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Trilingual and biliterate language education policy in Hong Kong: past, present and future

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Abstract

Hong Kong's 'trilingual and biliterate' language policy (TaB, 三語兩文) is almost as old as the special administrative region (SAR) itself. Through free education and language support measures in school, students are expected to be conversant in English and Putonghua in addition to Cantonese, and be able to read and understand written Chinese and English. After being implemented for over two decades, however, there are signs that most students' language standards in Chinese and English fall short of the TaB target, as measured by the public examination results of successive generations of secondary school leavers. Designed with essentially Cantonese-dominant Hongkongers in mind, the TaB policy consists of many measures, with the 'medium of instruction streaming policy' introduced since September 1998 being the most controversial. Driven by the twin principles of monolingual English-medium instruction (EMI) and 'no language mixing allowed', secondary schools are divided into two streams. Stringent requirements must be met before a school could claim to be an EMI school. According to this 'late immersion' model for students aged 11–12 at secondary level, every year about 30 percent of the primary school leavers are allocated to an EMI school. Following Li (*Multilingual Hong Kong: languages, literacies and identities*. Springer, Cham, 2017), this paper will first discuss why the TaB target is such a tall order for Cantonese-dominant students by reviewing the relevant literature along five inter-related dimensions: contrastive linguistics, psycholinguistics, sociolinguistics, cognitive neuroscience, and instructional strategies and bilingual pedagogies. I will then examine the SAR government's language support measures to assess their effectiveness and explore possible alternatives. The paper will end with a number of recommendations, which together constitute an LPP (language policy and planning) roadmap for improving the chance with which the TaB policy is likely to produce more positive outcomes. (i) To re-prioritize the investment and extent of language support by strengthening the quality of language input at the key stages of learning from age 3–9, which in curriculum terms correspond with K1–P3; (ii) To use Cantonese as the medium of instruction for teaching all subjects except English and Putonghua as separate subjects at pre-school (K1–K3, age 3–6); (iii) To explore the possibility of implementing total immersion in Putonghua for three years at lower primary level (P1–P3, age 6–9); (iv) To abandon the 'maximum exposure, no mixing' dogma in secondary education and to encourage basic and action research in bilingual pedagogies and instructional strategies informed by Content-and-language integrated learning (CLIL); (v) To attract academically bright and linguistically gifted students to receive professional training and be prepared and committed for a career in language teaching; and (vi) To encourage civil servants of

various government offices, schoolteachers, and university staff to initiate a ‘speak English/Putonghua where we can’ campaign. For these policy measures to be successfully implemented and bear fruit, apart from careful planning, there ought to be strong leadership from within the government and the education sector, plus mechanisms for coordinating concerted actions on the part of various groups of stakeholders, notably teachers, school principals, educationalists, and experts of language teaching and learning in academia.

Keywords: Language-in-education policy, Biliteracy and trilingualism, Translanguaging, Medium of instruction (MOI), Early immersion, Bilingual teaching strategies, Content-and-language integrated learning (CLIL), Language across the curriculum (LAC)

Introduction: multilingual Hong Kong

For over 150 years until 30 June 1997, Hong Kong was under British rule with a UK-appointed Governor at the pinnacle of an administrative hierarchy consisting of mainly local Chinese civil servants.¹ Under the unprecedented ‘one country, two systems’ renationalization arrangement, that administrative infrastructure has largely remained intact after the handover. One expected change is that at the helm, the Governor of the colonial administration was replaced with the Chief Executive of the Hong Kong Special Administrative Region (SAR). During the colonial era, the small number of non-Cantonese speakers of English – of Caucasian or South Asian descent in particular – would only feel moderately inconvenienced by a lack of knowledge of the local lingua franca, largely because they lived in “enclosures” that were separated from the lifeworld of the vast majority of Cantonese-dominant Hongkongers (Luke & Richards, 1982). In this regard, little has changed after June 1997. From social to professional milieux, from the choice of schools to marketplace, from frequented eateries to religious practices, and from venues of cultural activities to preferences of media products (print or electronic), English-mediated institutions, resources and services distinct from those of Chinese Hongkongers are never too far away and conveniently accessible to and within the reach of the relatively small number of English-dominant, non-Cantonese-speaking Hongkongers.

Following the gradual extension of free, universal education since the early 1970s (see below), English is taught and learned from kindergarten, and so young people grow up developing bilinguality in Chinese and English to different extents (Wang & Kirkpatrick, 2019). For non-Cantonese-speaking Hongkongers, the risk of getting lost in the former colony is minimal. Thanks in part to a linguistic landscape characterized by multilingualism, finding their way around is not much of a problem. For one thing, most street names and shop names are bilingual in Chinese and English, among other cosmopolitan and ethnic minority languages. Based on an analysis of 1160 signs collected over three months (Jul–Aug 2009) from eight streets in four areas: the main business district (Central), a tourist hub (Tsim Sha Tsui), a local shopping area (Mongkok) and a residential town near the border with mainland China (Sheung Shui), Lai (2013) found that over half of the signs (53.4%) were monolingual. Of the 620 monolingual signs, 298

¹ “As at June 30, 2021, the civil service employed about 176,900 people (...) or about 4.6 per cent of Hong Kong’s labour force.” Cited from the Hong Kong Government: ‘Hong Kong: The facts – Civil service’, retrieved, 2 Apr 2022, from https://www.gov.hk/en/about/abouthk/factsheets/docs/civil_service.pdf.

(25.7%) were in Chinese, and 271 (23.3%) in English.² Bilingual signs, on the other hand, accounted for 45.1%, with Chinese-English making up the majority (505, or 43.5%). There were 17 multilingual signs (1.5%) displaying three or more languages including Chinese and English, the third being Japanese, Korean or French. Bilingual and multilingual signs together added up to 540, or 46.6% (Lai, 2013: 256–258). In terms of the chance of finding speakers conversant in English, in general English-dominant bilinguals are far more commonly encountered in the vicinity of the central business district (CBD) or tourist hub than in rural or residential areas close to the borders with the mainland (e.g., Tin Shui Wai and Yuen Long).

Language-in-education policy in Hong Kong SAR

Under ‘one country, two systems,’ British institutions – from the common law tradition and the status of English as a co-official language (alongside Chinese) to capitalistic economic subsystems and horse-racing events – are preserved with minimal change after the handover.³ As a correlate of the end of British rule, however, significant changes were made to the domain of education. Apart from the re-alignment of the 6-5-2-3 (primary-secondary-matriculation-university) curriculum structure with the one preferred in mainland China, 6-6-4, sweeping reforms were also introduced to the realm of language choice and use in primary and secondary schools, which were guided by a rather ambitious language-in-education policy, whose genesis may be traced back to the mid-1980s.

Since the colonial era, primary education in public-sector schools has been conducted in Chinese, including the English subject. In Hong Kong, Chinese is written in the traditional (as opposed to simplified) script and pronounced in Cantonese.⁴ Given that Standard Written Chinese (SWC, 標準中文) is more closely aligned with the national language Putonghua, learning to read and write Chinese often requires lexico-syntactic adjustments, which is akin to translation. With few exceptions, ‘dialect’ words are generally excluded from school literacy. This problem is captured by the saying 我手寫我口 (literally ‘my hand writes my mouth,’ i.e., ‘write as one speaks’), which is generally more true of Mandarin speakers, but less so for ‘dialect’ speakers. Most characters (漢字) are pronounceable in Cantonese (*hon3 zi6*) or Putonghua (*hàn zì*),⁵ but Cantonese-specific words are normally not accepted as part of SWC. For instance, reference to everyday activities such as eating and sleeping is expressed by *sik6* (食) and *fan3* (瞓) in colloquial Cantonese, but they are targeted for unlearning and exclusion from school literacy through repeated writing practice or copying, and replaced with their SWC counterparts *hek3* (吃, *chī*) and *seoi6* (睡, *shuì*), respectively. There are hundreds of SWC equivalents

² Other languages appearing in monolingual signs were French (17), Japanese (5), and other European languages such as Italian, German and Spanish (28) (Lai 2013: 257).

³ For example, in place of the Queen’s birthday, Buddha’s birthday was celebrated and made a public holiday; the word ‘Royal’ was dropped from the title of the exclusive, members-only horse-racing institution founded in 1884, and gave way to a charity-focused horse-racing organization in 1997: The Hong Kong Jockey Club (<https://lottery.hk/en/mark-six/hkjc>). A similar change occurred to the (Royal) Hong Kong Police Force. On the other hand, there is no shortage of colonial vestige that remains unchanged, such as street names featuring governors and British monarchs like Queen’s Road Central, King’s Road, Bowen Road, Nathan Road, etc.

⁴ Hong Kong and Macau are two Special Administrative Regions (SARs) of China where Chinese is taught through the medium of Cantonese (Li and Tong 2020). In the rest of China, the medium of instruction (MOI) is Putonghua or Mandarin, the national lingua franca (Li 2015a).

⁵ In this paper, JyutPing and pinyin will be used for transliterating Chinese characters pronounced in Cantonese and Putonghua, respectively.

that schoolchildren must learn to substitute for Cantonese-specific colloquialisms, in writing as well as in speech (i.e., when reading, silently or aloud). Many performance indicators of primary pupils have shown that such a task is extremely time-consuming. This is why for Cantonese-dominant pupils in Hong Kong, developing literacy in Chinese is generally more challenging compared with their mainland peers, who learn to read Chinese characters in Putonghua and write in the simplified script, with Romanized pinyin playing a pedagogically important if auxiliary role at P1–P2 (see Li, 2017, Chapter 3).

During the colonial era, driven by the popularity of and high demand for English-medium education, most secondary schools tended to prefer the label ‘Anglo-Chinese School’ (英文中學, as opposed to ‘Chinese Middle School’, 中文中學),⁶ giving the false impression of being English-medium schools. In practice, while English textbooks were used, lessons were typically taught in Cantonese mixed with English, especially when academic jargon was introduced or invoked. As Sweeting and Vickers (2007: 28) put it:

[T]he prevalent mode of teaching in most schools (...) became a mixture of Cantonese and English. Students would sit for English-medium public examinations, and ‘cram’ for these using textbooks written in English, but in the classroom the language of oral instruction was, in the overwhelming majority of cases, Cantonese.

For students aspiring to enter university, knowledge of discipline-specific English terminologies was absolutely crucial not only because such knowledge was an important part of the highly competitive entrance examinations, but it was also essential for success in academic studies at university (except for students studying Chinese-specific disciplines). Until the 1980s, access to university education was highly competitive and elitist, with a success rate of only around two percent. In the last decade before the new millennium, university education gradually opened up and became more accessible. In 1991, the third university, *The Hong Kong University of Science and Technology* (HKUST) was founded.⁷ In the mid-1990s, more institutions – two polytechnics and several post-secondary colleges – were upgraded and renamed as universities. Today, there are eight government-funded universities, with HKDSE (Hong Kong Diploma of Secondary Education) students’ undergraduate programme admission rate hovering at about one in four (a “record high” 38.1% in 2021, Chan, 2021).

Notwithstanding the expansion of the tertiary education sector and higher university admission rates, the language performance of graduates on average – in English as well as Chinese – was a big societal concern (see, e.g., the ‘complaint tradition’, Bolton, 2003; Li, 2017: 110–111).⁸ This prompted the colonial government to set up the Education

⁶ For more details about different types of primary and secondary schools before and after 1997, see Wang and Kirkpatrick (2019).

⁷ After the English-medium *University of Hong Kong* (HKU, founded in 1911) and the Chinese-medium *Chinese University of Hong Kong* (CUHK, founded in 1963), the latter being bound by a University Ordinance to use Chinese as “the principal language of instruction”. In the new millennium, CUHK having evolved into an ‘international university’, adherence to the Chinese-only language instruction policy was regarded by the university management as anachronistic and inconsistent with the higher-order goal of attracting high-caliber international, non-Chinese-speaking students. On how such tensions gave rise to a fierce debate on CUHK campus, which later evolved into a protracted lawsuit making news headlines for several years, see Li (2013).

⁸ For instance, in September 2015, at a public forum organized by the *South China Morning Post*, former chairperson of the *Standing Committee on Language Education and Research* (SCOLAR) Michael Tien urged the SAR government to step up its support measures to cope with Hong Kong students’ declining English standards, which he found worrying (Yau 2015). As for Standard Written Chinese, every July when the results of the *Hong Kong Diploma of Secondary Education* (HKDSE) are publicized, secondary school leavers’ patterned SWC anomalies in written form or usage would make news headlines.

Commission (EC) to supervise language education reforms. After a decade and seven EC reports (ECR1, 1984 – ECR7, 1997),⁹ many recommendations were made and accepted by the colonial government, leading to the roadmap for the SAR government to implement a ‘trilingual and biliterate’ (TaB) language-in-education policy.¹⁰ Briefly put, after 1997, the curriculum structure from primary to tertiary education would be thoroughly reformed, with a view to enabling students to speak and understand Cantonese, English and Putonghua, and to read and write Chinese and English. To this end, in 1996, the *Standing Committee on Language Education and Research* (SCOLAR) was established to garner experts’ views, coordinate stakeholders’ concerted efforts and supervise the distribution of funding to support new, worthy research initiatives via the *Language Fund*.¹¹

At the time of writing, the twenty-fifth anniversary of the return of Hong Kong’s sovereignty to China (1 July 2022) is only a few days away. How successful is the trilingual and biliterate language-in-education policy in uplifting Hong Kong students’ abilities in the target languages?¹² To my knowledge, Li (2017) is by far the most recent attempt to review and evaluate various TaB policy measures systematically. In this paper, following Li (2017), I will first discuss and illustrate a host of linguistic challenges faced by Cantonese-dominant students when striving to meet the government’s TaB target. I will then examine and assess specific curricular and extra-curricular support measures adopted by the SAR government to help students cope with those challenges. To explore alternative policy measures, I will briefly summarize Li’s (2017) review of the relevant literature in five closely related disciplinary areas: Chinese-English contrastive linguistics, sociolinguistics, psycholinguistics, cognitive neuroscience, and bilingual pedagogies and instructional strategies. This will set the scene for identifying alternative theoretically-grounded and evidence-based policy options which have good potential to enable Cantonese-dominant students to meet the government’s expectation of becoming trilingual and biliterate. The paper will end with several recommendations for improving the TaB policy design and support measures.

The trilingual and biliterate target: a tall order

That English figures so prominently in the SAR government’s trilingual and biliterate (TaB) language policy is hardly surprising, given that Hong Kong was under British rule for over 150 years but also in view of the international currency of English as the de facto global language. Nor would Cantonese and SWC as the other TaB pillars raise any eyebrows as the majority of the local population is Cantonese-speaking. Added to the

⁹ All ECR reports (1984, 1986, 1988, 1990, 1992, 1996, 1997) are downloadable from the Education Commission website: https://www.e-c.edu.hk/en/publications_and_related_documents/education_reports.html.

¹⁰ The same policy is also referred to as ‘biliteracy and trilingualism’ (兩文三語). According to Wang and Kirkpatrick (2019: 5), the first mention of this language-focused objective could be traced to the report of the working group on the use of Chinese in the civil service (September 1995): “It is already the Government’s ultimate objective to develop a civil service which is biliterate (in English and Chinese) and trilingual (in English, Cantonese and Putonghua)”. TaB as a policy goal of the SAR government was officially proclaimed by Mr Tung Chee-hwa, the first Chief Executive, in his policy address in 1997: “the goal [is] for secondary school graduates to be proficient in writing English and Chinese and able to communicate confidently in Cantonese, English and Putonghua” (para. 84, cited in Wang & Kirkpatrick 2019: 24).

¹¹ See SCOLAR’s official website: <https://scolarhk.edb.hkedcity.net/en/about-scolar-introduction>.

¹² After being implemented for over a decade, from about 2010, the SAR’s language policy focus shifted to supporting the Chinese language (spoken Cantonese and Standard Written Chinese) learning needs of non-Chinese-speaking (NCS) students, especially those born to Hong Kong parents of South Asian descent, notably Pakistani, Indian and Nepalese, with effective social integration being an overarching goal of free education (Leung and Li 2020; Li and Chuk 2015; Li and Leung 2018, 2020; cf. S.D. Chan 2019).

language matrix in the TaB policy goal after the handover is Putonghua, the national language of China and the lingua franca connecting speakers of different Chinese ‘dialects’, many of which are mutually unintelligible.

Cantonese is the local and regional lingua franca in the Pearl River Delta (PRD), which geographically is almost co-extensive with the more recent designation “the Greater Bay Area” (GBA) since July 2017.¹³ In Hong Kong, while there is no specific language subject called ‘Cantonese’, in most primary schools it is used as the medium of instruction (MOI) for most subjects, including in English lessons sometimes (Wang & Kirkpatrick, 2019). From secondary education onwards, other than those who ‘make it’ to an English-medium or international school, most students continue to use Cantonese as the language of teaching and learning in all school subjects except English and Putonghua. Relative to the trilingual and biliterate language policy target, therefore, the development of this vibrant vernacular is very much taken for granted. The same cannot be said of the development of proficiency in (spoken and written) English, (written) Chinese, and (spoken) Putonghua, however.

In acquisitional terms, both Chinese and English, spoken or written, are challenging target languages for the majority of Hong Kong students. For one thing, given that the majority of Hongkongers use Cantonese as their “usual spoken language” (88.2%) or “another spoken language/dialect” (5.5%, 2021 Population Census, Summary Results, Tables 2.7 and 2.8, pp. 45–46),¹⁴ there is a widely shared perception among Cantonese-dominant Hongkongers that their preferred vernacular functions tacitly as a marker of Hong Kong identity. In effect, conversing with fellow Cantonese speakers in any other language at the inter-sentential level would amount to a breach of that lingua-cultural identity, unless there is a legitimate reason for doing so (e.g., to avoid excluding a non-Cantonese speaker who joined the conversation). Thus, unlike multilingual and multi-ethnic Singapore, where Chinese-Chinese interaction entirely in (Singaporean) English is commonplace, doing so would be regarded as highly marked by Cantonese-dominant Hongkongers (‘what’s wrong with you today?’), to the point of attributing some ulterior motive to the person initiating such a move (e.g., showing off). As for Putonghua, other than employees who have a genuine work-related need to use Putonghua to interact with their clients from mainland China, notably for transactional purposes in the hospitality industry and retail sector, few locally-born Hongkongers would have any motivation to socialize with their friends and peers in Putonghua (Leung, 2017). What this means is that for Cantonese-dominant Hongkongers, English and Putonghua have little social reality in their daily lives beyond the language classroom and homework exercises. In terms of learning effectiveness and relative acquisitional ease, if developing interactional competence in English and Putonghua is not at all obvious, especially for those learning them under foreign-language learning conditions (see below), developing biliteracy

¹³ See ‘Framework Agreement on Deepening Guangdong-Hong Kong-Macao Cooperation in the Development of the Greater Bay Area’, retrieved, 3 Apr 2022, from https://www.bayarea.gov.hk/filemanager/en/share/pdf/Framework_Agreement.pdf.

¹⁴ Census and Statistics Department. (2/2022). *2021 Population Census: Summary Results*. Hong Kong Government. Retrieved, 6 Apr 2022, from <https://www.census2021.gov.hk/doc/pub/21c-summary-results.pdf>.

in standard written Chinese and standard English (or English for Academic Purposes, EAP) would be even more difficult, each for their own reasons.¹⁵

As “Asia’s World City” where East meets West, Hong Kong is geopolitically located at the doorstep of the world’s second-largest economy in southern China. Coupled with palpable British influence by virtue of its colonial heritage for well over a century and the emergence of English as a world language, Hong Kong’s needs for English are virtually indisputable. Similarly, the SAR’s needs for Putonghua (Mandarin), the national language of China, may be seen as a natural correlate or expected outcome of decolonization and renationalization. Like in any modern society, developing functional trilingual competencies and biliteracy skills in the local, regional, and global languages is arguably both a right and an obligation of the Hong Kong citizenry. The rationale for that trilingual and biliterate target is therefore well-grounded. But for most Cantonese-dominant speakers in the SAR, such a target is a tall order. Why? An important part of the answer lies in the sharp linguistic contrasts rooted in marked typological differences between Chinese and English.

Unless used as a home language, English is not at all learner-friendly for Chinese learners, whatever their ‘dialect’ background. No two languages are exactly alike. In general, the more the target language resembles one’s first language, the less arduous the language learning task would be. Thus, French learners of English can draw on their deep knowledge of French grammar when learning English, for example, to make sense of how English tenses or articles (*a, an, the*) are used. Likewise, native English-speaking learners of French will find English grammatical patterns a useful frame of reference. For either group of learners, considerable overlap between French and English lexis allows for quick lingua-cognitive transfer of native vocabulary knowledge, and the learning outcome is often positive. Consider words ending with *-isme* (*journalisme, réalisme, etc.*) or *-tion* (*civilisation, globalisation, etc.*), or words beginning with *multi-* or *pre-* (e.g., *multiculturel, multilingue, préparer, prétexte*).¹⁶ However challenging the pronunciation is, useful clues may usually be found in spelling, which in both languages is based on the Roman alphabet.¹⁷

None of the above-mentioned linguistic advantages – available to English-speaking learners of French or French-speaking learners of English – are shared by Chinese learners of English. This is because typologically, Chinese and English belong to completely unrelated language families, which explains why they have so little in common: ‘I love you’ has the same basic word order (subject-verb-object, SVO) as in Chinese (compare: 我愛你, *ngo5 ngoi3 nei5, wǒ ài nǐ*), but the similarity ends there. From phonology and lexis to grammar and writing system, it is as if English and Chinese are situated at the opposite poles of a continuum. One implication for Chinese learners of English is that their knowledge of Cantonese and written Chinese has little reference value when they

¹⁵ While nowhere in the ECR reports and language policy statements was there any explicit mention of the Chinese and English standards expected of Hong Kong students, exonormative standards are implicitly followed.

¹⁶ Such an advantage only stops when similarity in form is semantically deceptive. Thus, *éventuellement* does not mean *eventually* – one of the *faux amis* (‘false friends’) that either group of learners must watch out for.

¹⁷ Such an orthographic advantage, however, does not exist for English or French speakers learning another alphabetic language like Arabic or Russian, which are written with rather different writing systems, not to mention Chinese, which is written with a non-phonographic, morphographic script.

strive to crack the English code (on difficulties of English pronunciation encountered by Cantonese-dominant learners, see Chan & Li, 2000).¹⁸

If learning to converse in idiomatic spoken English is tough, developing literacy in written English is even harder. Alphabetic though it is, the spelling-pronunciation relationship is very inconsistent (Li & He, 2020). Consider the pronunciation of the letter sequence *-ough-*. It depends on the letter(s) to the left and/or right: *cough* [ɑ], *drought* [aʊ], *rough* [ʌ], *though* [oʊ], *ought* [ɔ], *through* [u] and *thorough* [ə]. This may seem like an extreme case. A less vexing problem may be found with words that contain *-ove-*: thus, *love* [lʌv], *not move* [mu:v], would be a useful model for pronouncing *dove* [dʌv], but not *cove* [kəʊv]. Still more irritating are silent letters that must be memorized through ‘sight word spelling’ (Table 1).

Perhaps the most famous mockery of the English spelling system is the claim, often attributed to the British playwright George Bernard Shaw (1856–1950), that the word *fish* (/fɪʃ/) could well be spelled as ‘ghoti’, for its constituent sounds may be found in the words *enough* (/f/), *women* (/ɪ/) and *nation* (/ʃ/). Compared with the spelling in other alphabetic languages like Finnish, German or Italian, therefore, spelling as a guide to English pronunciation is messy, to say the least. In an increasingly globalized world, that is bad news indeed for millions and millions of non-native learners given that English has emerged as a world language or global lingua franca, a widely perceived status or prestige ascribed to it largely as a result of historical circumstances rather than popular choice (see, e.g., the role of English as an ‘Asian lingua franca’ in ASEAN and European ELF, Kirkpatrick, 2010).

What about standard written Chinese (SWC) and Putonghua? Unlike English, which is written with an alphabet from *a* to *z*, written Chinese (中文) is non-alphabetic. To elementary learners of English, the meaning of a word like *butterfly* may be obscure (and semantically misleading, as it has nothing to do with *butter* or *fly*), but its pronunciation can be deduced by the letters that make up the three syllables: *but-ter-fly*. Its Chinese equivalent, 蝴蝶, offers no such clues. Its pronunciation in Cantonese (*wu4 dip2*), Putonghua (*hú dié*) or any other ‘dialect’, must be learned along with its written form and meaning. It is not true that Chinese characters offer no clues of pronunciation (e.g., 胡 and 菓 are similarly pronounced as *wu4/hú* and *jip6/yè*), but for such phonetic clues to be discernible, one first needs to know hundreds of characters fairly well (Erbaugh, 2002: 47). Since most Chinese characters are monosyllabic and made up of two components, one phonetic, the other semantic (e.g., 虫, ‘insect’, in 蝴蝶), their linguistic status is morpho-syllabic.¹⁹

¹⁸ Chinese learners of English find many pronunciation features difficult to master, with the dental fricatives being notoriously difficult consonants: the voiced /ð/, as in high-frequency <th> words like *the, this, that, these, them*, among many others; and the voiceless /θ/, which is found at the syllable-initial position of words like *thumb, theme, and theory*. In a few polysyllabic words embedded with <th>, its pronunciation can be tricky, as in the word *chrysanthemum* [kriˈsænθə.məm], which is associated with the imperial family of Japan and is commonly found elsewhere in East Asia. ‘Fricatives’ is also the title of an award-winning poem by Eric Yip, a 19-year-old Hong Kong student of economics at Cambridge University, which begins with “To speak English properly, Mrs Lee said, you must learn the difference between *three* and *free*” (March 2022, see <https://www.theguardian.com/books/2022/mar/31/national-poetry-competition-youngest-ever-winner-eric-yip-fricatives>). Stress-timed rhythm is another major prosodic challenge for Cantonese-dominant students, whose native language predisposes them to syllable-timed pronunciation (see Li 2017, Chapter 4, for more details).

¹⁹ A few other instructive examples are (phonetic components within brackets): 繽紛 (賓, 分), 猗猗 (猗, 猗), 銅鑼 (同, 羅), 洵湧 (洵, 勇) (I am indebted to Prof. CHAN Shui-Duen for these additional illustrations). Chinese characters are not only used in China. Popularly known as kanji (漢字), such sinograms are also widely used in Japanese, for example, 櫻花 (sakura), which is intelligible to Chinese speakers who do not speak any Japanese (*jing1 faa1/ ying hua*). Today, about 1,800 kanji sinograms are still actively learned and used in Japan (compare: List of jōyō kanji consisting of 2,136

Table 1 Examples of English words written with one or more silent letters

Silent letter	Examples	Silent letter	Examples
	<i>climb, debt</i>	<c>	<i>muscle, scissors</i>
<h>	<i>ghost, hour</i>	<k>	<i>knife, knock</i>
<l>	<i>half, talk</i>	<n>	<i>column, condemn</i>
<p>	<i>pneumonia, psychology</i>	<s>	<i>aisle, island</i>
<t>	<i>castle, listen</i>	<w>	<i>whole, wrestle</i>

Written Chinese being non-alphabetic and overwhelmingly morphographic, it takes considerably more time for Chinese schoolchildren to develop literacy in their native language compared with their peers whose first language is written with a phonographic script, the latter being far more common for writing other languages worldwide. For children learning to read a learner-unfriendly alphabetic language like English, it takes them, on average, two more years to reach the same literacy level compared with their age-relevant peers learning to read a language written with a 'shallow' orthography and more consistent spellings like German (McBride, 2016: 15). What about reading skills development in morpho-syllabic Chinese characters? It would take considerably longer. In Hong Kong, six-year primary education is looked upon as the crucial key stages of learning (KS1 and KS2) for preparing schoolchildren for their Chinese literacy needs in adult life. These include being able to understand print-based news stories and information from various sources including social media, job advertisements, bank statements, miscellaneous public announcements and instructions like health risk alerts and dosage of medicine. According to Chinese curriculum specialists, in Hong Kong SAR and elsewhere in Greater China, a sound knowledge of 3,000+ characters and about 10,000 polysyllabic words is needed to carry out everyday literacy functions such as these (Education Bureau, 2008).²⁰

Learning to recognize and write thousands of characters thus requires considerably more time compared with learning to write in an alphabetic language. The internal complexity of a Chinese character may be gauged by the number of strokes needed to compose it. Some characters are fairly simple, requiring one stroke (e.g., 一, 'one') or two (e.g., 十, 'ten'), but those that require 20 strokes or more in the traditional script are not rare. A character like 鬱, an integral part of polysyllabic words with such disparate meanings as 'tulip' (鬱金香) and 'depressed' (憂鬱), is made up of 29 strokes. Learning to compose a character – quite a few requiring 15 strokes or more – entails following a few cardinal rules: from left to right, top to bottom, outside to inside (Tse et al., 2007). There is no shortcut for internalizing their written forms. Schoolchildren in Hong Kong are routinely instructed to copy the characters repeatedly, as many times as it would take

Footnote 19 (continued)

characters. https://en.wikipedia.org/wiki/List_of_j%C5%8Dy%C5%8D_kanji). Incidentally, this is one major reason why Japanese was considered by the Foreign Service Institute (FSI) of the US Department of State as one of the five 'Category IV Languages', which are "exceptionally difficult" or "super-hard" for native English speakers to learn (requiring no less than 88 weeks or 2,200 class hours). The other four super-hard languages are all from Asia: Arabic, Cantonese, Mandarin and Korean (<https://www.state.gov/foreign-language-training/>).

²⁰ According to a more recent study in mainland China, the most frequently used 2,380 characters have a coverage rate of 99 percent of all Chinese texts (S.D. Chan, personal communication).

until they are able to improvise them correctly at will, as in dictation lessons. The next time you see someone finger-drawing on their mobile phone (e.g., on a bus or train), the chance is they are applying that hard-earned orthographic knowledge to compose some character-based short message online (e.g., on Whatsapp, Facebook, Instagram or Twitter). There, one need not be a hundred percent accurate, for users are prompted with AI-driven, recently used character choices. This function is built into the East Asian users' 4G or 5G smart phones. Such a high-tech device, however, is not available to students taking a high-stake public examination like HKDSE Chinese,²¹ where the normative output expected of secondary school leavers – hundreds of characters composed correctly, showing good understanding, sound arguments and original creativity – must be hand-written. While the same may be said of examination papers hand-written in English, the 'drawing' quality of written Chinese conveys a stronger sense of calligraphic appeal or aesthetic quality, which makes composing Chinese characters more stressful in examination settings. All this, among other reasons, helps explain why for successive years, the HKDSE Chinese Language subject was dubbed in local Chinese media as 死亡之卷 ('lethal exam paper'; Li, 2017: 86).²²

As for the learning of Putonghua, some of its pronunciation features are rather difficult for non-native speakers. Apart from a few consonants and vowels leading to negative transfer,²³ there is a subtle prosodic feature called 'tone sandhi', whereby under specific conditions a shift in tone contour is required (e.g., from tone 3 to tone 2). Thus 很 (*hěn*, 'very') and 好 (*hǎo*, 'good') are separately pronounced with the third, low-rising tone, but that tone-3 adverb must be pronounced with the second, rising tone if followed by another tone-3 syllable (i.e., *hén hǎo*, 'very good'; similarly, 舞 *wǔ* and 蹈 *dǎo*, which as a disyllabic word 舞蹈 ('dance') is pronounced as *wú dǎo*). This rule applies to quite a few high-frequency characters; for a string of morpho-syllables like the aforementioned 我手寫我口 (*wǒ shǒu xiě wǒ kǒu* should be pronounced as *wó shǒu xiě wó kǒu*), 'dialect' speakers can hardly get its pronunciation right short of memorization. Such a subtle tonal shift may be straightforward to native speakers of Putonghua, but for 'dialect' speakers, it is anything but obvious. Frequent rule-governed tonal shifts triggered by tone sandhi do not make Putonghua any more difficult than English, but they do present a challenge for Cantonese-dominant students learning Putonghua under foreign-language (as opposed to L1 or L2) conditions.

²¹ In the old 6-5-2-3 curriculum, secondary school leavers had to take the *Hong Kong Certificate of Education Examination* (HKCEE) to qualify for two years of matriculation (pre-university) studies, at the end of which students would sit for the *Hong Kong Advanced Level Examination* (HKALE) to compete for a place at HKU. CUHK used to administer a separate *Hong Kong Higher Level Examination* (HKHLE) for sixth-form Chinese Middle School graduates. The HKHLE was abolished in 1993 after its normative four-year undergraduate degree curriculum was converted to three-year, despite CUHK staff and students' vehement objection for well over a decade since 1978. Starting from 2012, following the new 6-6-4 curriculum Hong Kong-wide, HKCEE and HKALE were replaced with the *Hong Kong Diploma of Secondary Education* (HKDSE) Examination, in effect reducing the number of high-stake public examinations from two to one.

²² Another factor leading to the labeling of the HKDSE Chinese paper as 死亡之卷 was related to the elimination of prescribed exemplary texts (範文). Without the prescribed texts, students found it more challenging when making preparation for the examination. The revised curriculum and assessment criteria require them to demonstrate how the linguistic skills they learned could be applied to resolve real-life linguistic problems, an area of competence that many students are not good at (S.D. Chan, personal communication).

²³ For example, 土 and 肚 are both pronounced in rising tone in Cantonese (*tou2* and *tou5*, respectively), but in Putonghua the former is pronounced with tone 3 (*tǔ*), the latter as tone 4 (*dù*). Owing to divergence in tone contour and the initial consonants, most Cantonese speakers would mispronounce the tone contour and initial consonant of 肚 (S.D. Chan, personal communication).

Below is a summary of the main linguistic, sociolinguistic and literacy challenges faced by Cantonese-dominant Hongkongers as they strive to meet the SAR government's goal of becoming trilingual and biliterate in the target languages:

1. Cantonese: Being a vibrant regional vernacular, Cantonese is 'picked up' effortlessly by children growing up in Cantonese-speaking households. It is also the MOI for learning standard written Chinese. Its omnipresence in society across such key domains as home, school, government, newspapers, broadcast and social media, and various art forms from Canto-pop songs and Cantonese opera to films and stand-up comedy, makes it the unmarked language of identity for over ninety percent of Chinese Hongkongers. Such a strong perception of Cantonese being an inalienable part of Hong Kong identity makes Cantonese-dominant Hongkongers hesitant to consider switching to only English or only Putonghua in their informal social interactions, except in intra-sentential code-switching or mixed code with Cantonese serving as the 'matrix language' (for Cantonese-English code-switching, see, e.g., Li & Tse, 2002). As for written Cantonese, although it is excluded from school literacy, there is no question that it has found social space to thrive in 'soft' sections in the 'back' pages of sundry media, print or electronic. Incidentally, this suggests that any perception or claim that the vitality of Cantonese in the SAR is at risk, is probably exaggerated or overstated (compare Bauer, 2000; Li, 2000, 2017).
2. English: *Sociolinguistically*, English is highly visible in Hong Kong society (Lai, 2013). It has been characterized as a second or foreign language depending on the scholar (e.g., second language, Bolton, 2003; McArthur, 2001: 8–9; "fast-expanding" foreign language, Kachru, 2005: 90). For families which can spare resources to support their children's learning of and investment in English-rich activities, English would function more like a second language (ESL). These include, for example, learning aids like picture word cards embedded in simplified readers, TV games and entertaining programmes like cartoons, play groups led by native speakers of English, short-term immersion in an English-L1 country through joining a study tour or summer school. By contrast, for children growing up in socioeconomically modest families, exposure to English tends to be confined to classroom teaching contexts and homework exercises, with little relevance to or reality in their lifeworld beyond schooling activities. Learning English under such conditions makes it more like a foreign language (EFL). Between ESL and EFL learners, clearly the latter make up the majority, who deserve and are in dire need of government support. *Linguistically*, Chinese and English have very little in common. Knowledge of Cantonese and written Chinese has little reference value when learning English, from pronunciation and written form to vocabulary and grammar. For Chinese learners, such a marked linguistic distance makes English, spoken or written, a learner-unfriendly language, much more so for EFL than ESL learners. No wonder non-standard lexico-grammatical errors in their 'learner language' are notoriously resilient to corrective teacher feedback (Li, 2009, 2017). A significant number of such learner language features would accompany them to adult life.
3. Putonghua: Like English, opportunities to use Putonghua outside the classroom are rare. For Cantonese-dominant Hongkongers, Putonghua similarly exhibits character-

istics of a second or foreign language, except that Cantonese and Putonghua share the writing system, essentially the same vocabulary ('learned words') and grammatical patterns with minor differences, plus the fact that both are tone languages. Prior knowledge of the L1 Cantonese prosodic system, however, is of little help when learning lexical tones in L2 Mandarin (Hao, 2012; So & Best, 2010). While the bulk of Chinese characters in SWC (標準中文) are pronounceable in Cantonese and Putonghua, the latter's pronunciation is not easy to acquire under second- or foreign-language learning conditions (Li, 2017). Research shows that Cantonese speakers have great difficulty differentiating Mandarin tone 1 (high level 55) and tone 4 (high falling 51), probably because both are mapped onto Cantonese tone 1 (high level 55 and high falling 53, the latter being an allotone). Mandarin tone 2 (mid rising, 35) and tone 3 (falling rising 214) tend to be perceived as Cantonese tone 2 (low rising 23) (So & Best, 2010). Very similar findings were found in Hao's (2012) experimental study involving Cantonese speakers' identification, mimicry and reading performance in Mandarin. According to Hao (2012: 277), Mandarin tone 2 and tone 3 are intrinsically harder, for "the cause for the smaller perceptual distance between these two tones was not only phonological but also auditory", suggesting that acoustically and phonetically, "the signal properties of Mandarin T2 and T3 are not very distinctive" (cf. Hume & Johnson, 2003, who found that even for Mandarin L1 speakers, tone 2 and tone 3 were similarly more difficult to differentiate compared with other tonal pairs). This is further complicated by the tone 3 sandhi rule, whereby the distinction between tone 2 and tone 3 is neutralized (Hao, 2012: 277). In addition, characters pronounced with an entering tone in Cantonese is another major problem. As there are no entering tones in Putonghua, when learning the corresponding characters in Putonghua, most learners have difficulty getting their tones right (for more details, see Li, 2017, Chapter 3).

4. Standard Written Chinese: Chinese is written with a non-alphabetic, morphographic script, which takes more time to learn and is easy to forget.²⁴ Being lexico-grammatically more closely aligned with Putonghua than Cantonese, SWC requires considerable efforts through regular reading and writing before normative literacy knowledge could be attained and maintained. While Cantoneisms are clearly attested in schoolchildren's writing at different learning stages, it is unclear whether they should all be targeted for unlearning and elimination through Chinese literacy training in (especially primary) school. A good case can be made, as Shi (2006) and Shi et al. (2014) have done, for accepting a subset of Cantoneisms by recognizing them as part of 'Hong Kong Written Chinese' (HKWC).

Hong Kong education system and the government's language support measures

Relative to the trilingual and biliterate language policy target, the aforementioned difficulties add up to prodigious if not insurmountable challenges for Cantonese-dominant Hongkongers, especially those grassroots schoolchildren struggling at the bottom of

²⁴ This commonplace psycholinguistic phenomenon among literate users of Chinese, sometimes referred to as 'character amnesia', is captured by a Chinese quadrisyllabic idiom: Mandarin 提筆忘字 (*tí bǐ wàng zì*); Cantonese 執筆忘字 (*zap1 bat1 mong4 zì6*), literally 'pen-ready to write but don't know how to' (see Huang et al., 2021a, 2021b).

the social strata. It is unclear to what extent such challenges were taken into account by the education authorities since the 1980s when the language policy was conceptualized from formulation to implementation. Below is an indicative overview of policy measures adopted by successive Hong Kong governments in the last three decades (for a more comprehensive list of city-wide English enhancement initiatives since the colonial era, see Miller & Li, 2008):

1. Extension of free, universal education: Free, universal primary education from P1–P6 (age 6–12) was first introduced in 1971, which was later extended to lower secondary (S1–S3, age 12–15) in 1978 (Sweeting, 2004; cf. Sweeting & Vickers, 2007). The nine-year free, universal education policy was maintained until after the handover. In 2008, free education was further extended to upper secondary (S4–S6, age 15–18), but at the end of secondary 3, school leavers may pursue vocational education by studying a fully-subsidized programme offered by the Vocational Training Council (VTC) if they wish. In effect, a decade after renationalization, the Hong Kong SAR government adopted a 12 year free primary and secondary education system, of which nine years (P1–S3, age 6–15) was compulsory. As for early childhood education (ECE, K1–K3, age 3–6), it was left entirely to the private sector until 2007, when direct fee subsidy through the *Pre-primary Education Voucher Scheme* (PEVS) was made available to parents who could choose an eligible kindergarten on an approved list (H. Li & Fong, 2014; Wong & Rao, 2015). In 2017, Chief Executive LEUNG Chun Ying made good his election promise and pushed through the “15 year free education and quality KG education” policy (Education Bureau, 2016: 2). Given that the majority of Cantonese-dominant students rely essentially on classroom input and learning experiences for their trilingual and biliteracy development in the target languages, the number of years of free schooling in the education system has a direct bearing on the amount of students’ exposure and outcomes of language learning, among other factors.
2. Native-speaking English Teacher (NET) Scheme: Launched in 1998/99, the NET scheme allowed individual public-sector secondary schools to recruit one NET to assist in ESL curriculum development and provide leadership and support in ESL speaking activities. The NET scheme was subsequently extended to public-sector primary schools in 2002/03 as well as schools with Special Education Needs (SEN).²⁵
3. Benchmark test for teachers of English (LPATE) and Putonghua (LPATP): Starting from 2001, teachers of English and Putonghua must pass the *Language Proficiency Assessment for Teachers* (LPAT) before they are qualified to teach English or Putonghua in secondary school.²⁶
4. Setting up the *Language Enhancement Grant* to boost university students’ proficiency development: Set up in 1991, the *Language Enhancement Grant* (LEG) supports UGC-funded universities’ initiatives to enhance undergraduate students’

²⁵ See ‘Native-speaking English Teacher (NET) Scheme’: <https://www.edb.gov.hk/en/curriculum-development/resource-support/net/index.html>. More specific duties of NET teachers may be found at ‘The NET scheme in Hong Kong’: <https://nets.edb.hkedcity.net/page.php?p=456>.

²⁶ See the Education Bureau (EDB) website: <https://www.edb.gov.hk/en/teacher/qualification-training-development/qualification/language-proficiency-requirement/lpat.html>.

language proficiency development in English and Chinese. Since the 2016–19 triennium, LEG was merged with the *Teaching Development Grant* (TDG, since 1994) and renamed as the *Teaching Development and Language Enhancement Grant* (TDLEG). Individual UGC-funded universities have flexibility in using the TDLEG funding to support various innovative projects designed to improve the quality of language instruction and uplift students' proficiency in English, written Chinese and Putonghua. In dollar terms, the TDLEG grant kept expanding, with an annual funding of HK\$ 260.4 million per annum in the 2019–22 triennium (HK\$ 781.2 million in total).²⁷

5. Literacy training in Chinese: The Chinese Language subject in the first two key stages P1–P3 (age 6–9) and P4–P6 (age 9–12) at primary school is seen as the curriculum space for consolidating students' knowledge – both receptive and productive – of 3,000+ Chinese characters needed for adult life. Chinese characters are pronounced in Cantonese and written in the traditional script, which in general require considerably more strokes to compose, and so more time to develop writing competence than their peers learning to write using the simplified script.
6. Late immersion for students with proven ability to learn through English as the medium of instruction (MOI): Through a *Secondary School Places Allocation* (SSPA) mechanism,²⁸ primary school leavers (age 12) are streamed, such that those whose academic performance in English has reached a 'threshold' level would be offered a place in an English-medium (EMI) secondary school, while the rest would be allocated to a Chinese-medium (CMI) school. In effect, only those with 'proven' potential to learn through the medium of English would be assigned to an EMI school. As for the school's choice between CMI and EMI, 'firm guidelines' were issued, including a set of conditions under which a school could apply for the EMI label.²⁹ Such an 'MOI streaming' mechanism, introduced in September 1998, was highly controversial and widely reported in public media; critics pointed out, rightly so, that those students assigned to a CMI school would be stigmatized as inferior. In the end, of the 420+ secondary schools, only 100 were recognized as meeting that EMI threshold or benchmark. An appeal mechanism was set up and, after the appeal process was completed, an additional 14 schools were given the EMI status, yielding an EMI-CMI ratio of 3:7. Fueling the stigmatization and 'labeling effect' criticism was the observation that all of the 114 EMI schools were classified as Band 1 schools.³⁰ A good

²⁷ In March 2022, UGC informed the eight government-funded universities that, with effect from the 2022-25 triennium, a portion of the TDLEG funding (up to 25 percent) may be used to support language enhancement projects involving other additional languages (e.g., French, German, Japanese, Korean, and Spanish; see the University Grants Committee (UGC) website: https://www.ugc.edu.hk/eng/ugc/activity/teach_learn/tdg.html).

²⁸ For more details, see the SSPA website: <https://www.edb.gov.hk/en/edu-system/primary-secondary/spa-systems/secondary-spa/general-info/index.html>.

²⁹ According to the Medium of Instruction Guidance for Secondary Schools issued by the Education Department in 1997, "all secondary schools in Hong Kong were mandated to adopt Chinese as the MoI unless they could be proven otherwise. The only exceptions were those who can provide evidence for (i) student ability to be an average percentage of not less than 85% of Medium of Instruction Grouping Assessment (MIGA) Groups I and III students in Secondary 1 intake for the past three years; (ii) teacher capacity to be based on the principal's assessment and certification; and (iii) support strategies and programmes (such as bridging courses) to give sound school-based assistance to students (para. 2.4)" (Ho and Man 2007: 7).

³⁰ In 1978, primary schools were classified into Bands 1–5, with Band 1 being the top-performing tier. Students' SSPA assessment results would determine their relative priority of school choices. Starting from 2001, the number of Bands was reduced from five to three (Ho and Man 2007: 8, 12).

decade after the MOI streaming was enforced, bowing to sustained social critique, coupled with a lack of compelling evidence of marked improvement in EMI students' English performance, in 2009, the Education Bureau allowed CMI schools some flexibility in the choice of MOI at lower secondary level. Such a corrective, which was well received by schools and various groups of stakeholders, was framed as 'fine-tuning' of the language-in-education policy (Poon, 2013; Li, 2017, Chapter 5; see also Education Bureau, 2021).

7. Prohibiting classroom code-switching or code-mixing: Before 1997, successive ECR reports pointed out that Cantonese-dominant students' lack-luster performance in English was a direct result of their teachers' unprincipled classroom code-switching (CCS) or code-mixing (中英夾雜). The premise behind this stance may be characterized as 'maximum exposure, no mixing' (Li, 2017), in that by sprinkling English expressions of various lengths into their predominantly Cantonese instruction, the teachers' 'code-mixing' would deprive students of precious exposure to high-quality input in English. Despite critics' skepticism and queries, however, to my knowledge no empirical, let alone convincing, evidence has been found to ascertain such a putative causal relationship. As noted by Low and Lu (2006):

Generally, opposition to the use of mixed code is based on the belief that mixed code communications will not only hinder L2 learning but also retard the development of L1 learning. Mixed code has been described as the leading factor contributing to the general decline of students' language proficiency. Such an assertion was found in some documents that support the recent changes and adjustments in educational policies of Hong Kong.... Importantly, there were little data or empirical evidence to show that codemixing was responsible for, or might lead to, low proficiency in L1 and L2 if it was used extensively. Nor was data available to support why mixed code caused undesirable results in language learning. (Low & Lu, 2006: 183)

8. Teaching Putonghua in primary and secondary schools: In 1998, Putonghua was made a compulsory subject from P1 and an elective subject in secondary school, with 'teaching Chinese in Putonghua' (TCP) being set as a long-term goal. Putonghua was also made a subject in the HKCEE, which was replaced with the HKDSE from September 2012. Whether teaching Putonghua as a subject and/or experimenting with TCP (Chan & Zhu, 2015; Chan et al., 2016; Ho et al., 2005; Zhu et al., 2012), individual schools have the autonomy to decide (e.g., the timing, extent and scale of TCP), and are given financial support to ensure quality teaching. Such a flexibility is due largely to a lack of qualified and proficient Putonghua-speaking teachers of Chinese. According to one investigative report by i-Cable TV in 2016,³¹ of the 400+ primary schools, about 70 percent were keen on experimenting with TCP in one way or another.

After being implemented for over a decade, societal interests in and concerns about the TaB policy seemed to have lost steam after the fine-tuning measures were announced

³¹ Programme title: 無明顯證據普教中有助學中文 [No clear evidence that Teaching Chinese in Putonghua (TCP) is conducive to learning Chinese]. Cable TV, 31 May 2016.

in 2009 by then Secretary of Education Michael Suen Ming-yeung. Open criticism in public media regarding the overly rigid MOI divide between CMI and EMI schools seemed to have subsided. Since then, the focus of the language policy and direction of support have shifted to meeting the Chinese language learning needs of ethnic minority groups, notably local schoolchildren of South Asian descent who were born to parents of Indian, Pakistani or Nepalese origin, with effective social integration as the ultimate goal (Chan, 2019; Li & Leung 2018; Leung & Li 2020). As for Cantonese-dominant students' language learning outcomes in the past two decades, while careful analysis of Putonghua test results of primary and secondary students showed that the Putonghua of successive generations receiving compulsory Putonghua instruction at primary school since 1998 has improved (Chan & Zhu 2015; Chan et al., 2016; Zhu et al., 2012), their English performance as reflected in successive years of HKDSE results in the English Language subject appeared to fall short of the TaB target for English, spoken or written, by a wide margin.

Biliterate and trilingual language policy design and support measures: some recommendations

Based on a comprehensive review of the relevant literature on various critical issues concerning Hong Kong's language policy since the 1980s, Li (2017) examined the language policy measures from multiple vantage points as follows:

- Linguistic: contrastive differences (i) between Cantonese, English and Putonghua at the phonological level, (ii) between (written) Chinese and English at the lexico-grammatical level, and (iii) between their writing systems, with a view to assessing how conducive it is for Cantonese-dominant Hongkongers to acquire English and Putonghua, especially under foreign-language learning conditions;
- Sociolinguistic: the relationship between language and identity, and the degree to which opportunities for using the target languages – English and Putonghua – could be found in Cantonese-dominant Hongkongers' everyday lives;
- Psycholinguistic: the extent to which students' knowledge of spoken Cantonese and written Chinese could facilitate their learning of English and Putonghua;
- Neurocognitive: compared with late immersion in English (around age 11–12, onset of secondary schooling), whether the quality of classroom language input at KS0 and KS1 levels (age 3–9) could be enhanced by strengthening the requirement for English and Putonghua teachers' qualifications and proficiency in the target language; and
- Pedagogical: whether synergy between teachers of English and content subjects could be created to enrich their students' exposure to English, and how feasible it is to foster additive bilingualism through bilingual pedagogies and instructional strategies.

Strengthening the provision of high-quality English and Putonghua input to schoolchildren (K1–P3, age 3–9)

Commonality between the linguistic subsystems of Chinese (spoken Cantonese and SWC) and English (spoken and written) is negligible. A psycholinguistic correlate of this

contrastive difference is that knowledge of Chinese, spoken or written, has very little reference value for Cantonese-dominant learners learning English under second or foreign language learning conditions. Sociolinguistically, given the strong identity-driven inhibition among Cantonese-dominant Hongkongers to use English or Putonghua for intra-ethnic communication, opportunities for exposure to or use of these target languages are rare. So, linguistically, psycholinguistically and sociolinguistically, none of the conditions are conducive to the effective learning of English and Putonghua in the Hong Kong context.

On the other hand, after reviewing a selected body of empirical research in cognitive neuroscience (see, e.g., Kuhl, 2004, 2010; Kuhl et al., 2006; Mayberry & Lock, 2003), Li (2017) found that in terms of sensitivity to language input and learning effectiveness, there is general consensus among leading researchers that, compared with teenagers and (young) adults, infants and children up to the onset of puberty – roughly age 11–12 – have a clear advantage in terms of acquiring native-like competence in the target language(s). With the help of sophisticated equipment and research methods, plenty of findings in psycholinguistic and cognitive neuroscience research in the last two decades point to a ‘time-delimited window’ for effective language learning (age 4–8, Mayberry & Lock, 2003). As a human faculty, the language acquisition apparatus is most sensitive in the first 12 months of a newborn child, but such sensitivity is biologically pre-programmed to gradually decline with age, as reflected in the ability to discriminate or differentiate language-specific speech sounds. Available evidence points to a relatively language-sensitive and productive learning period between age 4 and age 8. Beyond that life stage, the child gradually loses sensitivity to discrete speech sounds and distinct lexico-grammatical patterns, making the (additional) language learning tasks progressively more challenging. One important implication is that, so long as regular and high-quality input in the language(s) in question is assured, including in multilingual environments, young learners have the lingua-cognitive ability to absorb them, much like a sponge soaked in multi-colored liquids. Given that language learning sensitivity and effectiveness show a downward trend and gradually become sluggish after puberty, what implication does it have on the SAR’s language-in-education policy?

One important implication concerns the timing of the provision of high-quality input, as reflected in the proportion and priority of funding support for different key stages in the 15 year free education system from pre-primary (K1) to secondary (S6) (Table 2).

It is only relatively recently that the quality of preschool education (K1–K3, age 3–6) began to be regulated. As a correlate of free education being extended to preschool from 2017, more stringent qualifications are required for teaching in a kindergarten or nursery school, including the teacher’s academic performance in Chinese and English. Further, postgraduate diploma courses are also offered to first degree holders aspiring to obtain a qualification for a management position at preschool level, such as the principal of a kindergarten. The resources invested in preschool education by successive governments in the last three decades, however, were meager compared with the funding support made available to the tertiary sector, as evidenced in the lion’s share – the annual Teaching Development and Language Enhancement Grant (TDLEG) allocated to the eight UGC-funded universities.

I am not aware of any publicly available breakdown of Hong Kong government expenses on various policy measures in support of students' learning of and development in Chinese and English across the different key stages of learning. There is some indication that the domain of education makes up a huge chunk. In 2021–22, for example, an estimated HK\$ 110.9 billion was budgeted for education, representing 15.2 per cent of total government expenditure. That means roughly one in six to seven dollars in government expenditure was invested in education, including support for language teaching and learning.³²

Given that TDLEG accounts for HK\$ 260.4 million in 2021–22 (see above), huge spending is invested in boosting the Chinese and English proficiency development of young adult students studying FYFD (first-year, first-degree) undergraduate programmes at the eight UGC-funded universities. While it is unclear how that funding amount compares with funding support for preschool and early primary education, it may be safely assumed that both in terms of investment and language policy measures, funding support for language teaching at preschool and early primary level is eclipsed by that at the tertiary level. In light of the aforementioned empirical insights in cognitive neuroscience research worldwide, such a funding strategy appears to be lopsided. That is, if a person's language learning sensitivity is pre-programmed to peak neuro-biologically around puberty before declining irreversibly beyond that life stage, it would seem unwise to devote the bulk of precious resources to support tertiary students' language teaching and learning, to the relative neglect of providing high-quality language input in English and Putonghua for schoolchildren at pre-primary and early primary levels (age 3–9).

If Cantonese-dominant students tend to find it difficult to make progress in their learning of English and Putonghua by attending one or two courses (typically 3-credit, 39-h each) at university, that is largely because the language enhancement gain is disproportional to their investment or efforts, in that neuro-biologically, only meager return could be expected despite huge efforts. Such an imbalance is neatly captured by a Chinese quadrisyllabic idiom 事倍功半, 'yielding half the result with twice the effort'. Conversely, for young schoolchildren, exactly the opposite is true of the relationship between regular exposure to high-quality language input and their proficiency gain. So long as regular, high-quality language input for pre-primary and early primary schoolchildren (K1–P3, age 3–9) is assured, we can be sure of much higher returns by virtue of young learners' significantly higher language learning sensitivity and effectiveness. Such a scenario is also neatly encapsulated by another quadrisyllabic idiom, the antithesis of the one above: 事半功倍, 'yielding twice the result with half the effort'. In sum, in light of compelling cognitive neuroscience research evidence worldwide whereby the validity of the folk wisdom 'the earlier, the better' in the realm of (additional) language learning has been unequivocally vindicated, I believe there is room for rethinking the SAR government's language policy measures as well as the priority of funding support for different key stages of learning.

³² The percentage of recurrent government expenditure on education is even higher, at \$100.7 billion (19.5%), or one in five dollars. Hong Kong Government: 'Hong Kong: The facts – Education', retrieved, 2 Apr 2022, from <https://www.gov.hk/en/about/abouthk/factsheets/docs/education.pdf>.

Table 2 Key stages of education, corresponding levels of schooling and age ranges

Key stage	Level of schooling	Age
Key stage 0 (KS0)	K1–K3	3–6
Key stage 1 (KS1)	P1–P3	6–9
Key stage 2 (KS2)	P4–P6	9–12
Key stage 3 (KS3)	S1–S3	12–15
Key stage 4 (KS4)	S4–S6	15–18

In their (2000) monograph, *The scientist in the crib: What early learning tells us about the mind*, Gopnik et al. (2000) observe that:

The new research shows that babies and young children know and learn more about the world than we could ever have imagined. They think, draw conclusions, make predictions, look for explanations, and even do experiments. Scientists and children belong together because they are the best learners in the universe. (p. i)

Learning to understand a language is like cracking a deeply encrypted code. We all crack this code effortlessly, at an age we can't even remember, and we use it effortlessly as adults. But it turns out that the code is far more baffling than any spymaster's cryptogram. No computer has been able to figure it out. (p. 94)

(Gopnik et al., 2000; see also <https://ilabs.uw.edu/scientist-crib-preface/>).

Given infants' and schoolchildren's enormous learning capabilities, a strong argument can be made about:

- (i) teaching all subjects in Cantonese except Putonghua and English as separate subjects at preschool (K1–K3, age 3–6);
- (ii) creating an immersive Putonghua school environment through early total immersion (i.e., beyond TCP, 普教中, teaching subjects other than 'Chinese Language' in Putonghua at lower primary level for three years (P1–P3, age 6–9); and
- (iii) raising schoolchildren's phonological awareness by helping them lay a solid foundation in pinyin as a Putonghua learning aid from P1, the primary purpose being to facilitate independent learning as they progress to a higher grade, for example, looking up the pronunciation of less familiar characters.³³

Of course, such an early total immersion approach toward developing additive bilingualism may only be considered when qualified and proficient teachers of Putonghua (and English) are in place, and high-quality language input is assured. While this prerequisite may not be easily satisfied, in my view it is absolutely essential to start planning and drawing up a roadmap for meeting that pre-condition, even though that goal might take a good decade to accomplish, if not longer. There is already some research evidence showing that creating conditions for early immersion by using Putonghua as a language of instruction for teaching and learning all P1 subjects (except English) would

³³ In Hong Kong, there is some evidence that schoolchildren going through Putonghua-medium instruction in an immersive environment throughout the primary school years (P1–P6) can develop interactional competence in standard Putonghua without learning pinyin. As the proposed immersion period lasts for only three years (P1–P3), however, and taking into account possible individual learner differences, equipping young schoolchildren with pinyin as a learning aid can enhance their phonological awareness and promote their independent learning as they progress to higher grades.

make a great difference to the proficiency gain of schoolchildren. In their small-scale comparative study of P1 schoolchildren (age 6) learning Putonghua under total immersion conditions versus as a subject, Huang and Yang (2000) found that, in ten months' time, through total immersion, thirteen Cantonese-dominant P1 students acquired normative Putonghua pronunciation in four stages: silent period (two months); mixed use of Putonghua/Cantonese (two months); spontaneous use of Putonghua (three months); and fluent Putonghua (from the eighth month onwards) (Huang and Yang 2000: 218–219). Compared with young-adult learners struggling with their learning of Putonghua at university (age 18 or above), schoolchildren who learn Putonghua under immersion conditions (age 6) have a good chance of attaining fluency and confidence in speaking Putonghua within one year. Huang and Yang's (2000) findings prompted them to surmise that, provided school-based immersion in Putonghua at primary level is carried out rigorously and quality language input is assured (e.g., as at Kiangsu & Chekiang Primary School 蘇浙小學 where their data was collected), there is a good chance for the teaching of Putonghua beyond primary school to be obviated. In view of the tremendous projected benefits – imagine generations of schoolchildren's fluency in Putonghua being assured by age 12, reduction in huge government spending on Putonghua teaching as well as precious curriculum space thus saved at secondary and tertiary levels – such a line of research is definitely worth exploring more in depth and systematically.

To skeptics' concern about a possible detrimental consequence, namely the 'domain loss' of Cantonese (as MOI) to Putonghua, they could rest assured that such a concern is unnecessary, for in this early total immersion scenario, TCP would only last for three years till the end of P3, whereupon the MOI for teaching all subjects would revert back to Cantonese beginning from P4 (age 9). Assuming no other major change to the use of Cantonese in society, the putative risk to the sustained vitality of this vibrant vernacular in the SAR would be minimal. Of course, to ascertain the learning outcomes of this early total immersion approach, in Putonghua but also other areas of lingua-cognitive development, solid empirical evidence is needed. This could be done, for example, by encouraging experimentation with school-based total immersion at early primary level, namely, teaching all P1–P3 subjects in Putonghua (except English). Obviously, for such a radical change in language policy to go ahead beyond the drawing board, consensus-building among teachers, educators and other stakeholders is absolutely necessary. This in turn is premised on supportive empirical evidence that informs the best option every step along the way, while fine-tuning in light of contrary evidence-based findings should not be ruled out (e.g., less language-loaded subjects like visual arts and physical education may be taught in Cantonese). In the age of the Internet when teaching and learning resources can be made available to digital natives through their mobile devices (e.g., e-learning activities enriched with virtual reality apps; see Legault et al., 2019; P. Li et al. 2020), I believe such an early total immersion approach to Putonghua is a viable solution for helping Cantonese-dominant students 'pick up' Putonghua more easily before the end of primary education. The only precondition is the availability of large numbers of professionally trained and highly proficient teachers of English and Putonghua (see below). This position is by and large similar to the trilingual MOI policy for primary schools recommended by Wang and Kirkpatrick (2019: 77) after their in-depth analysis of trilingual teaching practices in one sample primary school:

1. The three languages [Cantonese, English, and Putonghua] should be used as media of instruction, but the ratio of each should alter as students progress through primary, with the emphasis on Cantonese in the early years.
2. Cantonese could be used as the MoI for the Chinese Language subject from P1 to P3, but the option should be given to those who would prefer to study Chinese Language in Putonghua from P1 to P3. After P3, Putonghua should be used as the MoI in Chinese Language lessons. Cantonese lessons should be provided for P1 students whose mother tongue is not Cantonese.

Notice that Wang and Kirkpatrick (2019) did not include preschool in their trilingual MOI matrix. Based on the findings of Li and Chuk (2015) on non-Chinese-speaking (NCS) English majors' Chinese language learning experiences, spoken and written, three Pakistani students who reported studying in Cantonese kindergarten (age 3–6) under immersion conditions achieved native-like interactional competence in Cantonese. What is more, in terms of knowledge of Chinese literacy they also outperformed their peers whose learning started at a considerably later age. So long as NCS kindergarteners are able to mix with peers from Cantonese-speaking families in a Cantonese-rich school environment, they stand a good chance of developing native-like proficiency in Cantonese by the time they progress to primary school. This would allow them to not only develop a network of Cantonese-dominant friends and peers, but also acquire interactional competence in Cantonese that might also facilitate peer learning of and support for the Chinese Language subject, Putonghua, English and possibly other content subjects as they progress to higher grades.

Bilingual instruction strategies rather than 'maximum exposure, no mixing'

After over two decades of implementation, the 'maximum exposure, no mixing' MOI policy at secondary level did not seem to have yielded any hard evidence regarding successive generations of Hong Kong students' improvement in their academic performance in English, as shown in the HKDSE English language subject results. This is despite strict enforcement by the education authorities, complete with a discomfiting deterrent of surprise class visits by EDB inspectors, whereby school principals are held accountable for any teachers' violation of that non-negotiable 'no CCS (classroom code-switching)' directive. The ill-advised premise, whose rationale is dubious and taken largely at face value, is that class time being precious, any use of Cantonese in an EMI lesson would be time lost to students' exposure to good English. For the majority of Cantonese-English bilingual teachers, this is unfortunate and frustrating, in that the shared language with their students is socially constructed as an impediment to students' learning rather than a semiotic resource that could be mobilized or manipulated as part of the design of sound bilingual pedagogies – not to mention a lingering, irritating sense of guilt when the teacher's switch to the students' L1 could not be helped under many circumstances (Swain et al., 2011).

Recall that under the current late immersion policy, each year about 30 percent of primary school leavers are allocated to EMI schools. If their English proficiency is advanced enough to receive instruction in such language-loaded subjects as history,

biology, economics and geography, it would hardly be necessary for the bilingual teacher to code-switch. There is indeed some classroom-based research evidence showing that some bilingual teachers of Band 1 students with high English proficiency hardly need to switch to their shared vernacular, Cantonese (see, e.g., Lo, 2015). But the problem is that despite meeting EDB's 'threshold' standard for EMI schooling, a large percentage of students have tremendous difficulties adapting to learning through English-only instruction. Ho and Man (2007) echo Johnson's (1997) observation and point out that:

[T]he 'pedagogy' for switching from Chinese to English at Form 1 (Grade 7) is largely not effective especially for those students who are marginally acceptable to be instructed in English. (Ho & Man, 2007: 51)

Johnson (1997) describes the late English immersion model in the Hong Kong education system as "under stress", and questions its effectiveness in a non-conducive socio-linguistic environment where spontaneous use of and exposure to English outside the classroom is virtually non-existent for most Cantonese-dominant students.

Ho and Man (2007) reviewed four studies initiated by the Education Research Establishment of the then Education Department during the 1980s on the learning effects of CMI versus EMI instruction. Of particular interest is the large-scale 'intervention' study conducted by Alan Brimer (1985), who examined the effects of MOI on students' learning outcomes in Integrated Science lessons involving 1,100 Form 2 (Grade 8) students from 12 Anglo-Chinese schools and three Chinese Middle schools. Four modes of MOI were represented (Ho & Man, 2007: 16): a) English; b) English with Chinese glossary; c) Chinese with English glossary; and d) Chinese. Another variable was students' exposure to English, which fell into one of two types: more English than Chinese (Anglo-Chinese schools) and more Chinese than English (Chinese Middle schools). Brimer (1985) measured students' learning outcomes using a delayed post-test in three versions: a) Part 1 in English; part 2 in Chinese; b) Part 1 in Chinese, part 2 in English; and c) Chinese only.

One of Brimer's (1985) findings concerned the effect of the teacher's use of mixed code, which is summarized by Ho and Man (2007: 16) as follows: "mixed code may not be handicapping but it was the requirement to perform in English (tests) that hinders students' performance". This suggests that mixed code was not unhelpful to students' learning. Such an 'inconvenient truth' was clearly inconsistent with the education authorities' prevailing rhetoric since the 1980s, whereby students' low level of learning attainment in English (and Chinese) was attributed to their teachers' apparently indiscriminate and unprincipled use of Cantonese-English mixed code in class. Interestingly, Brimer's (1985) commissioned report received very limited publicity, attracting relatively little scholarly attention, as observed by Sweeting and Vickers (2007: 31, note 86):

This report [Brimer 1985] received only a very limited form of publication, mainly in senior government circles and, at the insistence of the Education Department, was categorized as 'Restricted'. A copy is, however, shelved in the Hong Kong Collection of the University of Hong Kong's Library.

Brimer's (1985) conclusion regarding a possible conducive role of Cantonese-English mixed code to students' learning is consistent with a large number of more recent classroom-based studies, including a few in Hong Kong. As demonstrated in plenty of

empirical findings in a variety of multilingual education settings worldwide (see, e.g., Weber, 2014, for a critical review), provided the teacher's use of the students' L1 in class is informed by sound pedagogical principles, conceptual learning in the target language plus a medley of information gaps in the learning process may be resolved through content-and-language integrated learning (CLIL), a tightly integrated curriculum principle akin to language across the curriculum (LAC; see, e.g., Ho & Man, 2007: 51). LAC has won the support of many Hong Kong teachers; as for CLIL, several projects were completed in the last decade or are still ongoing (Lo et al., 2022; see other works led by Angel Lin and Yuenyi Lo listed under 'References' and discussed below). Be it CLIL or LAC, for the best effect, close collaboration in curriculum development between teachers of the target language and teachers of content subjects is required in order that their respective classroom input to the same students could complement and reinforce each other (Lo et al., 2022; cf. Wang & Kirkpatrick, 2019).

Learner diversity being a classroom reality and perennial concern, there is naturally a need for the teacher to attend to the learning needs of students who are struggling with content learning in an L2. In this regard, the teacher's and students' shared language (L1), if used judiciously and underpinned by sound pedagogical principles, has been shown to be a valuable resource for stimulating students' prior knowledge mediated through their L1, in addition to being an important tool for scaffolding incremental knowledge needed for conceptual learning and intellectual enlightenment in L2, in keeping with the lexico-grammatical norms in the target language. For instance, Weber (2014), a champion of 'multilingual flexible education', argues convincingly that in the case of a vibrant vernacular like Singlish in Singapore:

the vernacular can be harnessed as a resource to help students acquire the standard variety in a better way. It can act as a bridge or scaffold to lead students towards a deeper understanding of academic subject matter, by linking it with students' own lifeworld knowledge and experience. (Weber, 2014: 114)

Likewise, drawing on Maton's (2013) notion of 'semantic waves' in reference to teachers' exemplary CLIL teaching strategies, Lo et al. (2020: 2) demonstrate how the teacher's skills in unpacking and repacking hold the key to cumulative knowledge-building in Hong Kong EMI students' L2. In particular, written subject content may be unpacked using multi-modal resources, including students' L1 (e.g., equivalents of technical terms in English where necessary), and guiding students to retain and repack that content in their own L2 writing, giving explanation orally or in written mode, using grammatical jargon where appropriate, etc. Elsewhere, it has been amply attested that, provided certain conditions are met, the teacher's use of the students' L1 helps engage them in higher-order thinking, which is crucial for facilitating students' repacking of that knowledge in L2. In terms of the learning outcome of the subject content in L2, especially for students who are struggling with L2 learning, CLIL-informed bilingual pedagogies embedded with the judicious use of students' L1 is clearly a far more productive instructional strategy compared with teaching the subject content monolingually to a class of EMI students with diverse L2 abilities.

Lin and Wu (2015) present one instructive illustration in this regard. In an EMI 'pulled-out' science class, a Cantonese-dominant student was struggling to

demonstrate her understanding of a science concept, albeit in Cantonese. Instead of insisting that she speak in English, however, the teacher accepted her response as part of ongoing class discussion and guided the whole class to familiarize themselves with the corresponding meanings in discipline-specific L2 science discourse. Drawing pedagogical implications, Lin and Wu (2015) argue convincingly why bilingual teachers should create space for translanguaging and ‘trans-semiotising’, which is crucial and instrumental for providing their students with a solid linguistic and semantic basis to master the corresponding expressions in L2. Bilingual pedagogies should thus be assessed by the extent to which they facilitate students’ transfer of content knowledge from L1 to L2, and how effectively students are encouraged to “(co-)construct or ‘trans-semiotise’ their own understanding using examples familiar to them in their L1 lifeworld” (Li, 2015a, 2015b: 342). To be sure, for bilingual pedagogies and instructional strategies to work effectively, apart from sharing the students’ L1, the teacher should also possess:

a high level of teacher expertise in subject specific knowledge, an understanding of students’ everyday views/language and how these could be related to (or juxtaposed with) academic views/language, the pedagogical skills of designing teaching activities and interaction with students to probe their understanding. (Lin & Lo, 2017: 42)

Such an interactive, ‘dialogic scientific inquiry’ approach was adopted by that resourceful bilingual teacher, as reported by Lin and Wu (2015), whose paper title begins emblematically with “May I speak Cantonese?”. After getting her teacher’s permission, however, that student “demonstrated what a difference it would make between her stuttering and struggling in English and her eloquence when languaging in Cantonese” (Li, 2015a, 2015b: 339). For CLIL-informed pedagogies to work in teacher talk, both dialogic and monologic discourses have a specific role to play. Lin and Lo (2017: 42) provide an instructive continuum to help visualize the various possibilities at the disposal of a versatile bilingual teacher when engaging EMI students with limited L2 abilities to discover the thematic patterns of science discourse in L2 (Fig. 1).

Grounded in evidence-based EMI classroom interaction data, Lin and Lo (2017) demonstrate that rather than a hindrance, Cantonese-dominant students’ L1 can function as a valuable semiotic resource in classroom interaction, and should be treated as such. Used judiciously, students’ L1 is pedagogically too valuable a resource to be banned when Cantonese-dominant students are clearly showing lingua-cognitive difficulties coping with L2 English academic discourse. Table 3 lists a few other useful bilingual teaching strategies that have been shown to work effectively with low-proficiency EMI students in Hong Kong from Form 2 (Grade 8) to Form 4 (Grade 10) across language-loaded subjects like biology, geography, and history but also mathematics (see S. Chan, 2015; Li, 2015b; Lin & Wu, 2015; Lo, 2015; Lo & Lin, 2015, 2019; Lo et al. 2022; and Tavares, 2015 for more details).

What these pedagogies and strategies have in common is that the bilingual teacher takes pains to create a safe and supportive learning environment for their students before eliciting L2 output from them individually (see, Tavares, 2015 for the exemplary

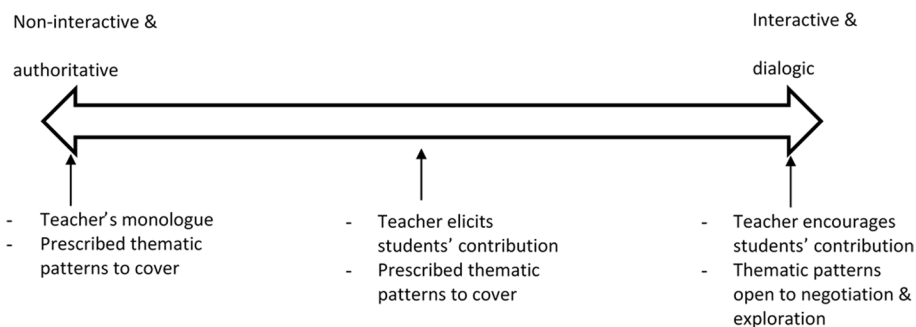


Fig. 1 A continuum for understanding teacher–student interactions. (Source: adapted from Lin & Lo, 2017: 42, Fig. 2, reprinted with permission)

practices of another resourceful bilingual EMI teacher of Mathematics, Ms. Sitt). Cummins (2008: 65) critiques ‘the monolingual principle’ and promotes bilingual pedagogies as follows:

In the case of bilingual and second language immersion programs, it has become axiomatic that the two languages should be kept rigidly separate. (...) When we free ourselves from exclusive reliance on monolingual instructional approaches, a wide variety of opportunities arise for teaching bilingual students by means of bilingual instructional strategies that acknowledge the reality of, and strongly promote, cross-language transfer.

The pedagogical merits of bilingual teaching strategies as exemplified here are also underpinned by more recent research on translanguaging (see Conteh, 2018 for a critical review). Li Wei (2018) argues convincingly that, even though conventionally labeled languages (e.g., English, French, Putonghua, Spanish) are taught and learned as separate languages in a school setting, plenty of empirical evidence shows that multilinguals do not think monolingually when making meaning in their interaction with others. All linguistic resources or signs pertaining to any number of conventionally labeled languages like English and French are “part of a wider repertoire of modal resources” at the disposal of the multilingual speakers (p. 22). Provided such linguistic resources are shared by their interlocutor(s), bilinguals and multilinguals would have no hesitation re-semiotizing linguistic resources they acquired monolingually to lend expression to creativity, criticality, humor, and the like, simply because mobilizing elements in a composite pool of linguistic resources to make meaning is part of their ‘translanguaging instinct’. Li Wei (2018) further reminds us that earlier research on such ‘code-switching’ or ‘code-mixing’ phenomena was misguided and problematic due to their ill-informed “conventional code-name approaches” (p. 22). That is, to say that a switch occurs here and there is to presume that monolingual communication is the norm, whereas this is far from the truth, for the act of re-semiotizing elements from conventionally labeled languages knows no boundaries. Driven by their translanguaging instinct, what bilinguals and multilinguals care about is to create their own translanguaging space while co-constructing meanings in context.

Extending this insight adduced from translanguaging research as a practical theory of language, Li Wei (2021) critiques the fallacy of the monolingual approach in the

Table 3 Some exemplary bilingual pedagogies and instructional strategies (based on a discussion paper by Li, 2015b)

Bilingual teaching strategy	Evidence-based pedagogical merits
(i) Socratic questioning technique	Teacher to make complex questions cognitively more accessible and answerable in English by providing clues through scaffolding to facilitate students' uptake of the target L2 expressions
(ii) Corrective feedback through recasting or paraphrasing the student's L1 response in L2	Teacher to provide metalinguistic input to help students grasp the meanings of technical terms and facilitate noticing, e.g., through morphological cues such as the meaning of the prefix <i>tri-</i> , and syllabification by 'chopping up' polysyllabic words on the board, e.g., 'nu/me/ra/tor' and 'de/no/mi/na/tor'
(iii) Reiterating and/or illustrating the key concepts in English	Teacher to consolidate students' understanding in L2 by accepting their answers in L1, and follow up with structurally more manageable questions in L2 step-by-step, from simple (what?/which one?) to more challenging (how?/why?), before guiding the whole class to discover the correct and lexico-grammatically well-formed answers in L2
(iv) Think-pair-share	Teacher to boost students' confidence by encouraging peer learning through pair work in their L1, before calling individual students to answer teacher-led questions in L2
(v) Using technological tools and multiple semiotic systems	Teacher to deepen students' understanding of abstract concepts and enhancing their retention by deploying multimodal semiotic resources (e.g., symbols, mind maps, flow charts, graphs and diagrams, tree diagrams, crossword puzzles, electronic whiteboard, video games)
(vi) Fostering independent learning by asking students to keep notes and create a personal bilingual glossary of important terms in L2	Teacher to alleviate students' anxiety and facilitate convenient retrieval of important technical terms by keeping a personal bilingual glossary, and to boost their confidence by clarifying any doubt in L1 when engaged in collaborative learning before calling upon individual students to verbalize the correct answers in L2

MOI debate, and further takes issue with the political dimension of classroom teaching. For instance, in English language teaching (ELT) discourse, 'bilingual education' is taken narrowly to mean "teaching English to people whose first language is not English" (p. 1). He further argues cogently that, intended or otherwise, many terms in ELT research to date can be shown to be politically motivated:

The labeling of a language as 'native', 'foreign', 'immigrant', or 'heritage' language is a political act and one that is more about the sociopolitical categorization of its users than about the language itself. (p. 3)

As a result of the proliferation of such ELT labels, immigrant languages and heritage languages and their speakers "are typically associated with minoritized, racialized, and/or socially stigmatized languages and speakers" (p. 3). What is ironic is that despite growing up in 'migrant families' in the UK and becoming English-dominant through schooling, many young Asians who are labeled as 'heritage language speakers' are said to have problems expressing themselves in good English. One consequence is that their opportunities for higher education are compromised due to a widely held stereotypical, dubious assumption, namely, Chinese are good at science and mathematics but not good

at language-loaded subjects like literature and philosophy (Li Wei 2021: 5–6). It is ironic because the upholders of such a belief fail to see that the racialized ‘minority’, ‘migrant’, or ‘heritage’ languages attributed to those English-dominant Asians are regionally influential lingua francas spoken by huge numbers of speakers beyond UK (e.g., Arabic and Chinese).

To Li Wei’s (2021) list of derogatory ELT jargon above may be added ‘CMI schools’ and ‘CMI students’ from the Hong Kong education context. Given the prestige of EMI (mostly Band 1) schools and the second-rate-at-best ‘reputation’ of their (mostly Band 2 or Band 3) CMI counterparts, primary school leavers allocated to a CMI school have to put up with the stigma of being ‘second best’ from about age 12. Further, for the majority of students learning English under foreign-language learning conditions, non-standard ‘learner English’ features or errors from pronunciation to lexico-grammar are unavoidable despite their teachers’ repeated corrective feedback (see Li, 2017, Chapter 4). The education authorities are therefore faced with a dilemma which is not easy to resolve: since L1 (native speaker) norms are held to be ‘the standard’ (e.g., British English or American English), and given that developing native-like proficiency under foreign language learning conditions is a lofty if not unachievable goal, the target for English in the TaB policy appears to be a recipe for failure – an arguably deep-rooted cause of social inequality in Hong Kong.

Attracting linguistically gifted and academically talented students to join the teaching profession

As far as the language of instruction is concerned, teachers, especially of language subjects, are looked upon as role models of pronunciation for schoolchildren’s imitation. Given schoolchildren’s high sensitivity to language input, high-quality input predictably yields high-quality output, while the opposite is no doubt also true. It is therefore most important for schoolchildren to be exposed to adequate high-quality language instruction. For this reason, teachers, their role models, must have a high level of proficiency in the target language, both in terms of pronunciation and the command of the lexico-grammatical subsystems. While it is neither possible nor necessary to engage native-speaking English teachers (NETs) or native-speaking Putonghua teachers (NPTs) at preschool or early primary level, the teachers must meet the threshold standard for English or Putonghua by satisfying the LPATE or LPATP requirement, which should be reviewed periodically as part of ongoing human resources planning.

To ensure high-quality language input to schoolchildren, large numbers of qualified and properly trained teachers – teaching language as well as other content subjects – are needed. The pool of such teachers must be sufficiently large for the teachers-as-role-models scenario to produce its intended effect. Clearly, the more linguistically gifted and academically talented students are attracted to the teaching profession (e.g., Bachelor of Education degree programmes specializing in teaching English or Putonghua), the better chance we stand toward helping our students to approximate the TaB target. Currently, the salary scale for qualified first-degree holders opting to enter the teaching profession is the most generous among fresh graduates. Previous experience, however, suggests that students who are academically bright and linguistically gifted have a wide range of prestigious degree programmes to choose from. Compared with those programmes leading

to lucrative professions, a BEd (Bachelor of Education) degree in language teaching may not be among their top choices. It is therefore important for the government to work with admission officers of teacher training programmes and the institutions concerned, to step up their efforts to attract high-caliber students to consider language teaching as their life-long career. Awarding the highest salary package for fresh graduates may not be attractive enough.³⁴ Can anything be done along the lines of ‘prestige planning’? Language education at ECE and early primary levels being so crucial for the development of human resources in future generations, there is plenty of room for imagination how we can mobilize bright students with the right talents and attitudes to be thoroughly trained up as dedicated language teaching professionals.

Government taking the lead to encourage ‘speak English/Putonghua where we can’

In my over 30 years of work experience at three English-medium universities in Hong Kong, I recall witnessing a recurrent scene when attending work-related meetings. In the absence of non-Cantonese-speaking colleagues, Cantonese is felt to be the most appropriate language of interaction by default, even though all present are bilingual speakers of English. Time and again, I have noticed how English would be ‘triggered’ by the arrival of one or more non-Cantonese-speaking colleagues, but then during the meeting, in small-talk between Cantonese-dominant neighbors seated next to each another, Cantonese (or Putonghua) is still the unmarked choice. Once the non-Cantonese-speaking colleagues have left the meeting, there would often be a sense of relief, in that everyone would feel more comfortable switching back to Cantonese, sometimes accompanied by a light-hearted comment like ‘we can speak Cantonese now’. This made me wonder how productive – or futile – it would be for teachers of English to remind their students to ‘speak English please!’ in class. Why so?

An important clue lies in the demographic pattern of the SAR. As mentioned, over 90 percent of Hongkongers are Cantonese-speaking Chinese (Census 2021), to whom there is no question that Cantonese is the shared lingua franca and language of identity. Such a strong perception makes it very difficult for them to initiate a conversation in some other language like English or Putonghua without being misunderstood. Anyone doing that without some excuse risks being frowned at. Reaching a consent to speak English or Putonghua with friends purely for the sake of language practice is possible, such as designating a spot on campus as ‘English corner’ (common practice on mainland university campuses) or agreeing to meet weekly over ‘English tea’ or ‘Putonghua lunch’ (probably more commonly practiced in Hong Kong), but the proficiency gain thus obtained is minimal and hardly sustainable due to its artificiality. Much more naturally occurring opportunities are needed to hone one’s language skills by making meaning with others interactively and spontaneously. In my view, with careful planning and coordination, the Government can take the lead to make a change by example. Where Cantonese is felt to be the default language choice, in work settings within the civil service and the public-school sector, I believe a ‘speak English/Putonghua where we can’ campaign could gradually instill a culture of bilingual interaction among civil servants and school teachers. Such a campaign, if well organized and properly promoted, can help break the widely

³⁴ This is neatly captured by a Cantonese quadrisyllabic idiom: 薪高糧準 (*san1 gou1 loeng4 zoen2*, ‘high salary and payment on schedule’).

shared and tacitly followed assumption concerning the ‘rule of speaking,’ such that no one would feel awkward by initiating a conversation in English or Putonghua. At the planning stage, it is important that the campaign be promoted as a volunteer bottom-up initiative, for any top-down directive would likely generate resistance and produce the opposite effect. The more (especially balanced) bilinguals or trilinguals choose to ‘speak English/Putonghua where we can,’ the less intense that uneasy feeling would be. By the time the ‘alternative language choice’ begins to take root and is gradually naturalized, there is a good chance that the civil servants and school teachers would take the lead in extending that alternative language choice to their own private life with friends and peers, or even within the family. What good would that bring? Well, when that happens, English and/or Putonghua would stop being perceived as just classroom languages. It would be nice to see them gradually come alive, taking up space in Hongkongers’ composite pool of semiotic resources or linguistic repertoire when languaging and making meaning with their significant others.

Coda

It has been over two decades after the Hong Kong SAR government’s trilingual and biliterate (TaB) language policy was rolled out shortly after the termination of British rule in July 1997. Given the geopolitical location of Hong Kong connecting the most open and international city of China with the rest of the world, plus its diverse development needs for human resources across a wide range of service-oriented industries, the government must ensure that sufficient numbers of tomorrow’s workforce will be conversant in English, written and spoken, as well as in Putonghua in addition to the regional lingua franca Cantonese. In this sense, it may be argued that the TaB policy is inescapable from the outset of the renationalized SAR. For the majority of Hongkongers – estimated at 7.4 million in 2022 – who are Cantonese-dominant, neither English nor Putonghua is learner-friendly, partly due to tremendous differences in their respective linguistic subsystems, including two completely distinct orthographies. While I am not aware of any research on the feasibility of TaB as a realistic goal by virtue of the nature of linguistic and sociolinguistic challenges faced by native speakers of Cantonese, the roadmap conceived since the mid-1980s that gradually took shape shortly before the handover was unfortunately misguided by a deep-rooted monolingual ideology of ‘linguistic purism’ through late immersion in English for those who are deemed capable to do so (Lo & Lin, 2019: 79). One consequence is that from secondary education onwards (roughly age 11–12), schools are segregated into two streams: Chinese-medium instruction (CMI) versus English-medium instruction (EMI), with the latter being ‘reserved’ for a minority (of about 30 percent) of primary school leavers whose academic results in English appear to render them fit to learn content subjects in English.

There is some evidence that CMI students’ life chances in terms of access to university education are adversely affected by virtue of their insufficient command of the requisite discipline-specific terminologies in English. For the remaining 30 percent of EMI students, a rigid and non-negotiable guideline forbids bilingual teachers to switch to their students’ more familiar language, Cantonese, and yet plenty of evidence shows that translanguaging to Cantonese cannot be helped despite institutional prohibition. While no survey seems to

have been conducted investigating how successful EMI teachers have been to avoid translanguaging to their students' more familiar language, the classroom data collected and analyzed by many CLIL-informed translanguaging researchers suggest that the EDB guideline fails to put translanguaging to rest. In other words, for EMI teachers faced with students struggling to learn in English, with few exceptions translanguaging is part of everyday teaching reality. Teacher resistance or otherwise, there are signs that the rigid guideline against translanguaging in EMI classes is seldom enforced. In addition, CLIL-informed bilingual teaching strategies are gradually winning over supporters, thanks to the good work of the research team led by Angel Lin and Yuenyi Lo, whose enlightening findings are discussed above. To make more teachers benefit from CLIL-informed bilingual pedagogies, there is "an urgent need for knowledge transfer to let research-based good practices to inform ELT teacher training programmes targeting bilingual teachers of English" (Li, 2015b: 343).

I hope to have made it clear that of the five research dimensions for exploring how the effectiveness of the TaB policy could be enhanced (Li, 2017), if relatively little could be done at the linguistic, psycholinguistic and sociolinguistic levels, two promising directions to make a change are: CLIL- or LAC-informed bilingual pedagogies, and the reprioritization of government support for the earlier key stages of learning from K1 to P3 (age 3–9), which in curriculum terms corresponds with pre- to lower primary education. In light of young schoolchildren's superb language learning capabilities, it is such a pity and waste not to build TaB capacity by making the most of the 'time-delimited window' for effective language learning in early life (Mayberry & Lock, 2003).

Putonghua being more efficiently learned through early exposure than late explicit teaching, it is my view that, with careful planning and proper teacher training, Cantonese-dominant preschoolers stand a much better chance of 'picking up' Putonghua through early exposure at kindergarten (age 3–6) and total immersion at lower primary education (age 6–9) before they progress to P4 (age 9). To raise primary pupils' phonological awareness and to facilitate independent learning, the alphabetically based pinyin system should be introduced as soon as the schoolchildren begin to converse in Putonghua spontaneously. Huang and Yang's (2000) research findings obtained in a small-scale project two decades earlier hold a lot of promise; their investigation is absolutely worth replicating through action research on a larger scale. Once confirmed, appropriate support measures could be put in place to ensure a steady supply of qualified and proficient teachers of Putonghua. From the drawing board to actual implementation, however, it could easily take a good decade, if not longer. It is therefore never too early to start planning.

I would like to end this paper with the recommendation made in Li (2017: 292, slightly modified):

In light of the tremendous learning capabilities of preschoolers, and students at early primary level, it would appear that the government's current priorities of investment in and funding support for language education of the SAR are lopsided. It is therefore worth re-thinking the policy provisions and measures to help Hongkongers reach the trilingual and biliterate target. In particular, it is worth encouraging research into the question, whether resources for language learning support in the education domain are more productively directed at a life stage of language learners from

K1 to P3 (age 3–9), when their language learning sensitivity and chance of success appear to be at their highest.

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Author contributions

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