Research in English language teaching and learning in Singapore: 2017–2023

Sally Ann Jones, Chin Ee Loh and Robbie Lee Sabnani

National Institute of Education, Nanyang Technological University, Singapore, Singapore
Corresponding author: Sally Ann Jones; Email: sajones676@gmail.com

Abstract

This review on English language teaching (ELT) in Singapore examines 159 empirical research studies published between 2017 and 2023 in both internationally recognised peer-reviewed journals and less well-known regional journals. With this comprehensive review, we aim to raise awareness of ELT research in Singapore for international, regional, and local readership. This will also serve as a starting point for educators, scholars, and researchers to investigate ELT in Singapore. The review yielded five themes: teaching the language skills; multiliteracies and technology; bi/multilingualism/bidialectalism and English; English as an academic language; and teacher education for ELT. While there is continuity from the last two reviews of research from Singapore in 2009 and 2021, reflected in the single theme of teaching language skills, the other themes represent new directions.

1. Introduction

Singapore is a small island and city-state located in Southeast Asia with a land area of about 700 square kilometers (735.6 km^2). Its total reported population (residents and non-residents) was 6,036,860 as of June 2024 (Department of Statistics Singapore, 2025a). Before gaining independence in 1965, Singapore was a British colony for 144 years, and for two years between 1963 and 1965 underwent a merger with Malaysia. Today, governance in Singapore is carried out according to six principles: meritocracy, racial and religious harmony, clean government, rule of law, inclusiveness, and care for the environment (Koh, 2009). The Singaporean education system places particular emphasis on developing the skill sets of its people, who are considered a core resource for economic development in light of the country's small size and lack of natural resources (Organisation for Economic Co-operation and Development [OECD], 2011). As such, meritocracy is upheld as an important principle for granting young people in Singapore equal opportunities in education (Teng, 2024).

Singapore is a multilingual and multicultural society with three main ethnic groups: Chinese, Malay, and Indian (Department of Statistics Singapore, 2023b). English is one of four official languages and the medium of instruction and business (Goh & Gopinathan, 2008; Singh et al., 2022). The other three official languages are Mandarin Chinese, Malay, and Tamil, and these are known as the mother tongues in Singapore. They are associated with the country's main ethnic groups and function as a means of retaining culture (Low & Pakir, 2018). Since gaining independence in 1965, Singapore's English language literacy rate has increased rapidly from 60.2% in 1965 to 82.3% in 1980, 89.1% in 1990, 92.55% in 2000, and 97.5% in 2019 (Department of Statistics Singapore, 2021).

This is also reflected in students' achievements in international assessments such as the Progress in International Reading Literacy Study (PIRLS) administered to fourth graders (10-year-olds) and the OECD Programme for International Student Assessment (PISA) for 15-year-olds (International Association for Evaluation of Educational Achievement [IEA], 2021; OECD, 2023).

The rapid evolution of ELT in Singapore, shaped by its unique historical, economic, and linguistic circumstances, makes it a significant area of study. In Singapore, ELT is guided by a national English language curriculum documented in syllabi published every eight to ten years, which provides a concrete framework for investigating educational objectives on a national level over time. Since 2002, the Singaporean Ministry of Education (MOE) has invested heavily in educational research, facilitating the development of a research ecology that has positively impacted the overall quality of education (Kwek et al., 2023). This, alongside the previously discussed importance ascribed to education in Singapore, makes up the unique context within which our review is situated.

Our review examines research on ELT in Singapore published during the seven-year period between 2017 and 2023. We connect our findings with two other similar reviews which focus on research in ELT in Singapore – one by Rubdy and Tupas (2009) and the other by Jones (2021). This comparison allowed us to identify salient patterns in ELT research over time. The review by Rubdy and Tupas (2009) covered the seven-year period between 2000 and 2007 and surveyed 100 locally produced publications including research articles, conference papers, government committee reports, and edited books. It focused on norms, standards, and models of English; English language curriculum and policy; reading and writing instruction and research; mother tongue teaching and learning; and the teaching of English to international students. The more recent review by Jones (2021) covered peer-reviewed research articles and book chapters on English language education in the ten-year period from 2010 to 2020. The analysis of themes from our review in conjunction with those from previous reviews not only allowed us to identify continuities and changes with respect to ELT in Singapore, but also enabled us to make predictions and suggestions for future research.

Five core themes emerged from our comprehensive analysis of research published between 2017 and 2023. Two of the themes, metacognition and multiliteracies, align directly with two of the three focal areas of the most recent national English Language Syllabus implemented progressively since 2020 (Ministry of Education Curriculum Planning and Development Division [MOE CPDD], 2020). We discuss the third focal area, inquiry through dialogue, in relation to the theme of classroom dialogue. These three syllabus areas are important to consider as they suggest a change of direction in pedagogy about halfway through our review period. Research in areas of national concern, including studies of multiliteracies, benefits from funding by the MOE and is likely to develop at a faster rate. Our review also examines bi/multilingualism/bidialectalism and English as a theme due to the relationships among the various languages spoken in Singapore and their relevance to ELT. In sum, the research carried out in our seven-year review period reflects a significant broadening of research topics reflecting local priorities, including but not limited to the focal areas of the syllabus. Since the early 2000s, education research in Singapore has expanded and developed in various ways, for example, by including more qualitative studies; situating teaching and learning in classroom contexts and locations such as homes and libraries; including early childhood and tertiary learners; and by attending more intentionally to the voices of participants in the research process. Based on the findings of the review, we see the areas of metacognition, bi/multilingual language acquisition and development, classroom dialogue, teacher education, and assessment as research priorities for ELT in Singapore.

2. Scope, rationale, and method of the review

One reason for the rapid and recent increase in research activity and peer-reviewed research on ELT in Singapore is MOE's competitive grants system, which funds research projects in priority areas of education. This has been observed over the last two decades and since the review was conducted in 2009. A seven-year review period was therefore decided upon to balance the manageability of the

Table 1. Search terms of the review

First-level Boolean operator 'AND' was used for the first, second, and third levels	Second level	Third-level synonyms for each search term were also applied here
Singapore	English language	teaching
		teacher education
		linguistics
		each of the language skills
		metacognition
		dialogue
		assessment
		materials
		methods
		education policy
		home language
		colloquial or standard language
		language development or language acquisition
		bilingual or multilingual

number of publications with potential for both breadth and depth. Given the substantial amount of high-quality peer-reviewed research, we chose to exclude graduate student work, unreviewed conference papers, and reports. We decided to review articles published locally, regionally, and internationally due to the challenge of making a true distinction between local and international research in a country with international, regional, and national outlooks, a highly regarded education system, respected universities, and academics who regularly publish internationally about Singaporean education.

Our review was guided by the question, 'What is the research on ELT in Singapore?' The methodology was systematic, involving the development of search terms, inclusion criteria, and filters with subsequent appraisal and categorisation of the results (e.g. Andrews, 2005; Aromataris & Pearson, 2014; Davies, 2000; Munn et al., 2014). We began by scoping the databases and keywords and sought advice from our librarians about the most useful databases for our task. Next, for the review proper, we searched three main databases, 'Education Source', 'ERIC', and 'APA PsycInfo', using three levels of search terms with increasing focus (see Table 1). For example, Singapore 'AND' English Language 'AND' Teaching. Each of the search terms in the third level depicted in Table 1 represents a separate search. We also used synonyms for each of the third-level search terms. Date (2017–2023), peer-review, and English language filters were used consistently. Regional journals were somewhat sporadically represented in the three main databases, likely due to some not being indexed there. The selection criteria for the regional journals included publication online or in print in the region, affiliation with a regional association or institution, and peer-review process. We searched these journals one by one, applying the same filters and search terms as we had in the main search. In this way, we aimed to conduct a comprehensive search as well as avoid bias towards international publications (Torgerson, 2006). The results of every search were cross-checked for duplication, after which the title and abstract of each article were examined by two team members and a research assistant to confirm their relevance. This led to a collection of 175 publications. The three reviewers made joint

decisions pertaining to relevance, discounting seven articles and ten more duplicates. The final number included was 158 published articles. Each article was read by at least two reviewers and a table was jointly constructed to help with categorisation. We then discussed, categorised, and organised the articles by content and count. Themes were decided upon through collaborative fine tuning and merging of categories into the five themes which structure the review. We later added one more article relevant to teacher education, which was initially missed due to its location in the *Chinese Journal of Applied Linguistics*, giving a total of 159 publications.

3. Singapore's linguistic and educational context

3.1. The sociolinguistic context of Singapore

Singapore has a multicultural and multilingual population, a result of colonisation and immigration. The population is comprised of Chinese (74.04%), Malays (13.52%), Indians (9.03%), and other ethnic groups (3.39%), as of September 2023 (Department of Statistics Singapore, 2023b). Singapore's bilingual policy, implemented in primary schools in 1960 and secondary schools in 1966, requires that all students learn their mother tongue alongside English, the medium of instruction in schools (Goh & Gopinathan, 2008; Singh et al., 2022). This arrangement has remained fairly consistent since Singapore's independence in 1965. While the use of English has become increasingly prevalent, particularly among the young (Mathews et al., 2020), it is spoken alongside other languages socially and in the home, thereby increasing the degree to which people are multilingual. According to the 2020 census, only 13.2% of the resident population over five years of age spoke only English at home (Department of Statistics Singapore, 2025b). National language planning has produced a population with high literacy rates (Department of Statistics Singapore, 2023a) and stellar performances in international benchmarking studies (e.g. PIRLS, PISA), cultivating an English-speaking workforce with a competitive edge in the region.

English carries high status within social and educational spheres in Singapore, a result of British colonialism, its subsequent association with a ruling English-speaking elite and individuals educated overseas, and its adoption by a large middle class as the dominant home language. In part due to its ethnic neutrality, English was selected as the lingua franca of Singapore (Low & Pakir, 2018), used for interethnic communication as well as education. Subsequently, proficiency in the language was shown to bring economic benefits (Tupas, 2011) and greater access to education (Low, 2017). Low and Pakir (2018) contend that the shift towards English use in Singapore has been motivated by national policies, as well as families striving to achieve social mobility and personal success. However, some have expressed apprehension about the potential reproduction of inequalities in education despite Singapore's emphasis on meritocracy (e.g. Mathews et al., 2020; Teng, 2024).

In addition to English and their mother tongue, many Singaporeans speak the local contact variety of English, Singapore Colloquial English (SCE) or Singlish. The complexity of Singapore's linguistic landscape means that descriptive terms employed in other educational settings reflecting the historical and geographical spread of English, such as 'English Language Learners' and 'English as a Second Language', may not necessarily fit Singapore's multilingual context. In a typical Singaporean classroom, there may be learners of English as the dominant home language (children whose families have used English as a dominant language over generations), learners of English as a second language (ESL) (children whose families have chosen to make English their dominant language, perhaps due to its significance in education), and learners of English as a foreign language (EFL) (children whose families do not speak English as a dominant language or children who are recent immigrants). The terms 'preferred'/'dominant' or 'not preferred'/'non-dominant' more appropriately reflect how English is but one language in the linguistic repertoire of speakers in Singapore, and its use may vary depending on one's educational level, context, and interlocutors. Children's home language is therefore an important consideration for ELT in schools. In our review, we make use of this terminology suited to the local context to aid our discussion.

3.2. Education in Singapore

Singapore has in place a national curriculum where education is compulsory up to the end of primary school (i.e. 12 years of age). Syllabi for all school subjects are written by officers at MOE in consultation with local and international experts. The English Language Syllabus 2020 (MOE CPDD, 2020) is implemented in all schools and guides ELT in terms of the principles and processes of English teaching, assessment, and the learning outcomes for skills and knowledge of English. Like the syllabi of other curricular disciplines, the English Language Syllabus relates ELT to national imperatives such as the Singapore Teaching Practice (MOE CPDD, 2020) and 21st Century Competencies (MOE CPDD, 2020). For English, the twenty-first-century competencies reflect multiple cognitive and affective competencies such as adaptability, flexibility, and empathy over and above current ideas of literacy skills. According to the syllabus, language learning is enhanced by multiliteracies, metacognition, and enquiry through dialogue or exploratory talk. These three focal areas are reflected in the national core values (MOE CPDD, 2020), which include communication, collaboration, information skills, and self-directedness.

National examinations mark transitions from primary to secondary to tertiary education in Singapore. Grades in English are significant at every stage of transition. The Primary School Leaving Examination (PSLE) assesses the academic abilities of almost all 12-year-old students. At higher levels, many students sit for the Singapore-Cambridge GCE O- and A-levels, though autonomous schools may offer the International Baccalaureate Diploma Program. Tertiary educational pathways include polytechnics and Institutes of Vocational Training (ITE) which offer a variety of diploma programmes and National ITE Certificate programmes. As competitive national examinations have been shown to have significant wash-back on ELT (Cheah, 1998) and place stress on families and learners, recent reforms aim to reduce competition and stress by removing some of the school examinations at primary level to encourage the joy of learning (Sng, 2022). The streaming or tracking of secondary school students has been abolished and replaced with full subject-based banding. This banding system consists of arranging students in mixed form classes (home groups) and assigning them to different classes for academic subjects according to ability (MOE, 2023b). The grouping of students by ability in a particular subject allows greater flexibility in customising teaching for individual needs (MOE, 2023b). The significant mindset shifts underlying these adjustments are greater attention to the individual learner and learning conceptualised as 'progress' rather than 'ability'. Classes are neurodiverse since learners with mild special educational needs (SEN) are included in mainstream education, resulting in efforts to differentiate instruction. Additionally, different educational pathways have been designed to accommodate students' diverse interests, talents, and needs. For example, there are schools in Singapore specialising in the arts, sports, mathematics and science, and SEN (MOE, 2025b).

The implementation of the National Digital Learning Programme was accelerated by the outbreak of COVID-19. Personal learning devices for all secondary school students in Singapore are funded by MOE, and classroom learning can be conducted by means of the Singapore Student Learning Space (MOE, 2025a). This online portal developed by MOE is for all subjects and supports teachers and their students in technology-enabled collaborative and self-directed learning with customised resources. In line with the government's intent to harness the potential of generative artificial intelligence (GAI), some AI learning tools have been integrated into the Student Learning Space to support greater customisation and differentiation of learning (MOE, 2025a). An example specific to ELT is the Language Feedback Assistant for English launched in December 2023 (MOE, 2023a), a tool used to correct the grammar and vocabulary of students' writing. This allows teachers more time to concentrate on other more complex aspects of writing, such as sentence structure, tone, and persuasiveness.

In recent years, there has been greater focus on child and human development in Singapore. Recognition of the importance of early childhood development has led to increased attention from MOE and the Ministry of Community Development, resulting in the development of a national

curriculum, and enhanced accreditation and training for teachers (Choo, 2010). The establishment of the Centre for Research in Child Development at NIE has increased research in ELT pedagogy, and bi/multilingual acquisition and development in early childhood. There has also been greater emphasis on adult learning, with career switching supported through the commissioning of courses under the broad umbrella of the SkillsFuture programme (Academy of Singapore Teachers, n.d.).

Having established the linguistic and educational context of Singapore, we move to review the research carried out from 2017 to 2023 in five themed sections: teaching the language skills, multiliteracies and technology, English as an academic language, bi/multilingualism/bidialectalism and English, and teacher education for ELT. We will survey and present examples from our set of 159 publications to achieve our aims of identifying and explaining current highlights, continuities, and changes in research direction, as well as those we anticipate.

4. Research in the English language skills

4.1. Reading and writing in ELT

In their review, Rubdy and Tupas (2009) expressed concern that research on reading and writing was pragmatic, and mostly had to do with immediate classroom problems. In contrast, the research in the period under review focused on studies of 'situated practice' that broadened the discussion to include issues of home-school literacies (Lim, 2021). Situated studies of literacy foreground equitable access to learning opportunities and highlight that language learning is a social practice which needs to be understood in context (The New London Group, 1996). Two key themes emerged from the articles reviewed in this section: emphasis on home-school connections in reading; and metacognition in writing.

With international studies such as PIRLS and PISA showing a decline in children's and adolescents' reading enjoyment internationally (Mullis et al., 2023), there has been increased emphasis on the need to promote a love for reading among Singaporean students (e.g. Teng, 2018). This might explain the growing number of studies examining the relationship between home and school resources from early childhood (e.g. O'Brien et al., 2020; Setoh et al., 2021; Sun & Ng, 2021) to primary school (e.g. Sun, Steinkrauss, et al., 2018; Sun et al., 2021) and adolescence (e.g. Loh & Sun, 2020; Loh et al., 2022). Studies on early learning show that home factors have an impact on the speed and breadth of language acquisition at school (e.g. Sun et al., 2021). However, the role of school remains crucial. In a study of 43 very young children, Sun, Yin, et al. (2018) found that the amount of English input and practice at school influenced children's development of English syntagmatic knowledge and vocabulary, which had implications for their reading acquisition.

A concern with declining reading enjoyment has also led to a focus on school library improvements as a way to encourage students' self-directed independent reading and to narrow the reading gap by providing them with access to books (Loh et al., 2017). Given developments in e-book technology and online reading resources, researchers have examined students' print and digital reading habits as well. The studies show that both children and adolescents continue to prefer reading in print (Loh et al., 2019; Loh & Sun, 2019; Loh et al., 2022; Sun et al., 2021), but students are also turning to online reading resources such as fan fiction and Korean webtoons, or to online comics (Loh et al., 2023). However, students who do not enjoy reading are more likely to be distracted by devices and are not likely to read frequently or enjoy reading (Loh & Sun, 2022). Thus, encouraging students' extensive reading with the aim of increasing enjoyment at both primary and secondary levels is vital for supporting developing readers (Hanington & Renandya, 2019; Renandya et al., 2018).

In the area of writing instruction, there has been a strong focus on metacognition in writing, especially that of younger learners (Bai, 2018; Cheung et al., 2021; Cheung & Jang, 2019). In a think-aloud study with 32 students aged from 8 to 12 from four primary schools, Bai (2018) found that students with high writing competence outperformed students with low writing competence in self-regulating their use of both metacognitive and cognitive strategies. The value of teaching

metacognitive approaches to writing is underscored by Cheung et al. (2021), who found that teaching primary four students (10-years-old) to regulate their writing through self-assessment was particularly helpful for low-achieving students, who showed the most improvement post-test, especially in the areas of story development, increased use of different words, writing lengthier texts, and improvements in accuracy. Studies of teachers in action have also shown that when teachers are more aware of different writing tools and strategies, from the use of grammar in writing (Xavier et al., 2020) to process writing (Cheung & Jang, 2019; Ng & Cheung, 2018), they are better equipped to develop students' metacognitive knowledge by scaffolding their writing through the development of enriched classroom resources, modeling, and other strategies.

A well-developed, comprehensive body of research continues to be built about reading and writing. We note a broadening of the agenda to students' interests, self-direction, and social equity. The conceptualisation of reading for the sake of pleasure is a move away from the traditional utilitarian view of extensive reading, recommended by teachers and parents to children and adolescents as a way of improving language skills. Psychosocial interventions in writing instruction show a theoretical alignment with the focus of the English Language Syllabus (MOE CPDD, 2020) on individual metacognitive regulation and development. There are gaps in coverage, given recent adjustments to the system. However, with the recent inclusion of those with mild SEN and full subject-based banding initiatives, as well as concerns with low-progress learners, we expect to see more research emerging on these aspects of diversity. Although work on home language and language acquisition is flourishing, the finding that school is a critical arena for language acquisition (Sun, Yin, et al., 2018) shows a need for research that recognises the fluid relations of the mother tongues and SCE in the development of English in school. While there are some studies at the primary level, there is an absence of studies of language acquisition at the secondary level. Finally, there is an urgent need to extend the scope of work in the digital space. Research on how print and digital resources can support independent reading across different grade levels has already begun and is likely to continue. There is also a need for research specifically from the standpoint of ELT to discover how effectively personal learning devices are being used in secondary schools to develop twenty-first-century competencies. How and whether GAI is implicated in the teaching of reading and writing is an associated area which is likely to attract researchers in the next few years.

4.2. Listening and speaking in ELT

Despite the significance of speaking and listening in language learning, research attention in Singapore is sparse, continuing the trend noted in the reviews by Rubdy and Tupas (2009) and Jones (2021). In the former, apart from a brief mention of pronunciation norms, oracy did not feature significantly, most likely due to the lack of research. In the latter, less work was recorded on speaking and listening compared to other language skills, and of the few studies available, the emphasis appeared to be on the final speaking product. Our review of research studies in speaking and listening identified two themes: firstly, the acquisition and development of the skills related to metacognitive and metalinguistic awareness, and secondly, the exploration of the dynamics of teachers' discourse in the classroom, which aligns with one of the focal areas of the English Language Syllabus (MOE CPDD, 2020): inquiry through dialogue.

Goh (2017) highlighted the importance of oral skills in the development of thinking and communicative competence, detailing key components of oracy knowledge. She considered this essential in the classroom, where the verbal mode is the main means through which learners think by clarifying their understanding, presenting ideas, and co-creating knowledge with the teacher and their peers in a variety of discourse domains. Sabnani and Goh (2021) investigated instructional methods teachers can employ to develop metacognitive awareness of person, task, and strategy to hone students' English-speaking skills at the primary level. This is especially important because in an English-medium curriculum, proficiency in speaking English is critical for students' mastery of the

other curricular subjects such as mathematics and science, which are taught in English. They advocate the use of the instructional scaffolds of critical reflection and self-monitoring as a means by which students can connect prior experiences to given tasks which depict the happenings and experiences of their daily lives, and explicit instruction providing vocabulary and prefabricated chunks of language for the immediate participation of learners in activities. Both studies offer teachers clear pedagogic direction, as does Sabnani (2019), who demonstrated how classroom research findings may be readily translated into school application to enhance the teaching and learning of speaking, offering authentic contexts for instruction.

Another angle in research on speaking and listening is evident in two discourse analytic studies of teacher language in classroom interaction. Ong (2019) analysed teachers' discourse aimed at focusing learners' attention on target vocabulary and its relative effectiveness in eliciting the meanings from students in an English comprehension lesson. The findings of the initiation-response-follow-up (IRF) pattern, however, revealed students' short turns, as well as the fact that teachers' elicitations focused on checking answers, with only a short amount of time given for expected responses. Ong (2019, p. 119) described the interaction as being 'devoid of dynamic negotiation of the meanings between the learners, teacher, and text'. A study by Ng et al. (2021) on the less-researched area of preschool students' show-and-tell performances focused on teachers' interactive strategies in four language classrooms: English, Chinese, Malay, and Tamil. Ng et al. (2021) found that teachers used questioning most frequently in all languages but noted a lack of wait time. There was greater teacher modeling and greater interaction in general in the English classroom. Their data showed self-initiated talk as the most frequent type of children's talk and that children were more willing to respond verbally and by gesture than not. More research is warranted in this area due to the possibility of children becoming less enthusiastic about speaking in relation to a teacher's discourse moves and the transition from preschool to primary. The dearth of research in the past means that there is now a critical need for oracy research not only for teachers' professional development in pedagogic interaction skills, but also for its role in the development of children's thinking and access to the school curriculum. Since the area is associated with an important syllabus focus and likely to attract funding, we are optimistic that oracy research will advance in the future.

Research on young children's bi/multilingual oral language acquisition has produced findings on metalinguistic awareness and the uptake of different types of language input (Li et al., 2022; O'Brien, Mohamed, et al., 2019; Sim & Post, 2022; Singh et al., 2018). Local research confirms international findings about the importance of phonological awareness in language development and as a foundation for early reading. In their examination of bilingual children's phoneme awareness and oral language skills, O'Brien, Mohamed, et al. (2019) identified aspects of phonological processing linked with literacy development in English and other alphabetic languages. They highlighted the importance of both the linguistic environment and the effect of vocabulary knowledge and phonological awareness on children's oracy development. Singh et al. (2018) researched children's phonological development, specifically tone awareness, and found that it developed in young English monolinguals and Chinese monolinguals but not among English/Chinese bilinguals at the ages of six and nine months. Two studies showed the effects of home linguistic input on acquisition. Sim and Post (2022) found that young children acquiring English were sensitive to their mothers' production of coda stops and similarly produced their own. Li et al. (2022) found that structures of home language input, such as both parents speaking the same language or each parent speaking a different language, affected the development of children's interrogatives in both Chinese and English. The significance of family linguistic input and parental beliefs (discussed in Section 6) on children's bilingual language development, especially in relation to the acquisition of English, warrants continued research in homes, and on ELT at preschool and during the transition to primary school.

Although research in the area of speaking and listening is limited, it is productively located in two of the focal areas of the English Language Syllabus (MOE CPDD, 2020): metacognition and inquiry through dialogue. Both output skills of writing and speaking have been researched in terms

of metacognition, validating the value of output in developing learners' awareness of language in the local context (Swain, 2005). Additionally, work by Ong (2019) and Ng et al. (2021) highlight the importance of teachers' use of language and their awareness of it when encouraging learner output.

5. Research in Multiliteracies and Technology

The concept of multiliteracies, coined by The New London Group (1996), highlights diverse and multimodal forms of literacy, with an emphasis on ensuring equitable access to learning. While not a focus in the review by Rubdy and Tupas (2009), research in this field has been growing both internationally and in Singapore, especially with the inclusion of multiliteracies as a focal area of the Singaporean English Language Syllabus (MOE CPDD, 2020), which adopts the current broad conceptualisation of multiliteracies including psycholinguistic, sociocultural, and developmental processes alongside attention to the purposes and interrelations of multimodal and multilingual texts. It is the affordances of multimodal texts leading into the application of close, complex, analytical, reflective, and transferrable interpretive and expressive language skills that take students beyond single-dimension print literacy. However, educators throughout the world struggle with the applications of multiliteracy theory in teaching and learning due to a lack of resources and a lack of metalanguage (e.g. Dallacqua et al., 2015). In Singapore, multiliteracies are instantiated in the syllabus in such a way that they are not viewed as separate skills; rather, viewing is connected with reading, while representing is connected with writing. Research has examined how multiliteracies can be taught in Singaporean schools, mostly in secondary school classrooms (Anderson et al., 2017; Kiss & Mizusawa, 2018; Lim & Nguyen, 2022; Lim & Towndrow et al., 2021; Lim, Weninger, et al., 2021; Mizusawa, 2021), with some studies in primary school classrooms (Lim & Tan, 2021; Lim, Towndrow, et al., 2021). Many studies focused on teachers' implementation efforts and were thus informed by concepts in reading and writing development (Lim et al., 2022; Lim, Towndrow, et al., 2021; Mizusawa, 2021). For example, Lim and Tan (2018) described a study in which an intervention was carried out to enhance the teaching of language skills with the incorporation of multimodality. The study illuminated teachers' efforts to incorporate digital literacy into their teaching and deepen students' appreciation of its value in honing their twenty-first-century language skills. Lim & Towndrow et al. (2021) offered perspectives on scaffolding the teaching of viewing and representing through the examination of primary school teachers' use of multimodal texts. They highlighted the importance of technology and social media for collaborative learning and peer feedback, suggesting that these modes are particularly useful for instruction as they increase engagement and serve largely as an extension of social practices.

Some studies pointed to the tension between policy intent and constraints on the part of the teachers, in terms of their beliefs, skills, and the enactment of a multiliteracy pedagogy. For instance, Lim et al. (2022) studied five teachers' multimodal classes and found that teachers were uncertain about the teaching of multiliteracies. The authentic texts they used to connect with students' 'life worlds' (The New London Group, 1996), or the personal and sociocultural experiences that they bring to the classroom, tended to be perceived and used as language learning tools rather than 'to broaden the students' repertoire of multimodal literacy' (Lim et al., 2022, p. 388). Lim et al. (2022) discovered teachers' somewhat essentialised view of multiliteracies, which Kiss and Mizusawa (2018) suggested was a result of reducing the syllabus to text types and standardising English, consequently divorcing writing from its sociocultural contexts. In the area of media literacy, Weninger et al. (2017, p. 437) similarly found that teachers and students had 'a traditional notion of media literacy that focused on critical analysis and audience effect', in contrast to the expanded notion of 'creative expression and production' of the English Language Syllabus (MOE CPDD, 2020) (see also Weninger, 2018). Therefore, research on teacher support is particularly welcome. For instance, Toh and Lim (2021) recognised the need to support teachers in the unfamiliar arena of digital play and proposed a metalanguage to facilitate game design.

Our review examined studies on the role of technology across various age groups in multi-modal ELT, termed 'e-pedagogies' in Singaporean schools. O'Brien, Habib, et al. (2019) researched technology-based interventions for young learners, finding varied levels of success for students of different profiles. Yow and Priyashri (2019) addressed concerns about potential cognitive overload in young learners in a digitised environment. They investigated the in-built audio and visual features of narration and animation in single and dual language electronic books, finding that when synchronised, these two features helped young bilingual readers engage with print media in both their dominant and non-dominant languages. Choy and Cheung (2022) examined the participation of 408 students in self-directed learning and collaborative learning during process writing, using graphic organisers, Grammarly (an AI-assisted writing tool), and Padlet (an online post-it wall for collaborative work) for peer feedback. Students demonstrated more favourable perceptions of self-directed learning and collaborative learning in non-online environments compared to technology-enabled ones, but more targeted instruction in the experimental group helped them to respond more positively towards technology-enabled learning. Given the move towards blended learning in a post-COVID age, it seems crucial to help students become learners who are competent in the use of information and communications technology (ICT).

Multimodal texts in the form of digital stories is another area that has been explored. Towndrow and Pereira (2018) used digital storytelling to hone thinking skills, while Liang and Lim (2021) turned to video narratives in their conceptualisation of a secondary school lesson package. Anderson et al. (2017) studied how a group of students experiencing difficulties with language created a set of persuasive multimodal texts. They observed that the mode of presentation allowed the students to design complex texts while exploring their own positioning in relation to classroom practices. All of these studies connected secondary school students' experiences with social media and outlined considerations with respect to task knowledge, provision of content, and supervision of production to enable the fluent articulation of students' ideas. At an institute of higher learning, Tan (2018) trialled the designing of meaningful gamification for the flipped classroom, resulting in improvements in students' competence, motivation, and progress in reading. Finally, Shibani et al. (2017) focused on learning analytics in the pedagogical use of asynchronous chats to help students practice language and work together in groups. As online learning becomes increasingly common, the use of learning analytics may be better able to support personalisation for large classes.

Multiple examples demonstrate how research on multiliteracies and technology has advanced in Singapore, responding to the call for more situated, sociocultural studies. With greater access to technology in the classroom through the National Digital Learning Programme initiative, the Student Learning Space, and GAI, this area of research is predicted to grow steadily. Furthermore, research technology related to learning, such as eye tracking and wearable sensory devices, may be applied to ELT for researchers to consider students' perspectives and emotions in relation to their classroom experiences. Particularly significant are findings about teacher insecurity with regard to assessment and teaching multiliteracies. Since multiliteracies would not have been incorporated into many senior teachers' pre-service education, these findings underscore the necessity of continual professional development. This points to a pressing need to research how best to support teachers in building their knowledge of twenty-first-century theories and practices.

6. Research in Bi/Multilingualism/Bidialecticism and English

In this section, we review work in bi/multilingual/bidialectal language acquisition as well as additive pedagogies. Research on bi/multilingual language development which is specifically located in reading and oral development has been reviewed in their respective sections of the paper. A review by Rubdy and Tupas (2009) showed independent research conducted on the mother tongues and English in Singapore. However, current research reflects theories of integrated bi/multilingual development and shifts in policy evident in the English syllabi from 1991 to 2020. The English Language

Syllabus (MOE CPDD, 1991) initially treated English as a 'first language' (Rubdy & Tupas, 2009), while the syllabus of 2001 (MOE CPDD, 2000) recognised differences in learning English in monolingual and multilingual contexts. There is a similar acknowledgement in the 2020 syllabus (MOE CPDD, 2020, p. 15), with advice for teachers to differentiate their instruction accordingly. The remarks in successive syllabi show a shift over time from pedagogies designed for first language learning to 'a principled blend of first language (L1) and second language (L2) methods' (MOE CPDD, 2020). In line with international theorising, this area of research reveals unique developmental patterns in language acquisition of the multilingual individual, highlighting how individuals deploy language skills in their learning of English (Garcia, 2000). Key themes present are attitudes and perspectives on language; the contrast between the separation of languages by curriculum and policy in schools and the developmental intertwining of languages in the psychology of the individual in research; and the challenging quest for pedagogies suited to English-medium instruction in a multilingual environment.

Family attitudes to language is a prominent area of research. Studies of families with young children describe parental views on language adoption which drive family language policies and behaviours. For example, research on Malay families showed parental acceptance of children adopting English once in school (Mirvahedi & Cavallaro, 2020) and, conversely, parents resisting the dominance of school English to construct and preserve Malay identities (Cheng, 2020). Cavallaro et al. (2021) demonstrated how family socialisation determines and supports the continued use of and positive attitudes towards English and Chinese by young bilinguals. Although Singapore's bilingual policy has been in place since the 1960s and there has been theoretical commentary and research on the relative positioning of Singapore's various languages including SCE, there has been little research on the attitudes of those who have lived through it. Such research is gradually emerging. For example, Leimgruber et al. (2018) surveyed 450 students from Singaporean institutes of higher learning and found that multilingualism was the norm among them. The students valued proficiency in English over proficiency in the mother tongues, but had positive attitudes towards the bilingual policy. The students from universities and Institutes of Technical Education, in particular, held positive attitudes towards SCE. S. Y. E. Lee and Ahn (2021) uncovered mixed feelings about SCE in interviews with Singaporean undergraduates living overseas, who perceived SCE as a solidarity marker but considered it a low variety exclusive to Singaporeans. Such perception studies among young adults reflect their appreciation of and alignment with the relative value of languages under the bilingual policy. Nonetheless, speakers are aware of linguistic variation and when in Singapore, claim SCE as their own.

There is an interest in research on the acquisition of vocabulary in young bilingual learners (e.g. Setoh et al., 2021; Singh et al., 2022, 2018; Sun, Yin, et al., 2018). Setoh et al. (2021) identified some language-specific effects and commonalities across languages in lexical development. Singh et al. (2022) found influences of socio-economic status, gender, age, and exposure to English among young multilinguals from diverse economic backgrounds. They also created the first descriptive norms for children's development of English vocabulary in multilingual settings. Sun, Yin, et al. (2018) examined the influence of internal and external factors on the development of vocabulary in young bilinguals (speakers of English and a mother tongue at about four years of age). They found that internal factors accounted more for variance in English vocabulary knowledge, while external factors such as exposure to the mother tongues were more significant for mother-tongue vocabulary knowledge. This study adds to the findings of Mirvahedi and Cavallaro (2020), Cheng (2020), and Cavallaro et al. (2021) in underscoring the importance of the home environment and parental attitudes towards language when it comes to children's bi/multilingual linguistic development.

Other research that adopts a bi/multilingual standpoint examines preschool children's code-switching. Wu et al. (2021) studied the quantity of children's code-switching in school in relation to their home bilingualism, drawing from the Singapore Early Child Mandarin Corpus. They found

that code-switching was common and increased with age. Key findings were related to parents' use of language in homes; incidences of preschoolers' code-switching was influenced by having at least one bilingual parent, parental beliefs in the value of bilingualism from an early age (see also Cheng, 2020), and input patterns in parents' language (see also Li et al., 2022; Sim & Post, 2022). As discussed by Wu et al. (2021), work in Singapore in this area has been largely descriptive; longitudinal research investigating the productivity of code-switching in bilingual language development would help to validate the conclusion that 'code-switching plays an important and positive role in language development of bilingual children' (Yow et al., 2018, p. 1086). Apart from research on language acquisition in bilinguals, Hast (2022), in a singular study, investigated scientific concept development among young English-speaking bilinguals who also spoke Chinese, Malay, or Tamil at four, seven, and ten years of age. He discovered that exposure to a home language with a broad definition of a concept (in the case of his research, an 'animal') facilitated children's understanding of the concept in English for science instruction in school. Collectively, these studies illuminate not only the effects of bilingualism on English language development but also on cognitive conceptual development and the relationship between the two, as theorised by Vygotsky (1962) and Bloom (2000).

Recognition of Singapore's multilingualism and bidialectalism has catalysed research in additive pedagogies. With respect to ELT in secondary schools, Tupas (2018) and Seilhamer and Kwek (2021) advocated a bidialectal pedagogical approach which would validate the use of SCE in classrooms as students explore and negotiate their understandings of learning English and learning in English. Lu (2023) offered an example of such a pedagogy in a secondary school intervention. He found that the approach could aid students' development of critical language awareness. Tupas and Weninger (2022) illustrated a young teacher's struggle to reconcile political and experiential knowledge of standard English used in the English-medium curriculum with both her own and the students' knowledge of SCE. In research involving children with low progress in primary school, Vaish (2019a) found that when translanguaging was used judiciously and systematically, it helped low-achieving children notice language and develop metalinguistic awareness. Some difficulties in implementing translanguaging acknowledged by Vaish (2019b, 2021) included the multilingual composition or 'superdiversity' (2019b, p. 286) of the class in relation to the bilingual profile of the teachers; the difficulty in evaluating the efficacy of translanguaging; and the structure of the customary pedagogy in the Learning Support Program for learners with low progress which constrains the cognitive fluidity required for translanguaging. Additionally, Vaish (2019b) found that some children were unenthusiastic about the mother tongues, which would presumably affect their motivation for learning (see also the attitudinal research with young adults by Leimgruber et al., 2018, and S. Y. E. Lee & Ahn, 2021). Other research involving children with low progress comes from Jones (2018), who employed assessment for learning (AfL) techniques to analyse reading and writing tasks of two nine-year-old children, demonstrating the need for guided, additive cross-linguistic pedagogies and contrastive analysis by teachers which could draw on children's knowledge of SCE and their mother tongue. Similar to the studies by Vaish (2019a, 2019b, 2021), the findings of Jones (2018) suggest that the fluidity of children's linguistic knowledge was unaccounted for in the standard materials and scaffolding provided in the tasks. The search for additive pedagogies appropriate for the diverse multilingual classroom continues.

Research on bi/multilingualism/bidialectalism and English is a growing field. The Centre for Research in Child Development at NIE has produced much research related to language acquisition and development in early childhood in Singapore. There has, however, been relatively little attention to language acquisition and development among secondary school students. Some of the reviewed research on bi/multilingualism/bidialectalism and English suggests a fluidity in children's multiple linguistic resources, which may reflect the cognitive flexibility of twenty-first-century competencies. This presents an opportunity for local research to focus on the acquisition and development of both language and cognition.

7. Research in English as an Academic Language

Our review shows English positioned as an academic language in the English-medium curriculum. The studies reviewed are inspired by theories about the importance of language in individual cognitive development (e.g. Bloom, 2000; Vygotsky, 1962) and the concept of language specificity in discourse communities (e.g. Gee, 2000). As is the case internationally, there are two strands of research in Singapore in this regard: the first is disciplinary language and literacy in school subjects (e.g. Schleppegrell, 2001; Unsworth, 2001), and the second is language instruction in English for Academic Purposes (EAP) in the institutes of higher learning. Continuing the general trend noted by Rubdy and Tupas (2009), research into English as an academic language focuses on classroom practice with local calls for disciplinary literacy rather than general academic literacy. For example, Green and Lambert (2019) noted the remarkable linguistic variation across disciplines evident in corpus research, while Seah and Yore (2017) argued for disciplinary literacy even in the primary curriculum, traditionally a level of schooling taught by generalist teachers.

Studies on disciplinary literacy show how teachers strive to build their multilingual students' academic language while at the same time enabling them to use language to learn content in an English-medium multilingual context. Jones and Seilhamer (2019) found that although mathematics teachers recognised the importance of learning mathematical language for their primary school students, they conceptualised it largely as technical vocabulary. Green and Lambert's (2019) construction of secondary phrase lists suggests that learning disciplinary phrases is as crucial as learning individual words. In Seah and Silver's (2020) case studies, all three teachers taught academic vocabulary. However, one was notably more effective, using students' own writing to draw them into making language and content connections. Seah and Silver (2020, p. 2467) cautioned that assessing science writing merely for accuracy is insufficient for developing scientific language; instead, teachers 'need to entertain the possibility that students' inappropriate use of language could be a conceptual and/or representational issue'. In a study of collaborative classroom discourse in secondary school computer-supported physics lessons, Tang and Tan (2017) found that teachers might be implementing pedagogies without an awareness of an underlying linguistic rationale. Similarly, Jones and Seilhamer (2019) observed that teachers in their study were unaware of the potential effects of the grammatical complexity of their own instructional language on students' learning. This group of studies suggests a strong teacher belief that academic language consists of lexis rather than lexicogrammar or cognition represented in language. The studies also demonstrate how teachers' beliefs affect their practice, as is the case in international research on teacher cognition.

Another strand of research focuses on EAP in institutes of higher learning. Singaporean university students tend to possess a relatively high standard of English proficiency (Brooke, 2018; Frattarola, 2023). At the same time, foreign students for whom English is a non-dominant language may require additional support (Brooke, 2018; Jaidev & Chan, 2018). While some articles tended to be descriptions of EAP courses (Jaidev, 2021) or teacher reflections (Brooke, 2017; Jaidev & Chan, 2018), others examined the impact of EAP interventions within Singaporean institutes of higher learning. For example, Frattarola (2023) offered a comprehensive review of tertiary-level writing courses in Singapore through a survey study of the background and pedagogical approaches favoured by tertiary-level writing teachers in Singapore. The study revealed that most teachers have a linguistics background and adopt an EAP approach. She also observed that many teachers employed a blended approach, integrating EAP with composition studies where the emphasis is on 'critical thought, identity formation, and civic engagement' (Frattarola, 2023, p. 2). Evidence of both emphases is present in the articles analysed for this section (see also Brooke, 2018; Sim, 2021). Studies involving students from institutes of higher learning examined student responses to feedback (Song et al., 2017), their ability to evaluate suitable words or phrases within their disciplinary discourse (Loo, 2022), and support for their academic writing tasks (Wong et al., 2017).

Of the two research strands reviewed in this section, the research prognosis is better for EAP in institutes of higher learning than it is for disciplinary literacy in secondary schools. Given the growing

number of institutes of higher learning in Singapore, policy support for lifelong learning under the SkillsFuture initiative, and the recognition of the role of language in developing cognition and twenty-first-century competencies such as criticality in EAP courses, research in this area could increase in coming years. In contrast, there have been few recent studies on disciplinary literacy despite the finding that many teachers, both of English and other subjects, consider disciplinary literacy to be primarily about lexis. This can be attributed to some degree to the categorisation of teachers' roles as language or subject teachers (e.g. Garces-Bascal et al., 2018) and the segmentation of the curriculum, as noted by Jones (2021) in her review.

8. Research in Teacher Education for ELT

Considering the influence of teachers on students' educational outcomes (Darling-Hammond, 2006), it is surprising that few studies in Singapore tackle the issue of teacher education head on, and none in the 2009 review. Many research studies provide insight into the dynamics of teaching and learning in classrooms, however, these take the form of implications in publications rather than intentional examinations of teachers and teaching. In contrast, Goh (2017) took three findings from research on the teaching of speaking and listening, demonstrated their strengths, and suggested instructional strategies to apply them to a local context. In her review of ELT, Jones (2021) catalogued implications for teaching and suggested future directions for research based on them. Both types of publications – involving the extraction of specific findings, and the reviewing and cataloguing of a range of findings – are helpful for teachers interested in translating research to practice. They are useful for educators seeking a prioritised and organised compilation to select from, and equally useful for researchers who would like to know what kind of research would be helpful for teachers and learners in a Singaporean setting. As the body of research grows, it will become increasingly important to investigate ways to communicate findings to teachers, particularly where gaps in their knowledge have been revealed. Innovations in research translation also constitutes a potential area for research.

Some work on teacher education in ELT focuses on teacher knowledge and awareness. While Lim and Nguyen (2022), Xavier et al. (2020), and Teo (2017) reported different approaches to professional development in teaching, all of them involved teachers' grounded reflection, knowledge building, and analysis. As Teo (2017) explained, a degree in English language or linguistics is not part of the entry requirement for a postgraduate diploma programme for prospective English teachers in Singapore. This might explain teachers' insecurities in knowledge discovered in these studies; in particular, knowledge of grammar among primary school teachers (Xavier et al., 2020), and knowledge of multiliteracies (Lim & Nguyen, 2022) and language (Teo, 2017) among secondary school teachers. In these studies, teachers' knowledge was built through workshop discussions or the examination of classroom data, as well as the co-construction of teaching materials (Lim & Nguyen, 2022; Xavier et al., 2020). These findings provide further evidence supporting the conclusion of Jones (2021) that teachers' knowledge of texts and language requires augmentation. The studies also show participating teachers gaining confidence (Lim & Nguyen, 2022) and shed light on the metacognitive and metalinguistic awareness necessary for change (Xavier et al., 2020) during the interventions.

Research studies on teacher education which focus on small groups of teachers are necessarily labour-intensive for researchers. However, teacher preparation courses which draw from the findings of such studies have the opportunity to put research findings into practice and reach more teachers. Chia et al. (2021) described their design for a pre-service professional practice and inquiry course in a concept paper supported by the reflections of five English language teachers. The course drew from aspects of the university and school practicums and aimed to position the teacher as agentive and reflective, and thus prepared for self-directed learning in future professional development. It was designed to help early-career teachers develop their twenty-first-century competencies, allowing for a move away from syllabus dependence (Teo, 2017), lesson proceduralisation and decontextualisation (Kiss & Mizusawa, 2018), and preteaching for national assessments (Poh, 2021). The familiar themes

of knowledge, awareness, and reflection were evident in research at institutes of higher learning as teachers reflected on their own practices in EAP courses (Brooke, 2017; Brooke et al., 2019; Weninger, 2020). On one hand, the reflective frameworks discussed in these articles are helpful in demonstrating how reflections may be researched; on the other hand, the actual content of the teachers' reflections illustrated how self-perceptions may exist in tension with student perspectives on the role of the teacher, while also providing insight into students' conceptions of knowledge construction.

Other studies examined teachers' experiences and subjectivities, suggesting how tensions develop and are reshaped into particular cultural models of practice among teachers of a range of ages and career stages (Pereira, 2018; Poh, 2021). Poh's (2021) questioning of the theory–practice gap in education led him to argue for a more complex and critical theory of pre-service education. He found three novice English language teachers reformulating their cultural models of practice to align both with the pressures experienced in schools and the politics of the work ethics of meritocracy and pragmatism. Practice was related to examinations, and to being practical, efficient, and effective teachers. Pereira's (2018) study of the reflections of nine English teachers with three to 30 years of experience produced similar findings. By critically examining interview data through an ethics of care lens (Noddings, 2012), Pereira (2018) discovered how feelings were linked to school appraisal systems and the demands of the syllabus, school, and national assessment. Teachers felt frustrated that the pressure to perform efficiently affected their care of students and the pedagogies they were able to employ. Thus, through critical and cultural analyses, Pereira (2018) and Poh (2021) highlighted teachers' cognitive and emotional conflicts, described as 'struggles with formidable constraints' by Rubdy and Tupas (2009, p. 336).

Another innovative study spotlighted tensions between the English-medium education policy and its bi/multilingual and bidialectal participants. D. H. L. Lee and King (2022) explored how teachers' home language experience affected their predisposition towards student-centredness and risk-taking in their teaching of English. They found that Chinese as a home language had an influence on student-centred practice, mediated by risk-taking. The writers argued that bilingual education policies have a delayed effect on education, shaped by the cultural beliefs associated with teachers' home languages. They further suggested that blended bilingual experiences in childhood would result in bilingual speakers with locally situated identities rather than coordinate or sequential ones (Nguyen & Ahmadpanah, 2014, as cited in D. H. L. Lee & King, 2022). This could lead to greater cognitive flexibility among teachers.

The number of research studies that focus on English language teachers is limited. With more research in the future, greater coherence in this area can be achieved. Our review of research on English teachers in Singapore highlights the significant potential of teacher reflection, teachers' reception of new concepts, and the productive nature of the researcher-teacher relationship in the development of ELT knowledge and pedagogies. At the same time, research in multiliteracies and bi/multilingual/bidialectal acquisition reveals teachers' insecurities with respect to their knowledge, emphasising the need for support and guidance. A valuable pursuit in the future will be to identify the most effective and scalable models and timing for professional development in ELT in a local context. In addition to research on teacher knowledge and pedagogies, research on English teachers' experiences, perceptions, and emotions (D. H. L. Lee & King, 2022; Pereira, 2018; Poh, 2021) can provide further insight into the successes and challenges faced by teachers in their educational settings.

9. Conclusion

Our review period saw significant research activity in ELT in Singapore with a broadening of perspectives in the areas of theory, location, and life stage, as well as a wider range of research approaches as compared to Rubdy and Tupas (2009). In terms of research on reading and writing, multiliteracies, and technology, we observed continuity and a forward-looking agenda which aims to expand on and improve existing pedagogy (e.g. Lim & Nguyen, 2022; Sun & Ng, 2021). Policy imperatives such

as full subject-based banding, the National Digital Learning Programme, and reductions in summative assessment have implications for ELT and can be taken into consideration in future research. This emphasis is also reflected in the recent English Language Syllabus (MOE CPDD, 2020) which stresses multiliteracies, metacognition, and inquiry through dialogue and twenty-first-century competencies.

Research on digital tools and digital environments of ELT is advancing (Shibani et al., 2017; Tan, 2018) and given the potential for new technology and e-pedagogies, it is likely to substantially improve teaching by enhancing student engagement in self-directed and collaborative learning. This review encompasses studies investigating a range of age groups, tools, and language purposes. Policies and initiatives such as the National Digital Learning Programme, Student Learning Space, and the provision of personal learning devices to all secondary school students grant students access to digital tools and environments. This provides a space for researchers to investigate outcomes in education, particularly in relation to twenty-first-century competencies. We also expect to see an increase in the use of technology in research design. For example, eye-tracking, brain imaging, and portable sensory devices can be employed to examine cognitive and affective processes. The use of GAI in ELT classrooms is likely to produce new insights into teaching and learning, too. As such, research into the quality and benefits of such data, as well as the ethics of its collection and use, should begin now (Hobbes, 2020).

While there is an expanding body of research on the syllabus focus of multiliteracies, and the theme of metacognition is seen in research on writing and speaking (e.g. Bai, 2018; Ng et al., 2021; Sabnani & Goh, 2021), the theme of inquiry through dialogue is less evident. Similarly, the skills of speaking and listening, while gaining more attention in research, continue to be understudied in multilingual Singapore. On the other hand, studies focusing on spoken interaction in classrooms – including teacher talk, questioning, and scaffolded class discussions – reflect an important turn in ELT research, as they have the potential to impact teaching and learning in a multilingual society (e.g. Ng et al., 2021; Ong, 2019).

Classrooms are complex as students are neurodiverse and differ in terms of pace of progress, dominant languages, and socio-economic backgrounds. This diversity is acknowledged in a variety of themes, for example, research on reading with an equity perspective. However, it is most apparent in the topic of additive pedagogies for learners with low progress (e.g. Tupas & Weninger, 2022; Vaish, 2019a). Steps have been taken to suggest appropriate accommodations for diverse learners in ELT in Singapore. Yet, ELT-specific work on neurodiversity is still lacking. This is pressing in light of the inclusion of those with mild SEN into mainstream education, which has been promoted by MOE over the last decade.

Research on the bi/multilingual/bidialectal language development of young learners has continued to grow, although research on secondary school students is still lacking. Studies on young children's cognitive and linguistic development reveal the intricacies of the relationship between language and cognition in a multilingual brain (e.g. Hast, 2022; Setoh et al., 2021; Singh et al., 2022). For instance, the application of cognitive and linguistic strategies by multilingual learners varies depending on their knowledge of different languages. Children's use of such skills suggests a potential for cognitive flexibility, which might aid their development of twenty-first-century competencies. While this research contributes to international theory, the challenge for Singapore lies in utilising locally situated findings to improve teachers' knowledge of language and language development, and by extension, enhance their teaching practices.

Although there have been few studies on ELT teacher education, they are significant in setting the direction for future research in this area in Singapore. This theme encompasses research on pre-service courses, small-scale pedagogic interventions in schools with teachers, and research attending to participants' views. The focus on the classroom has produced similar findings as research on multiliteracies, language skills, and English as an academic language suggest English teachers' insecurities are in specific areas of knowledge, mainly, language, language awareness, and the use of language in teaching and learning. Paradoxically, research with a focus on language itself, such as the theme of

English as an academic language, has decreased. It is not clear from our review whether such a critical focus will resurface in the future.

Research on ELT teacher education in Singapore (e.g. Teo, 2017; Xavier et al., 2020) highlights the need both for systematic in-service teacher education as well as further research into models of teacher professional development specifically for English language teachers. Additionally, tensions between teachers' personal aspirations and the demands of policy, syllabus, and assessment have surfaced in critical and cultural research focusing on participants' beliefs and attitudes (e.g. Pereira, 2018; Poh, 2021). This area requires urgent attention given concerns about teachers' well-being, which affects their recruitment and retention, and in turn has an impact on student learning.

Research involving teachers in Singapore (e.g. Kaur, 2021; Kaur & Lim-Ratnam, 2023) showcases how assessment determines and constrains teaching pedagogies, highlighting the need to support the development of teachers' assessment literacy. We found only two studies on assessment in ELT within the review period (Kaur, 2021; Kaur & Lim-Ratnam, 2023) which focused on formative assessment. According to the authors, greater knowledge about the theory and practice of assessment in relation to teaching and learning (e.g. Winch et al., 2014) would better equip teachers to adapt their teaching practices to suit the needs of learners. Considering the importance of formative assessment in personalising learning for diverse learners, this is a research area which could support previously mentioned concerns. Researchers (e.g. Mizusawa, 2021; Poh, 2021; Weninger, 2020) have pointed out that national high-stakes assessments can limit teachers' pedagogies, priorities, and appetite for experimentation. However, these studies tend not to focus on assessment practices; rather, findings related to assessment are embedded within revelations about teachers' beliefs or explanations of teacher practices. We propose that researchers build on the opportunities provided by these conclusions to develop research centred around assessment. Studies can be designed to systematically investigate teachers' beliefs, explanations, mindsets, and practices with respect to both formative and summative high-stakes assessment. This will provide an empirical basis for the development of policy, practice, and teacher education.

Research on perceptions and attitudes of teachers and students has emerged across themes. For example, ELT research in institutes of higher learning is a recent development and provides a historical or semi-longitudinal perspective on students' views of language and language use. Against the backdrop of Singapore's bilingual policy, other local findings have been made concerning people's attitudes towards languages and varieties in homes, schools, and institutes of higher learning (e.g. Cheng, 2020; D. H. L. Lee & King, 2022; Leimgruber et al., 2018; Tupas & Weninger, 2022). Such an orientation in research in ELT is welcome and will provide relevant insights for the consideration of educators and policymakers.

Research has the potential to offer evidence of practice and inspire action. Although the focus of this review was not on research methods, it is worth noting that the reviewed studies demonstrate a research ecology comprising of varied data collection methods and sample sizes. Classroom and school-based studies continue to yield rich insight, and the system may be ripe for larger scale or longitudinal studies tracking teacher and student change across time which could complement small-scale studies. With funding and investment in ELT research, a perennial challenge is how to translate findings into practice. We hope that this review provides a solid, comprehensive overview of recent ELT research in Singapore, including its contributions and gaps, and by so doing, offers a starting point for educators, scholars, and researchers looking to research ELT in Singapore.

Competing interests. The authors declare none.

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Sally Ann Jones is Senior Lecturer at the English Language and Literature Department at the National Institute of Education, Nanyang Technological University, Singapore. She has taught in schools and now in teacher education. Her teaching and research centre on language in education in multilingual contexts – as cognition and as culture.

Chin Ee Loh is Associate Professor at the English Language and Literature Department and Associate Dean (Impact and Partnerships) at the Office for Research at the National Institute of Education, Nanyang Technological University, Singapore. Her research focuses on young people's reading and the role of school libraries as learning environments.

Robbie Lee Sabnani is Program Leader and Lecturer at the National Institute of Education, Nanyang Technological University, Singapore. Her interests include speaking and listening, metacognition, and the development of teacher expertise. She publishes on education research and language instruction, and contributes to theory-building and practice through invited keynotes and conference presentations.