## Singapore Mandarin Chinese: Its Variations and Studies\*

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# Abstract

Given the historical and linguistic contexts of Singapore, it is both theoretically and practically significant to study Singapore Mandarin (SM), an important member of Global Chinese. This paper aims to present a relatively comprehensive linguistic picture of SM by overviewing current studies, particularly on the variations that distinguish SM from other Mandarin varieties, and to serve as a reference for future studies on SM. This paper notes that (a) current studies have often provided general descriptions of the variations, but less on individual variations that may lead to more theoretical discussions; (b) the studies on SM are primarily based on the comparison with Mainland China Mandarin; (c) language contact has been taken as the major contributor of the variation in SM, whereas other factors are often neglected; and (d) corpora with SM data are comparatively less developed and the evaluation of data has remained largely in descriptive statistics.

**Keywords:** Global Chinese; Singapore Mandarin Chinese; grammatical variations 关键词: 全球华语、新加坡华语、语法变异

### 1. Introduction

Recent years have witnessed an increasing number of studies on the Chinese language from a global perspective. That is, in addition to Mainland China and Taiwan, a significant number of studies on Chinese have extended their attention to the Chinese spoken in other speech communities of the world, e.g., Hong Kong, Macau, Malaysia, Singapore, and North America. Studies have proposed different notions and interpretations for referring to such Chinese language, e.g., "global Chinese" (全球华 语 quánqiú huáyǔ) (Diao 2015; Diao 2017; Tang 2009; Xu & Wang 2004; Xu & Dong 2013), "Big Chinese" (大华语 dàhuáyǔ) (Chew 2016; Li 2017; Lu 2005; Lu 2015), "World Chineses" (世界华语 shìjiè huáyǔ) (Huang et al. 2014; Lin et al. 2014; Lin et al. 2018), and "Generalized Mandarin as an International Language" (宽式国 际汉语 kuānshì guójì hànyǔ) (Dong & Xu 2015; Xu & Dong 2013), all of which

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accept that there are multiple varieties of the Chinese language. For instance, by taking into consideration both the historical and contemporary contexts, Diao (2015, 243) proposes that global Chinese (or Chinese in different regions of the world) is "a common language of ethnic Chinese based on the modern Chinese in early stage (Guoyu) with Putonghua as the core". Following Diao (2015) and other studies (Diao 2017; Xu & Dong 2013; Dong & Xu 2015), this study treats the Mandarin spoken in Singapore, i.e. Singapore Mandarin (新加坡华语 xīnjiāpō huáyǔ), as a variety of Mandarin Chinese. That is, Singapore Mandarin (shortened as "SM") is not simply a synonym of Putonghua (普通话 pǔtōnghuà), or even the Mandarin spoken in its neighboring country Malaysia (Malaysia Mandarin 马来西亚华语 mǎláixīyà huáyǔ), but one of the varieties that make up global Chinese. The study of SM is critical both theoretically and practically, given its historical and linguistic contexts in Singapore: it contributes to the research on global Chinese and theoretical discussion of language variation and change cross-linguistically; it also facilitates Mandarin teaching in Singapore and more efficient communication between speakers of different Mandarin varieties. This paper is an overview of studies on SM, particularly on its history (Section 2), the distinctive linguistic features that SM exhibits with respect to the other varieties of Mandarin (Section 3). With the overview, this paper aims to present a relatively full linguistic picture of SM and serve as a reference for future studies on SM by pointing out the possible gaps in the current research trends (Section 4).

# 2. Singapore Mandarin: History

The Chinese arrived in Singapore as early as the late 13<sup>th</sup> century (Zhang et al. 2004), though it was only until after Singapore was established as a British trading post in 1819 that the Chinese came in droves. By 1836, the Chinese people had become one of the largest ethnic groups in the region. Table 1 summarizes the changes in population demographics in Singapore since the first official census in 1824.

Year	Chinese	Malay	Indian	Others	
1824	31.0	60.2	7.1	1.7	
1836	45.6	41.7	9.9	2.6	
1849	52.9	32.2	11.9	3.0	
1871	57.6	27.6	10.9	4.0	
1911	72.4	13.8	9.2	4.7	
1947	77.8	12.1	7.7	2.4	
1957	75.4	13.6	8.6	1.1	
1970	76.2	15.0	7.0	1.8	
1980	76.9	14.6	6.4	2.1	
1990	77.7	14.1	7.1	1.1	
2000	76.8	13.9	7.9	1.4	
2010	74.1	13.4	9.2	3.3	

 Table 1. Demographics of ethnic groups in Singapore (%)

Source: Department of Statistics (2011); Xu and Wang (2004).

Despite being ethnically Chinese, the Chinese immigrants did not speak Mandarin when they first arrived in the early 19<sup>th</sup> century. Instead, they spoke their regional dialects, such as Southern Min dialects (including varieties from Quanzhou, Zhangzhou, Hainan and Teochew) and Cantonese, depending on their respective hometowns. This situation, where Mandarin was not adopted as the predominant home language for Singapore Chinese communities, lasted till the time around Singapore' independence around 1965; the census shows that only 0.1% of the Chinese population spoke Mandarin as their mother tongue in 1957. As these dialects were mutually unintelligible, the new Singapore Government sought to instate Mandarin Chinese as the common tongue for Singapore Chinese and decreed that all students must learn both the English language and their official, ethically-determined mother tongue. For the ethnic Chinese, this meant that they must learn both English and Mandarin. However, the preference for using Mandarin Chinese as a home language for the ethnic Chinese was considerably low even up until 1980 (see Table 2).

Language	1980	1990	2000	2010
English	10.2	21.4	23.9	32.6
Mandarin	13.1	30.0	45.1	47.7
Chinese vernaculars (dialects)	76.2	48.2	30.7	19.2

**Table 2.** A comparison of preferred home language by Chinese in Singapore (%)

Source: Adapted from Cavallaro and Ng (2014)

To tackle this issue, the Singapore government launched the Speak Mandarin Campaign in 1979 to promote Mandarin Chinese amongst the Singaporean Chinese community in order to bring about social cohesion and communication within the Singaporean Chinese community and with the wider Mandarin-speaking circle (Bokhorst-Heng & Wee 2007; Dixon 2009; Newman 1988; Shang & Zhao 2017). This campaign has been quite effective, dropping the use of Chinese dialects by around 30 within ten years and by 2010, most of the dialect-speaking community has shifted to using Mandarin (Bokhorst-Heng & Wee 2007; Cai 2014; Chua 2010; Ke 2009; Ng 2006; Xu & Wang 2004).

## 3. Singapore Mandarin: Its variations

A significant number of studies on SM have paid particular attention to the differences between SM and Mainland China Mandarin (i.e. MCM, or Putonghua), and to a smaller extent, Taiwan Mandarin (TWM), Hong Kong Mandarin (HKM), and Malaysia Mandarin (MM). This section aims to present a comprehensive overview of the variations in the grammar of SM. For a fuller review, this section also covers variations identified in lexicon and pragmatics, two categories closely associated with grammar.

# 3.1 *Lexical variation*

Lexical variation is the one of the most well-studied aspects in variation studies

because it is more noticeable and more easily captured. The scope of previous studies on lexical variation in SM ranges from listing of words in earlier studies (Chen 1986a; Jia & Xu 2005; Lu 1990; Wang 1999; Wang 2002; Zhou 1999) to more exhaustive surveys at dictionary-length in more recent studies (Li 2017; Tsou & You 2010; Wang 1999).

The lexical variations that SM exhibits can be classified into three major categories (Chew & Xiao 1999; Shao 2010; Chen 2008; c.f. the eight categories in Wang 1999 or the seven categories in Li & Chew 2002). The first category consists of region-specific words, which are words usually coined to denote concepts that exist only in Singapore, e.g., 组屋 zǔwū 'HDB flats' and 拥车证 yōngchēzhèng 'Certificate of Entitlement'. These words are what Tin (2016) terms as 'community expressions' (社区词 *shèqū*  $c\hat{i}$ ), i.e. words created and used by a local community and reflect its social, political, economic, and cultural backgrounds. The second category comprises of words with the same meanings but are expressed with different forms in different varieties. For instance, 'taking a shower' is expressed as 冲凉 chōngliáng in SM but as 洗澡 xĭzǎo or 淋浴 línyù in MCM. The third category consists of words with the same forms but express different meanings in different regions. For instance, 周日 zhōurì means 'a workday' in SM but 'Sunday' in MCM. However, the words in the third category are usually only partially different, and the differences lie in three main areas: (a) semantic broadening, e.g., in addition to 'cat', 猫 māo in SM can mean 'being stingy', (b) semantic narrowing, e.g., while 汽车 qìchē in MCM is a general term for vehicles, it only refers to cars in SM, and (c) change in sentimental connotation, e.g., 一小撮 yīxiǎocuō 'a small bunch' in MCM typically connotes a less favorable meaning when modifying human beings, but its SM equivalent is used in a neutral sense.

A number of studies have also discussed, briefly or in depth, the sources of the lexical variations in SM (Chen 1984; Chen 1986b; Chen 2008; Chua 2003; Li & Chew 2002; Huang 2011; Pan 2008; Wang 2002; Xu & Wang 2004). Four major sources have been identified: (a) words created to denote concepts unique to Singapore, e.g., 组屋 zǔwū 'HDB flats' and 拥车证 yōngchēzhèng 'Certificate of Entitlement', (b) loanwords from foreign languages like English and Malay, and local Chinese dialects, especially Southern Min and Cantonese, e.g., 巴士 bāshì from bus in English and 巴刹 bāshā from pasar in Malay, 三层肉 sāncéngròu 'pork belly' from Hokkien and 大耳窿 dà'ĕrlóng 'illegal money lender' from Cantonese, (c) words that have spread from Hong Kong and Taiwan, e.g., 垃圾虫 lājīchóng 'litterbug' from Hong Kong and 菜鸟 càiniǎo 'rookie' from Taiwan, and (d) words retained from earlier stages of Chinese like Pre-Modern Chinese, e.g., 邮差 yóuchāi 'postman' and 佣人 yōngrén 'domestic helper'.

Among the different aspects of language, lexicon is the most sensitive to variation and change, and these variations can happen rather rapidly (Bybee 2015). While many words are used with stable frequencies and have become part of the SM lexicon, new vocabulary is still being created to represent new concepts and existing words are either being replaced by words borrowed from other varieties or phased out because the concepts they denote no longer exist. For instance, by looking at the

changes in SM lexicon over the course of 50 years (1960-2009), Huang (2011) points out that SM in the earlier period still contains many words retained from Classical Chinese (e.g., 抑*yì* 'or', 呷*gā* 'drink' and 吾*wú* '1<sup>st</sup> person pronoun'). However, in a later period, most of these words have been replaced by words from Modern Mandarin brought on by the influence of MCM. When examining the 1557 words unique to SM listed in Wang (1999), Chen (2008) also finds that one-third of the list have undergone changes in a relatively short period of nine years. 17 of these words are no longer found in *Lianhezaobao* (联合早报), that is, they are very likely no longer used in SM, e.g., 红毛女 *hóngmáonů* 'Caucasian woman', 那西鲁玛 *nàxīlǔmǎ* 'nasi lemak (rice cooked in coconut milk)', 马打 *mǎdǎ* 'mata (police)'.

Meanwhile, studies such as Huang (2011) find that the usage frequencies of some borrowed words have either become stable or increased in more recent times, signifying that these words have been effectively added into the lexicon of SM, e.g., 家私*jiāsī* 'furniture' and 三层肉 *sāncéngròu* 'pork belly' from Hokkien, 巴士 *bāshì* 'bus' and 巴仙 *bāxiān* 'percent' from English, 甘榜 *gānbǎng* 'kampung (village)' and 巴刹 *bāshā* 'pasar (market/bazaar)' from Malay. Additionally, community words are constantly coined in SM to reflect changes in the community, social structures and such, e.g., 婴儿花红 *yīng'ér huāhóng* 'baby bonus', 陪读妈妈 *péidú māmā* 'study mama', 新生水 *xīnshēngshuǐ* 'NEWater' (Chen 2008:92–3).

The variations and changes in SM lexicon have also witnessed the close interactions between SM and MCM. Studies have shown some bi-directional lexical influence between the two varieties. For instance, in an investigation of 111 MCM community words (e.g., 粉丝 fěnsī 'fans', 炒房 chǎofáng 'real estate speculation', 防火墙 fánghuǒqiáng 'firewall'), Pan (2008) finds that 43.4 of native SM speakers can understand more than half of these words. Additionally, in the competition between SM and MCM words with the same meanings, some SM words have, in fact, been eliminated and replaced with the MCM equivalents. For instance, 骇客 hàikè 'hacker', 高解像电视 gāojiēxiàng diànshì 'HDTV', and 波道 bōdào 'channel' have all been replaced by 黑客 hēikè, 高清电视 gāoqīng diànshì, and 频道 píndào respectively. Furthermore, SM even sometimes directly borrowed loanwords in MCM, such as 谷歌 gŭgē 'Google', 播客 bòkè 'podcast', and 平台 píngtái 'platform'. Concomitantly, examples are found where MCM takes words from SM. According to Chen (2008), about 10 of the 1557 words that were unique to SM (Wang 1999) can be found in the Contemporary Chinese Dictionary (Chinese Academy of Social Sciences 2005). That is to say, these words have been adopted by MCM and are no longer unique to SM.

## 3.2 Grammatical variations

This section presents grammatical variations in two sub-sections. Section 3.2.1 introduces grammatical categories, particularly classifiers and adverbs, where major variations have been identified. Section 3.2.2 outlines some of the major grammatical process and structures in SM. These variations suggest that SM is clearly characterized by its tolerance and accommodation of different variants in almost all grammatical aspects. As will be outlined in the following, much of these variations

have been proposed to come from the influence of other previously dominant Chinese dialects and of other languages like English.

3.2.1 *Grammatical categories*. Variations in grammatical categories have been noted in a number of studies (e.g. Chen 1986b; Chew 2002; Lu 2001; Lu 2002; Zhu 2008). According to Zhu (2008), such variations are found across almost all major grammatical categories, with the more notable ones in classifiers and adverbs.

First, among the many classifiers, 粒 li 'grain' and 间 *jiān* 'room' are two of the most frequently discussed classifiers in SM. Both classifiers are used in a much more generalized way than their counterparts in MCM. For instance, for 粒 li 'grain', Situ's (2014) corpus-based investigation finds that in addition to modifying small and round entities such as grains and pills, 粒 li 'grain' can also modify (a) nouns denoting relatively larger round entities, e.g., 西瓜 *xīguā* 'watermelon', (b) entities that are not round, e.g., 罗里电池 *luōlǐ diànchi* 'battery of a lorry', (c) human figures, e.g., 仔 *zĭ* 'kid', (d) abstract entities, e.g., 声 *shēng* 'sound', and (e) event nouns such as 进球 *jìnqiú* 'scoring a goal'. The study also finds that 粒 li 'grain' is used much less frequently in MCM and TWM and is limited to small and round entities in the former and to round entities in the latter. The same semantic extension is found for 间 *jiān* 'room', where it can be used to modify not just entities related to individual rooms, but also whole houses or apartments as units, business entities and non-profit organizations (Zhu 2008). The latter nouns are typically modified by 家 *jiā* 'home' or fi *suǒ* 'place' in MCM.

Second, variations have also been noted in many adverbs, such as  $\forall c\dot{a}i$  'only; then', 比较 *bijiào* 'comparatively' and 太过 *tàiguò* 'overly'. For instance,  $\forall c\dot{a}i$ 'only; then' often replaces  $\exists z\dot{a}i$  'then' in SM because of the influence from Southern Min (Xing 2005), as in (1). In MCM, however,  $\forall c\dot{a}i$  usually only emphasizes something that had just happened or will happen later than expected, whereas  $\exists z\dot{a}i$ 'again' is for events that will be repeated, or events that will happen after another event or at a certain time. Therefore, in MCM, instead of introducing a subsequent event (as is the case in SM),  $\forall c\dot{a}i$  'only; then' in (1) would express the speaker's opinion that it is too late to let the students to start creative writing in the second lesson.

(1) 第一堂讲创作的基本知识,第二堂才让学生创作。 *dìyī táng jiǎng chuàngzuò de jīběn zhīshi, dìèr táng cái ràng xuésheng chuàngzuò*'Introduce the basic knowledge of creative writing in the first lesson; then let the students start creative writing in the second lesson.' (draft of a handbook for teachers, cited from Xing 2005:178)

Lastly, it is also found that some words can belong to different grammatical categories in different varieties (e.g., Chen 1986b; Chew 2002; Zhu 2008). For example, Chen (1986b) points out that as a borrowing from Cantonese, in SM, the adjective 近 *jìn* 'near' can be used as a verb and take objects, as in 香港很近中国 *Xiānggǎng hěn jìn Zhōngguó* 'Hong Kong is very near to China.' (Chen 1986b, 149). Such phenomena are often seen in nouns, verbs and adjectives; more examples can be seen in Zhu (2008).

3.2.2 *Grammatical process and structures*. This sub-section introduces some of the major grammatical process and structures that have exhibited variation, including reduplication, aspect marking, some special constructions (特殊构式 *tèshū gòushì*), and word order.

3.2.2.1 *Reduplication.* Like in MCM and other varieties of Mandarin, reduplication in SM can in various types of nouns, verbs and adjectives. It is a process which expresses a quantitative sense of augmentation (iconic in meaning and form) or attenuation (counter-iconic in meaning and form) (Stolz et al. 2011). In MCM, for instance, verbal reduplication usually expresses attenuation while adjectival reduplication expresses either augmentation or attenuation depending on the resulting syntactic functions. However, in SM, these various forms of reduplication differ in functions and meaning when compared with MCM as the former also takes features from Southern Chinese dialects. Specifically, SM is less restrictive in terms of the types of words that can undergo reduplication (and the forms they take) and that reduplication in SM serves more functions than in MCM. This section will outline some of these variations that existing studies have pointed out.

First, where the types of words that can undergo reduplication are concerned, SM is found to be much more flexible than MCM across word classes like nouns, adjectives and even auxiliaries. For instance, nouns like  $\pi$  shuǐ 'water' and 沙 shā 'sand' can be reduplicated in SM and not in MCM. Phua and Liang (to appear) point out that such reduplication expresses simulation, that is, the entity under modification possesses a property similar to the property of the entity denoted in the reduplicated noun. For instance, the reduplicated form  $\pi \pi k$  shuǐshuǐ in (2a) is used to describe the thin, watery property of the porridge. Furthermore, as in (2b), even disyllabic nouns in an attributive-head structure like  $\sqrt{M} xiǎojiě 'miss' can be reduplicated in$ 

SM to describe the property of the subject (Phua and Liang to appear; cf. Chen 1986b).

(2) a. 那碗粥水水的。 nà wăn zhōu shuĭshuĭ de
'That bowl of congee is a bit too watery.' (Chu 1996:19)
b. 她做起事来,小姐小姐那样 tā zuò qĭ shì lái xiǎojiexiǎojie nàyàng
'She does things like a young missy.' (Phua & Liang to appear:4)

The same flexibility is also noted in adjectives, where adjectives that typically do not allow for reduplication in MCM, such as absolute adjectives (e.g., 假 *jiǎ* 'fake', 粉 *fěn* 'powdery') and adjectives with negative connotations (e.g., 乱 *luàn* 'messy', 脏 *zāng* 'dirty', 硬 *yìng* 'hard', 坏 *huài* 'bad'), are reduplicated in SM. Another reduplication of a typically unacceptable word class is the auxiliary verb 敢 *gǎn* 

(3) 敢敢唱!
găngăn chàng
'Sing bravely!' (Chen 1986b:141)

'dare', as in (3).

The reduplicated form  $\bar{w}\bar{w}$   $g\check{a}ng\check{a}n$  'bravely' functions as an adverbial for VPs. According to Chen (1986b) and Zhu (2008),  $\bar{w}\bar{w}$   $g\check{a}ng\check{a}n$  expresses a higher intensity in the modified verb. In addition to SM,  $\bar{w}\bar{w}$   $g\check{a}ng\check{a}n$  is also found in MM (Guo to appear; Phua and Liang to appear), but not in other varieties of Mandarin. There have been a number of discussions regarding the source of this reduplicated form, ranging from Min dialects (Phua and Liang to appear) to Cantonese (c.f. Zhu 2008). Lastly, in verbal reduplication, not only do reduplicated verbs in SM take the forms "VV" and VV  $\bar{a}$  kàn, they also take the forms VV  $-\bar{r}$  yīxià (9a) and V  $\bar{a}\bar{a}$  kànkan (9b) (Zhu 2008), displaying variations in how the reduplicated verbs are expressed and constructed.

A second notable variation in SM with regards to reduplication is that reduplicated words in SM can perform more functions than in MCM. For instance, in MCM, adjectival reduplication can express augmentation when in the adverbial or complement position and attenuation when in attributive or predicative position (Huang & Shi 2016; Zhu 1982). However, adjectival reduplication in SM only expresses augmentation regardless of the syntactic position (Phua and Liang to appear). Similarly, reduplicated verbs in the form of "VV" in SM express augmentation on top of attenuation, a meaning not found in MCM. For instance, in (4),  $\frac{1}{2}$   $\frac{1}{2}$   $ch\bar{i}ch\bar{i}$  'eat' emphasize that the subject completes the act of eating before the next course of action, i.e.  $\frac{1}{2}$  *lái* 'come', and thus signals a perfective aspect (Chen 1986b; Chu 1996). Therefore, since "VV" in SM can express both attenuation and augmentation, and context is crucial for the determination of the intended meaning (Phua and Liang to appear).

(4) 我吃吃就来!
wǒ chīchī jiù lái
'I'll come after I am done eating.' (Chen 1986b:140)

The verb in a resultative verbal compound can also be reduplicated in SM and expresses augmentation. For instance, 收 *shōu* 'keep' in 收起来 *shōu qilai* 'keep it all away' and 吃 *chī* 'eat' in 吃掉 *chīdiào* 'finish eating' are reduplicated in (5). Chen (1986b) and Zhu (1996) propose that such verbal reduplication expresses exhuastiveness. That is, it emphasizes that all participants (e.g., books) or every part of the participant (e.g., the food denoted by  $\dot{r}$   $t\bar{a}$  'it') are affected by the action expressed in the reduplicated verb.

(5) a. 这些书收收起来! zhèxiē shū shōushōu qilai
'Keep all these books away!' (Chen 1986b:140)
b. 把它吃吃掉! bǎ tā chīchī diào
'Eat all of it!' (Chen 1986b:140)

The augmentation feature of verbal reduplication is not available in MCM but can be found in various Chinese dialects (Arcodia et al. 2015; Fu & Hu 2012; Zhu 2008), including Min, Wu, Cantonese and a small number of Mandarin (according to Fu & Hu 2012). Therefore, the feature is hypothesized to have found its way into SM via Southern Min dialects and Cantonese, the two most dominant dialects in Singapore.

3.2.2.2 *Aspect marking*. Relatively few studies focus solely on aspect marking in SM. Most studies only mention variations in SM's aspect markers as part of a bigger study on grammatical variations. Among these studies, the most notable discussions deal with (dis)use of aspect markers and the expressions of aspects in SM.

(6) 六个月后,那个女人离开[了]他 *liù gè yuè hòu, nàgè nǚrén líkāi [le] tā*'Six months later, the woman had left him.' (*Biepeng* 161, cited from Zhu 2008:95)

Second, certain aspects are expressed differently in SM. For instance, the perfective aspect  $\exists le$  can also be expressed as  $\exists li\check{a}o$  (Chen 1986b; Khoo 2018; Lua 2014). While Chen (1986b) and Lua (2014) claim that  $\exists le$  and  $\exists li\check{a}o$  are interchangeable and should thus be considered the same particle, Khoo (2018) notes

that the two particles exhibit different syntactic properties, and based on a corpus investigation, finds that  $\exists liǎo$  as a perfective aspect marker is more commonly found to occur after verb-object compounds, rather than between the verb and the object as preferred by  $\exists le$ . In addition to  $\exists le/liǎo$ , the perfective aspect in SM can also be expressed using verbal reduplication, which typically only expresses the tentative aspect in MCM (Chen 1986b); on the other hand, on top of "VV" and "VV  $\equiv kàn$ ", the tentative aspect in SM can also be expressed in "VV  $\neg \neg y\bar{x}ià$ " and "V 看看 kànkan".

SM has also developed aspect markers that are either rarely or not found in MCM. 有 yǒu 'have; exist' in the construction "有 yǒu + VP" is one such example, e.g., 我有 看那部电影 wǒ yǒu kàn nà bù diànyǐng 'I have watched that movie.' (Chua 2003; Lock 1989; Zhu 2008). The construction can be used whether or not the event or action is past and whether or not it is completed or terminated. There remain differing opinions as to the aspect that  $f y \delta u$  denotes. For instance, Chua (2003) suggests that 有 yǒu denotes the perfective aspect, similar to 了 le, while Zhu (2008) analyses 有 yǒu as an experiential aspect marker similar to 过 guo. While "有 yǒu + VP" has also been found in MCM, Zhu (2008) argues that 有 yǒu in MCM andSM underwent different developmental paths given that " $f y \delta u + VP$ " can co-occur with the perfective  $\vec{J}$  le in MCM, but not in SM. Another aspect marker often used in SM is 中 zhōng 'in the process of' in "VP+ 中 zhōng", e.g., 等待中 děngdài-zhōng 'in the midst of waiting' and 生长中 shēngzhǎng-zhōng 'in the process of growing'. Zhu (2008) analyses as a continuous aspect marker, similar to  $\ddagger$  zhe. It is postulated to be a result of TWM influence. According to Diao (2013), "VP++ zhong" first appeared in TWM and is more frequently used in TWM than in other Mandarin varieties. Therefore, Diao (2013) proposes that this construction could be a result of Japanese influence on TWM, which in turn was spread to other Mandarin varieties, including SM.

3.2.2.3 *Special constructions.* SM displays a number of variations in some of its special constructions. The following outlines the findings of these studies in terms of the "V + directional complement" constructions, comparative constructions, double object constructions and some other constructions.

### *V* + *directional complement*

Existing studies have found a number of variations involving directional complements in SM, such as "V +  $\pm l \dot{a} i / \pm q \dot{u}$  'hither/thither'" (Khoo & Lin 2016; Lu 2001; Zhu 2008), "V + 回 *hui* 'back'" (Chen 1986b; Choo 2015; Lin 2015; Lu 2001; Zhu 2008), "V + 到 *dào* 'to' + complement" (Choo 2015; Zhu 2008; cf. Chen 1986b; Lu 2001), "V + 掉 *diào* 'off'" (Choo 2015) and "V + 过 guò 'again'" (Zhu 2008). These constructions differ from their MCM counterparts in various aspects, such as word orders, the meanings they express and their collocations.

For instance, while in MCM the deictic complements 来 *lái* /去 *qù* 'hither/thither' typically occur after location NPs e.g., (飞)回印度去 *(fēi)huí Yìndù qù* '(fly) back to India', they are more often found after location NPs in SM, e.g., (飞)回去印度

(*fēi*)huíqù Yìndù '(fly) back to India' (Lu 2001; Zhu 2008). By comparing the word orders in self-agentive motion constructions in SM, MCM and three dialects (Wu, Cantonese and three branches of Min as discussed in Yiu 2014), Khoo and Lin (2016) find that SM allows all word orders used in MCM and the dialects. That is, SM allows the location NPs to come both before (not a VO characteristic) and after (a VO characteristic) the deictic complements. Khoo and Lin (2016) therefore argues that SM lies in between Chinese dialects and MCM with regards to VO characteristics, based on the data on self-agentive motion constructions.

Many of these directional complements are also found to be used in ways that are typically not observed in MCM. Take 回 *huí* 'back' as an example. In the post-verbal position, 回 *huí* typically functions as a directional complement and specifies the direction of an entity's movement to its original place, e.g., 走回教室 *zǒu huí jiàoshì* 'walk and return to the classroom'. However, several studies note that in SM, 回 *huí* can occur with a larger variety of verbs and has more functions that that of MCM (Chen 1986b; Choo 2015; Lin 2015; Lu 2001; Zhu 2008). Lin (2015) classifies "V+ 回 *huí*" into two major functions depending on whether or not 回 *huí* denotes the recurrence of the action expressed in the predicate; these two functions are further sub-classified into a total of ten sub-functions. For instance, in (7a), "V + 回 *huí*" denotes a repeated event that involves the same action and arguments, whereas (7b) does not involve recurrence of the action and is mainly concerned with the object (这 条桥 *zhè tiáo qiáo* 'this bridge') returning to its original state.

- (7) a. 他打你,你打回他啦!
   *tā dă nǐ dǎ huí tā la* 'He hit you, you hit him back!' (Lin 2015:38)
  - b. 炸坏了,日本人后来就用木头来修回这条桥。
    zhà huài le Rìběnrén hòulái jiù yòng mùtou lái xiūhuí zhètiáoqiáo
    '(The bridge was) destroyed in the building, so the Japanese then used logs to repair this bridge.' (*Rizhishiqide Xinjiapo* CD2 07/09/2005, cited from Lin 2015:36)

Such semantic or functional differences are also noted in  $\mathfrak{A}$  *dào* 'to', which is also used as a degree marker on top of a directional or resultative complement (Choo 2015; Zhu 2008) and  $\mathfrak{U}$  guò, which is used to express repetition of an event on top of being an experiential marker (Zhu 2008), as in (8a) and (8b) respectively.

- (8) a. 由于我先生的好赌, 害到我们没有一天温饱。 *yóuyú wǒ xiānsheng de hàodǔ hàidào wǒmen méiyǒu yītiān wēnbǎo*'We often starved because of my husband's gambling addiction.'
  (*Biepeng* 186, cited from Zhu 2008:119)
  - b. 小猴子皮皮跳起来,不服气道: "再比过,这一次我不见得会输。" xiǎohóuzi Pípí tiàoqilai bùfúqì dào zài bǐguò zhèyīcì wǒ bùjiànde huì shū

'Pipi, the little monkey jumped up and said sorely, "Let's compete again. I don't believe that I will lose again.' (*Wenxue* 26(89), cited from Zhu 2008:112)

Lastly, studies have also observed that these complements are able to collocate with a larger variety of verbs in SM than in MCM. 掉 *diào* 'off' and  $\pm q\hat{u}$  'thither' in SM two examples of this variation. Based on a corpus investigation, Choo (2015) finds that while 掉 *diào* can only collocate with verbs that typically denote removal and disappearance in MCM, the same verb can collocate with a much more diverse range of verbs, such as 抱 *bào* 'hug', 采 *cǎi* 'pick', 捞 *lāo* 'scoop' and 等 *děng* 'wait'. Similarly, when functioning as a resultative complement on top of being a directional complement,  $\pm q\hat{u}$  'thither' in SM is found as a complement to a larger range of verbs and adjectives, e.g., 换 *huàn* 'replace', 弄乱 *nòngluàn* 'mess up', 干 *gān* 'dry' (Choo 2015).

## Comparative construction

Comparative constructions in MCM are usually expressed in one of the following two types of constructions: (a) (a) "X + 比 bi + Y + A", and (b) "X + A + Y + measure phrase", where X and Y represent the comparee (the term being compared) and the standard of comparison respectively, and A refers to the predicate. Besides these two typically Mandarin expressions, SM also uses two other constructions to express comparison: (c) "X + 比 bi + Y + 来得 *láide* + A", and (d) "X + A + 过 guo + Y", as in (9) (Zhu 2008; Lu 2001).

- (9) a. 熟吃大蒜没有比生吃的效果来得强。
  Shú chī dàsuàn méiyǒu bǐ shēng chī de xiàoguǒ láide qiáng
  'Eating cooked garlic is not as effective as eating raw garlic.'
  (Lianhe zaobao 2007-9-16, cited from Zhu 2008:138)
  - b. 我现在骂他,好过以后人家笑他!
    Wǒ zxiànzài mà tā hǎo guò yǐhòu rénjia xiào tā
    'Him getting scolded by me now is better than getting ridiculed by other people in the future!' (*Xiaohaibuben*, cited from Zhu 2008:139)

Sources of these constructions have also been discussed, particularly of (d), which is also known as the surpass construction. According to Chappell and Peyraube (2015), the 'surpass' comparative construction is widely used in southern and southwestern China, particularly in Chinese dialects like Cantonese, Hakka, and Southwestern Mandarin. It is likely that the "surpass" construction in SM is a product of Cantonese influence (Chen 1986b). English could be another possible source as Zhu (2008) points out that the surpass construction is also similar to English comparative construction (i.e. "X + copular + comparative A + than + Y").

### Double object construction

Both Chen (1986b, 1993) and Chew (2002) observe that in addition to the more

prototypical order "V+IO+DO" (e.g., 给他一本书*gěi tā yīběnshū* 'give him a book'), double object constructions in SM can also be found in the form "V + DO + IO" (e.g., 给一本书他 *gěi yīběnshū tā* 'give a book to him'), i.e. the "inverted double object construction". According to Chen (1986b), the inverted construction is a borrowing from Cantonese. Using 给 *gěi* 'give' as the ditransitive verb, Zhu (2008) conducted a survey of the two variants (给五块钱他 *gěi wǔkuàiqián tā* 'given five dollars to him' and 给他五块钱 *gěi tā wǔkuàiqián* 'give him five dollars'). It is found that even though SM allows for both word orders, the inverted double object construction is only used marginally. Lim (2017) is a relatively comprehensive study of the inverted double object construction in SM. The study, involving corpus investigation of earlier stages of spoken SM (1979-1988) and contemporary spoken SM (2013-2015) as well as carefully-designed surveys among native speakers of SM, finds that in contemporary SM, the inverted constructions are rarely used, even though a small number of such constructions existed in the earlier stages.

# Other constructions

There are a range of other constructions that are found to exhibit differences in SM, such as passives (Chew 2002; Liu 2014; Lu 2001; Zhu 2008), "相信 *xiāngxìn* 'believe' + clause" (Lin et al. 2018; Zhu 2008) and "有信心 *yǒu xìnxīn* + clause" (Zhu 2008). The three listed examples have all been attributed to the influence of English.

For instance, in SM, the use of the verb 相信 *xiāngxìn* 'believe' is not as constrained as in MCM (Lin et al. 2018; Zhu 2008). In MCM, the subject of 相信 *xiāngxìn* is typically the experiencer who thinks that something or some event is true. SM (as well as HKM according to Lin et al. 2018), however, frequently uses 相信 *xiāngxìn* such that the subject is not the experiencer of believing, but an argument raised from the clause expressing the belief (Lin et al. 2018; Zhu 2008), e.g., 日本游客 *rìběnyóukè* 'Japanese tourist' in (10). Such an extended use of 相信 *xiāngxìn* is likely borrowed from English, as it corresponds to *It's believed*... (Lin et al. 2018; Zhu 2008).

(10)一名日本游客相信是因为驾驶的水上摩托艇失控,撞上另一艘客轮,当场丢命。

yīmíng rìběnyóukè **xiāngxìn** shì yīnwèi jiàshĭ de shuĭshàngmótuōtǐng Shīkòng zhuàng shàng lìng yīsōu kèlún dāngchăng diūmìng

'It is believed that a Japanese tourist lost life because the water jet he drove ran out of control and hit another passenger boat.' (Channel 8-Sina Weibo News-2016-9-23, cited from Lin et al. 2018)

3.2.2.4 *Word order*: Various studies such as Chen (1986b), Chua (2003), Chew (2002), Lu (2001), Pan (2008) and Zhu (2008) have pointed out the variations that SM exhibits in terms of word orders. Zhu (2008) summarizes two major variations involving verbal predicates. First, SM displays a tendency towards the SVO order, where the object stays in the object position, whereas in MCM, the object tends to

move into the topic position. Such variations are found in examples such as 不够时 间 bùgòu shíjiān 'not enough time' (vs. 时间不够 shíjiān bùgòu in MCM), 不见了钱 包 bùjiàn le qiánbāo 'lost wallet' (vs. 钱包不见了 qiánbāo bùjiàn le in MCM), and 与她不同宗教信仰 yǔ tā bùtóng zōngjiàoxìnyǎng 'have a different religion from hers' (vs. 与她宗教信仰不同 yǔ tā zōngjiàoxìnyǎng bùtóng in MCM). Second, while MCM usually has adverbials preceding the verbal predicates, SM tends to display an opposite order, as seen in the examples 像极 xiàngjí 'very similar to' (vs. 极像 jíxiàng in MCM), VP + 多 duō /少 shǎo 'more/less' (vs. 多 duō /少 shǎo + VP), and V + 没有 méiyǒu 'not' (vs. 没有 méiyǒu 'not' + V in MCM).

However, there are also instances where the verbal predicates precede the adverbials when MCM only allows the opposite order. For example, SM may use both VP + 先 xiān 'first' and 先 xiān +VP (e.g., 我走先 wǒ zǒu xiān 'I'll go off first' and 我先走 wǒ xiān zǒu), but MCM only allows the latter. These variations in word orders are mostly traceable to Min and Yue dialects (Chen 1986b; Lu 2001; Lu 2002; Zhu 2008). Some of them also share the same word order with English, e.g., VP+3 duo/ / shǎo 'more/less' (Chua 2003), VP + 先 xiān (Pan 2008), and "clause + 1 cái 'only; then' (Chen 1986b; Chua 2003; Goh 1986), and thus may also be ascribed to English.

## 3.3 Pragmatic and discourse variation

There have been limited studies conducted with regards to pragmatic and discourse variation in SM. Existing topics mainly cover issues like code switching and mixing (e.g., Chen 1998; Lee 2003), sentence-final particles (e.g., Pak et al. 2014; Zhu 2008), and conjunctive devices(e.g., Zhu 2008).

3.3.1 Code-switching and mixing. Code-switching in SM has also been suggested by Lee (2015) to be a unique feature of the variety, in comparison to MCM and TWM. This feature is observed even among undergraduate students who speak fluent Mandarin. Code-switching in SM typically involves Mandarin-English switching, which reflects that English is the underlying working language in Singapore (Lee 2015); but some Southern Chinese dialects like Hokkien, Teochew and Hakka, and even some Malay are also found in code-switching and mixing. An example can be found in (11), where Hokkien (显 xiǎn 'lethargic; bored'), Cantonese (好彩 hǎocǎi 'fortunately' and 死火 sǐhuǒ 'deep trouble') and English (chicken box, on MC, Disco, report) are all used in a single utterance.

(11) '好彩' Miss Woo 出 chicken pox, on MC 两个礼拜,不然我就'死火' 了,昨晚我去 Disco,回到家都已经'显'到要死,哪里还有力气去写 report?

'Hăo căi' Miss Woo chū chicken pox, on MC liăng gè lǐbài, bùrán wŏ jiù 'sĭ huŏ' le, zuó wăn wŏ qù Disco, huí dàojiā dōu yǐjīng 'xiăn' dào yàosĭ, nălĭ hái yŏu lìqì qù xiĕ report?

'Fortunately for me, Miss Woo is down with chicken pox and is on medical leave for two weeks, otherwise I'd be in deep trouble; I went to the disco pub last night and was so terribly lethargic when I reached home; how would I have found the energy to write the report?' (Chen 1998:37)

According to Lee (2003), there are several motivations behind code-switching, such as the desire to express thoughts in a more local way, for rhetorical effect, clarification and changing the topic.

3.3.2 Sentence-final particles. SM also makes use of many sentence-final particles (or discourse particles) to denote different pragmatic meaning depending on the context and tone of the particles. Some of the particles in SM, e.g., 咯 lo, 咩 mie, 咧 lie and 而已 éryǐ are rarely used in MCM (Lee 2015; Zhu 2008). Even for the ones that are shared between different Mandarin varieties, variation in uses may be found, especially between SM and MCM. Pak et al. (2014) conducted a more in-depth comparison of five sentence-final particles 呢 ne, 吗 ma, 吧 ba, 啊 a, and 啦 la that are frequently used in SM, TWM, and MCM. The study shows that the SM particles exhibit different behaviors in different varieties of Mandarin; for instance, SM 吧 ba shows significance preference towards declarative sentences while that of MCM shows significant dispreference in this regard. It is also found that Singapore and Taiwanese sentence-final particles are the most similar with each other. Finally, Pak et al. (2014) also show that the pragmatic function of the particles is the least effective method when it comes to differentiating between different varieties of Mandarin.

3.3.3 Variations in conjunctive devices. There have also been studies looking at conjunctive relations in SM. For instance, Zhu (2008) points out some differences between SM and MCM with regards to the use of conjunctive devices, such as adverbials and conjunctions. It is noted that SM prefers to attach the particle 的 de to an adverbial evaluative element, whereas MCM does not have such a preference, as in 相反的 xiāngfǎn de in SM instead of 相反 xiāngfǎn or 恰恰相反 qiàqià xiāngfǎn as used in MCM to express 'on the contrary'. Other constructions unique to SM include the form 'X 上 shàng' and 到头来 dàotóulái 'in the end'; in the former, X can be either an adjective (e.g., 一般 yībān shàng 'typically' as in 一般上 yībān shàng 'typically') or a noun (e.g., 直觉 zhíjué 'instinct' as in 直觉上 zhíjué shàng 'instinctively'), both of which yield evaluative adverbials.

Zhu (2008) also notes that SM exhibits several differences with MCM in terms of conjunctions. Some Mandarin conjunctions are typically used in pairs, as in 不但  $b\dot{u}d\dot{a}n...$ 而且 érqiě 'not only...also' and 即使 jíshǐ ...也 yě 'even if...also'. In SM, there is a tendency to omit the second word in the pair. There are also cases where there is a 'mis-match' in the conjunctions; for instance, while in MCM 不论 bùlùn 'regardless' is usually paired with 还是 háishì 'still' to mean that the outcomes will never change regardless of the criteria, in SM, 不论 bùlùn is more often paired with 或 huò 'or' or 或者 huòzhě 'or'.

## 4. Possible gaps in current research

Current research on SM has not only provided an inventory of the major grammatical

variations that can be found in SM, as detailed in Section 3, but also given a multitude of factors that may have motivated these variations and even, to some extent, discussed issues arising from these variations in terms of grammaticality and standardization. However, in reviewing the current trends in the study of SM, this paper notices a few possible gaps that future studies may fill. For instance, currently, while there have been a significant number of overview studies on SM, relatively fewer studies have investigated individual features that distinguishes SM and other varieties of Mandarin; the theoretical implications of these variations were also seldom discussed in the studies of SM studies. This section will discuss three of the more prominent possible gaps in the areas of factors leading to variations, data collection and analysis and points of comparison for studying variations.

#### 4.1 Factors leading to variation

Scholars of SM have proposed a range of factors that may have contributed to the variations found in SM. For instance, when discussing the lexical and grammatical variations in SM, Lu (2002) points out three major reasons for the variations. First, the Mandarin varieties of Mainland China and Singapore were isolated from each other for about 40 years due to political reasons. The pre-existing social, economic and cultural differences were then compounded with this isolation and contributed to the variations. Second, SM is influenced, to a greater degree than in MCM, by dialects (e.g., Min, Cantonese and Hakka). Third, SM was also in close contact with foreign languages, such as English and Malay, due to the multilingual environment, unlike the largely monolingual environment in which MCM exists. These reasons have also been pointed out by the many other studies on SM, as discussed in Section 3.

However, language variation does not arise solely out of language-external factors. As Chew (2007) and Lin et al. (2018) point out, there may also be language-internal reasons behind these variations. Language-internal factors refer to the motivations that exist within the properties of the language itself. An example of this is found in the VO separable compounds of SM, as provided by Lin et al. (2018). In SM, some separable compounds such as 帮忙 *bāngmáng* 'help' can be used as a compound verb and take objects (e.g., 帮忙他 *bāngmángtā* 'help him'), but their counterparts in MCM can only have the object between V and O (e.g., 帮他忙 *bāngtāmáng* 'help him'). According to Lin et al. (2018), with no clearly identifiable external factor, the variations of these VO separable compounds in SM and MCM could be results of the different degrees of lexicalization in the two varieties.

However, few studies explicitly discuss the variations of SM triggered by the internal factors or the interaction of language-internal and language-external factors, which may be critical to understanding the various forces that have characterized SM. As Lin (2018) demonstrates in her study of 说 *shuō* 'say' in SM, simply attributing the grammaticalization of SM 说 *shuō* into a complementizer to the influence of 讲 *kong* 'say' in Southern Min is not sufficient. SM 说 *shuō*, as seen in Lin (2018) is far more grammaticalized than 讲 *kong* in Southern Min, even going to the extent of forming a compound complementizer with SM 讲 *jiǎng*. While the initial development of SM 说 *shuō* into a complementizer may be attributed to # *kong* in

Southern Min, the same cannot be said for the phenomenon of further grammaticalization; the latter is ascribed as being the outcomes of language-internal development as no other external factors are clearly identifiable.

### 4.2 Data sources and analysis

Another notable difference between studies of SM and other Mandarin varieties is found in the sources of data. While more and more studies recognize the importance of natural language data for linguistic research, large-scale, richly annotated, genre-diverse, and freely available corpora consisting of data from SM are few, compared with the existing corpora for studies on MCM and TWM. Even though the LIVAC (basic version, Kwong & Tsou 2006) and Corpus of Southeastern Asian Chinese Media (by Jinan University) are two free-to-access corpora with written SM (newspaper), they are not the friendliest for linguists – for instance, these corpora are not fully segmented and POS tagged, making the work more tedious for scholars of SM. Furthermore, with the lack of spoken corpora, some studies (e.g., Khoo 2018; Lim 2017) resort to the Oral History Interviews (by the National Archives of Singapore), a database that is not purposefully constructed for linguistic studies.

As such, most of the existing studies on SM construct their own corpora for their own convenience (e.g., Choo 2015; Huang 2011; Lin 2015; Khoo & Lin 2016). For instance, Khoo and Lin (2016), and Khoo (2018) make use of a spoken corpus of contemporary Singapore Mandarin compiled from various variety shows to investigate grammatical features like motion constructions and perfective aspect marking in SM (see Section 3.2.2). Lin (2015), on the other hand, supplements his self-constructed corpus with naturalistic observation in order to account for the limited genre in his corpus. In addition, web-based data (e.g. Yuan & Lin 2016) and surveys (e.g., Lim 2017) are two other data sources for studies on SM. However, corpus construction is still necessary in order to capture the entire spectrum of SM.

Where data analysis is concerned, quantitative research has become more widely used in recent studies of SM. However, most studies have only relied on descriptive statistics (e.g., frequencies of (co-)occurrence, measures of central tendencies). While inferential statistics (e.g., chi-square tests, t-tests, regression) is able to go beyond the data sample and make generalizations about the whole population where the data sample comes from, it is rarely adopted for studies on the grammatical variations in SM (see exceptions in Pak et al. 2014). Instead, its main applications have been found in studies on other aspects of SM (e.g., Cavallaro et al. 2018 and Chong & Tan 2013 on language attitudes; Teo & Gao 2015 on phonological variations). As Huang et al. (2014) and Lin et al. (2014) point out, a key challenge in studying grammatical variations is that the different varieties are more often in convergence rather than divergence. In other words, grammatical variations are more concerned of the occurrence probability (or preference and dis-preference) of a grammatical structure in different varieties, rather than a clear-cut grammatically right or wrong structure. Moreover, grammatical variation is often closely related to the variable contexts, which are often multidimensional and interrelated. Therefore, evaluation of grammatical data may often require inferential analysis such as multifactorial

### statistics.

## 4.3 The varieties under comparison

As Lin et al. (2018) point out, where variations between Mandarin varieties are concerned, many existing studies take MCM as the yardstick. This is also true of the studies on SM (e.g., Chen 1986b; Chew 2002; Huang 2011; Lu 2001; 2002; Pan 2008; Zhu 2008, among many others). As a result, features shared among non-MCM varieties are often neglected. An example can be seen in the word order of the deictic complements  $\pm l\dot{a}i$  'hither' and  $\pm q\dot{a}$  'thither'. As pointed out in Section 3.2, in SM, these complements can occur before the location NP, but the order can only be regarded as a variation when compared against MCM, because such an order is commonly found in TWM and HKM.

It is not surprising that SM shares many similarities with both TWM and HKM given the linguistic environment in Singapore; on the one hand, like TWM, SM is also in close contact with Southern Min dialects; on the other hand, both SM and HKM are greatly influenced by Cantonese and English. Furthermore, during the isolation of Singapore from Mainland China, much of the entertainment and educational material used in Singapore came from Taiwan and Hong Kong, which further deepens the commonalities between SM and TWM/HKM. Therefore, comparison between SM, TWM and HKM can contribute to both the identification of variation and the theoretical discussions of language variation and change. Given that access to data from different varieties of Mandarin is becoming increasingly easier (e.g., online corpora and surveys), more studies can follow the path of Li (2010, 2016), Pak et al. (2015), Situ (2014), and Tsou and You (2010), among others, in comparing SM with other non-MCM varieties.

# 5. Summary

This paper started with an introduction of the history of SM before moving on to outline, as comprehensively as possible, the research and findings on grammatical variations in SM. We then discuss some of the gaps in current research in an attempt to serve as a reference study for scholars interested in SM. It should be noted that owing to space constraints, this paper is not able to include all studies on variations in SM and studies that cover other aspects about SM. For instance, there have been many studies dedicated to identifying phonological variations in SM, such as the fifth tone (e.g., Chen 1982; Choo 2013) and pronunciation differences (e.g., Chen 1986a; Choo 2015; Chua 2003, among many others). Studies have also been conducted in the fields of language teaching (e.g., Chew & Liang 1995; Chew 2008; 2014; Goh & Luo 2009; Huang & Bond 2016) and computational linguistics (Tan and Bond 2011). These are all very important studies that inform us of the situation of SM through the years. Nonetheless, the review provided in this paper seeks to inform readers of the current trends in the studies of SM and give some suggestions as to what further research can be done in this field.

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