">Parent 1, Note 7</p>
Purpose of shadow education for students with SEN	Support	National exam	<p>I've been teaching him things that the schoolteacher didn't teach him. And I'm preparing him for his PSLE, he's taking PSLE, this year. And, you know, the problem sum of P6s are so crazy. So, I have to expose him to a wide variety. There may be questions that's not been covered in school. Now, I am covering it and they are tough but they are easy. I've to teach him after four weeks, he still didn't get it and then before I go, can get it already, for homework, you just lapse one week, you don't do it and you forget again. I say "You don't wait so long before I come, than you start rushing to do your homework. Do it one or two days, because it's still fresh in your mind". So, I say "Yeah, now you</p>	<p>For my elder children, they only had tuition as they approached PSLE and O-levels. So, they did not have tuition from P1 to P4 except for Chinese. For my youngest now, he has tuition for every subject because I am unable to, I work, and I'm unable to sit with him to do his work the way I have done for the other children. And boy schools are particularly disruptive. Because I'm unable to be here every time, the tuition allows him to come closer to being on level with the average child otherwise he would in the class be the bottom, you know, six, in terms of behaviour, organization, academics, physical, ability, listening, attentiveness etc etc</p> <p style="text-align: right;">Parent 11, Note 6</p>

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Components of perspectives	Categories	Codes	Case study	
			Subcase 1: Shadow Educator Quotes	Subcase 2: Parent Quotes
			<p>understand, right? I teach you all those things is because I've been teaching you in advance, your teacher hasn't taught you. You never think that whatever I'm teaching are useful. But now you understand. Tuition is useful. I don't have to yell at you". I don't have to argue with them. So, I told the parent, "You see, now he understood why we are having tuition". Yeah, so I think I just have to bear with it and wait till the kids get mature and then they will understand. "I'm not coming here to make your life difficult. I'm really helping to make your life easier".</p> <p style="text-align: right;">Tutor 18, Note 17</p>	

Thematic Analysis (Shadow Educators): Theme 2, Sub-theme 1

In accordance with the component of perspectives outlined by Blackledge and Hunt's (2019), the section on "Purpose of shadow education for students with SEN" will be discussed along the thematic analysis theme of "Aptitude of shadow educators in supporting students with SEN"

Theme	Sub-theme	Categories	Codes	Coding Guide	Sub-Case 1			Examples of Identified Codes
					Participants	Participants Referencing Code (%)	Total Comment Count	
Theme 2: Aptitude of shadow educators in supporting students with SEN	1. Supporting academic progression	Build rapport	• Exercise flexibility	These codes identify instances where adaptability, understanding and interactions were mentioned, fostering trust and connections with students with SEN	T9, T13, T18, T19	21	6	"You have to be quite flexible, especially to the deaf kids, you have to know how to sign academic sign language, which is a lot more similar to normal English language structure." T13, N26
			• Have patience, empathy		T1, T3, T5, T6, T7, T9, T11, T13, T14, T15, T16	58	21	"...parents do engage or do look up to shadow teachers ... (who) have the heart for children and to keep them moving on and helping them to be included in school..." T5, N25
			• Be caring, firm and consistent		T1, T5, T8, T11, T14, T16, T18, T20.	42	16	"...I feel I care about him. I don't want him to feel like ...' I don't want to trouble you, it's okay that I don't do well, since I don't hear properly.' I just feel like sometimes he has that feeling. He doesn't say it, but I just feel it." T14, N38.
			• Persevere		T18	5	1	"...you must always hold them very tight and then ...then you will be able to see (progress). Therefore perseverance is very important." T18, N23

Thematic Analysis (Shadow Educators): Theme 4, Sub-theme 2

In accordance with the component of perspectives outlined by Blackledge and Hunt's (2019), the section on "Concerns Related to Supporting Students with SEN" will be discussed along the thematic analysis theme of "Dissonance between Policy Intention and Practical Implementation of Inclusive Education".

Theme	Sub-theme	Categories	Codes	Coding Guide	Sub-Case 1			Examples of Identified Codes
					Participants	Participants Referencing Code (%)	Total Comment Count	
Theme 4: Dissonance between Policy Intention and Practical Implementation of Inclusive Education	2. Availability of resources	Resources (Student)	• Resources	The codes identify instances where general resources were mentioned, impacting the educational process.	T3, T5, T6, T7, T8, T9, T10, T14, T16, T18, T20	58	33	"... mainstream school doesn't really support that kind of personalised attention ... not because the school doesn't care, but it just doesn't have enough specialised teachers or the expertise or the resources to actually cater to these kinds of students." T5, N7
			• Crucial/Essential		T7, T13, T15, T16, T18, T20	32	9	"Because in mainstream it's very limited to what you can do, outside help will always be will always be useful. I think that the parents send their kids for tuition, wanting more help for their children. I think it's a very important role. It's a role that can be optimized, fully optimized for the development of the kid." T7, N40
	3. Alignment of training and practice	Collaboration with schools (Teacher)	• Working with school	The code identifies instances where collaborative efforts were mentioned, improving educational outcomes and experiences of students with SEN.	T5, T6, T7, T8, T9, T10, T11, T12, T13, T14, T15, T16, T18, T19, T20	79	35	"Their teachers will communicate with our tutors, they'll email, sometimes we talk about like homework, and everything. But then for the other schools, I have students from a lot of others primary schools and secondary, they, they don't communicate with us." T8, N11
			• Learning space	The code identifies instances where the physical environment was mentioned, promoting a positive learning atmosphere.	T1, T3, T5, T6, T9, T11, T10, T18, T19, T20	53	15	"They (parents) are giving her a space where she would just progress at her own pace." T1, N10
		Enhancing learning environment (Learning Environment)						

Thematic Analysis (Parents): Theme 1, Sub-theme 1

In accordance with the component of perspectives outlined by Blackledge and Hunt's (2019), the section on "Beliefs about inclusion" will be discussed along the thematic analysis theme of "Potential of shadow education as a supplemental support for students with SEN"

Theme	Sub-theme	Categories	Codes	Coding Guide	Sub-Case 2			Examples of Identified Codes
					Participants	Participants Referencing Code (%)	Total Comment Count	
Theme 1: Factors influencing the supportive role of shadow education for students with SEN enrolled in mainstream schools	1. Fostering inclusive support	Aspiration	• Hope	These codes identify instances where a positive outlook or future educational prospects were mentioned, giving a sense of hope or better educational opportunities for students with SEN.	P10	7	1	"I know <C11> can pass. I'll make sure he <u>go</u> to the mainstream even though it is NT(Normal/Technical). As long as he goes to the mainstream, when he recovers, then he can move on with his life." P10, N3
			• Pathways to higher education		P4, P6, P10	20	3	"They will grow up with more confidence to be able to cope as they progress to higher education." P4, N15
	2. Providing targeted help	Academic Focus	• Curriculum	The codes identify instances where academic content, and academic achievement were mentioned, reflecting the importance of content and context	P5, P6, P7, P8, P9, P11, P14, P15	53	20	"...right <u>now</u> what I can see the curriculum is a bit pressurizing if I were to compare our time and this time is too totally different. I'm like quite surprised with current curriculum, when I see I, myself, cannot answer at times...So, you cannot expect the child to answer." P9, N30.
			• Meeting academic expectations	The codes identify instances where academic content, educational standards and the importance of academic achievement were mentioned, reflecting the text's content and context	P5, P7, P9, P10, P11, P12, P14	47	12	"If you're dyslexic, how are you going to cope? You can't even keep up in class because you can't read what is in your book and far less copy down and then writes it out ... of course I could you could let him be and then he would simply be borderline or fail...if you can't keep up in class, what's the point of going to school?" P11, N8

Thematic Analysis (Parents): Theme 4, Sub-theme 1

In accordance with the component of perspectives outlined by Blackledge and Hunt's (2019), the section on "Concerns Related to Supporting Students with SEN" will be discussed along the thematic analysis theme of "Dissonance between Policy Intention and Practical Implementation of Inclusive Education".

Theme	Sub-theme	Categories	Codes	Coding Guide	Sub-Case 1			Examples of Identified Codes
					Participants	Participants Referencing Code (%)	Total Comment Count	
Theme 4: Dissonance between Policy Intention and Practical Implementation of Inclusive Education	1. Influence of school leadership	School leadership	• School leadership	The codes identify instances where the influence of leadership on the environment were mentioned, addressing the leadership role in shaping the educational experience for students with SEN	P3, P4, P5, P7, P8	33	6	"Actually, my son received most help from his teachers and Principal." P4, N6
			• Structure		P2, P9, P11, P14	27	5	"I don't think the teachers will actually want to liaise with somebody's that's external, right, isn't it? Yeah, so I think there's no, I don't I mean, I assume that there's no way that, you know, that to any teacher want to liaise directly with the tutor. It's always with the parents to the tutor and things like that, yeah." P14, N28
		Financial Support	• Financial assistance	The code identifies instances where funding was mentioned, enhancing the educational experience for students with SEN.	P3	6	1	"The government doesn't help with anything related to the shadow support at all. There <u>is</u> no regulations about the shadow support agencies and no financial assistance in a form of rebates or something like that." P3, N14
		Parental engagement	• Parents did not feel they can teach their child	The codes identify instances where parents' feelings, capabilities, and financial aspects were mentioned, influencing their engagement in their child's education.	P7, P9, P10,	20	6	"Because for myself, I myself do not know how to teach her." P9, N5
			• Parents able to afford		P10	7	2	"I put (C10) one-in-one so is like only child so is like okay is just that to me it still can affordable." P10, N6