Vocabulary Learning Strategies: The Case of Mandarin Learners in Sarawak

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Abstract

The frequency of using different kinds of vocabulary learning strategies by Mandarin learners was assessed at the University of Malaysia, Sarawak to illustrate popular ways under each vocabulary learning strategy. One hundred and thirty-six respondents completed a five-point Likert-scale questionnaire in the twelfth week of their learning. The results of the study indicated that the learners employed cognitive strategies the most and metacognitive strategies the least. The most popular strategy included taking notes, studying the sound and stroke order of a word, asking classmates, and reviewing vocabulary regularly. The results suggested that teachers could make use of the learning strategy preferred by learners through the provision of appropriate language activities and assignments to support more effective learning. Future studies may include studying the specific strategies employed by learners in the four language skills, looking at how they employ vocabulary-learning strategies at higher language levels, and studying real-life examples of instructional activities conducted by language instructors for each strategy.

Introduction

Following the rapid growth and development of China in recent years, and fuelled by the status of Mandarin as one of the six working languages of the United Nations, learning and trying to master Mandarin as a second or foreign language has become a popular trend throughout the world. In this paper, 'Mandarin' is used instead of 'Chinese' on account of two rationales: (1) it fits the local context, and (2) to avoid confusion (as 'Chinese' is a big umbrella term which includes 'Mandarin' and other 'Chinese dialects').

In 2017, the United States' National K-12 Foreign Language Enrolment Survey Report showed that the number of Mandarin classes increased in primary and secondary schools across the Nation, making Mandarin the fourth most widely taught foreign language in the country's education system (Shan, 2018). In 2019, Russian students will sit for a Mandarin paper in their Unified State Exam before gaining entry to the university or a professional college (Jie, 2018). In addition, a survey by the Key Laboratory of Big Data Mining and Knowledge Management (2018), under the Chinese Academy of Sciences, estimated that by the year 2020 there will be 200 million learners of Mandarin outside of China.

Regardless of how promising learning the language may sound, one should be aware that Mandarin has been ranked as one of the most robust languages to learn by native English speakers (BBC, 2014). Many researchers in the field of Mandarin teaching also have discovered that a lot of learners were eager to study the language at the initial stage, but became demotivated after one or two semesters on account of the difficulties faced (Yin, 2003). Depending on the focus of their study plan, the challenges can be in the form of writing or speaking, which are both connected with the learning of new vocabulary. In languages utilising alphabetic writing system (i.e., the Roman alphabet), the learning of new vocabulary is less taxing because new vocabulary is the result of combination among a mere 26 letters. Once the letters are mastered, learners can start exploring new vocabulary. Contrastingly, Mandarin employs Chinese characters as its written form. Chinese characters belong to a logographic writing system (Perfetti & Tan, 1998) that offer no (or very limited) clues on how they should be pronounced. If left unguided, beginners often feel clueless and stuck when asked to pronounce a Chinese character, and this becomes one of the obstacles for them to learn new vocabulary in the initial stage.

Vocabulary Learning Strategies (VLS)

Schmitt (2000) pointed out that vocabulary is an essential element in language use. The importance of vocabulary is even more apparent for learners of a second or foreign language at the elementary level, as they must store a range of vocabulary in their long-term memory, usually within a short period of time (Oxford & Scarcella, 1994). To achieve this, vocabulary learning strategy is crucial (Çelik-Korkmaz, 2013; Zarrin & Khan, 2014; Vo & Jaturapitakkul, 2016).

VLS is often seen as part of general learning strategies in the process of investigating and classifying language learning strategies (LLS) (Oxford, 1990; Schmitt, 1997). According to Oxford (1990), LLS are the specific behaviours or thoughts learners use to enhance their language learning. Such strategies are one of the significant aspects influencing the process of second or foreign language learning. To better study learners' LLS, Oxford (1990) developed an inventory known as Strategy Inventory for Language Learning (SILL), consisting of direct learning strategies (memory strategies, cognitive strategies, and compensation strategies) and indirect learning strategies (metacognitive strategies, affective strategies, and social strategies).

Schmitt (1997) found that even though SILL could deal with LLS in general, it was inadequate to cover VLS. Some strategies from SILL could fit into two or more groups. For example, 'interacting with native speakers' could be categorised as a social strategy or metacognitive strategy (if it is a part of a language learning plan). At the same time, it is difficult to distinguish whether some strategies are memory strategies or cognitive strategies. Hence, Schmitt (1997) built on SILL to develop his own taxonomy to identify learners' specific VLS. Schmitt's taxonomy is a six-factor model that consists of discovery strategies and consolidation strategies. Discovery strategies (broken into determination strategies and social strategies) are strategies for gaining initial information about a new word. Consolidation strategies, which consist of social, memory, cognitive, and metacognitive strategies, are employed to help learners remember a word after they know its meaning (Hsu, 2012). Han (2014) pointed out that VLS is reported to be the most used strategy in the studies on LLS.

As expected, studies that look into the use of VLS are not rare in the field of foreign language learning. While the use of the dictionary remains popular VLS among learners (Asgari & Mustapha, 2011; Wu, 2005), other strategies also have been reported as useful, such as memorising and repeating (Schmitt, 2000), learning from sample sentences (Lau, 2018), guessing from the context (Wu, 2005; Huang, 2018; Ahmad, Muhammad, & Kasim, 2018), metacognitive strategies (Rogers, 2018; Mustapha & Hatta, 2018), and even via picture viewing and drawing (Lam, Ang, Kuan, & Hoe, 2018; Ou, Tarng, & Chen, 2018), such as in the case of Mandarin.

Researchers of VLS are interested in identifying the strategies commonly used by language learners primarily through giving a questionnaire. Previous studies have shown that adult learners of Roman alphabetic-based languages make use of several VLS, such as communicating with native speakers, listening to foreign language songs, applying newly-learnt vocabulary in daily activities, and utilising a monolingual dictionary (Asgari & Mustapha, 2011; Nayan & Krishnasamy, 2015; Rabadi, 2016; Mustapha & Hatta, 2018). Generally, a common conclusion can be drawn that learners of Roman alphabetic-based languages like to use social, memory, and determination strategies. Metacognitive strategies, however, are not always the preferred ones, as shown in the study of Rabadi (2016). As for the case of learners of Mandarin as a foreign language (MFL), Shen (2005) found that her ninety-five students adopted the orthographic knowledge-based cognitive strategy the most, and then metacognitive strategies. The study of Liu (2013), Tan and Hoe (2010), and Wang (2018) also yielded similar results. The respondents in these studies were non-native speakers of Mandarin learning from elementary through to the advanced levels. This is an interesting pattern because learners of Roman alphabetic-based languages and Mandarin seem to favour different kinds of VLS.

Research Aim and Research Objectives

The VLS employed by learners of MFL were studied at the elementary level at the University of Malaysia, Sarawak (UNIMAS), a public university in Malaysia. The specific research objectives were:

1. To identify the frequency of use of each VLS by the learners.
2. To illustrate the popular ways under each VLS in the UNIMAS context.

Methodology

Respondents and Data Collection

The respondents were learners who enrolled in the UNIMAS elementary MFL class for one semester (14 weeks). All respondents had an alphabetic writing system (Roman alphabet) background and were taught by the same language instructor. In the twelfth week of the semester, a questionnaire was distributed to them. Data were collected towards the end of the semester as learners should have started to employ some VLS at this point of their learning.

The instrument for this study was a questionnaire on Mandarin VLS with a five-point Likert response scale. The 48 items in the questionnaire focused on memory, cognitive, determination, social, and metacognitive strategies as proposed in Hsu (2012), which combined Schmitt taxonomy (Schmitt, 1997) and SILL (Oxford, 1990). The latter strategy was still used as it is considered to be "… the most frequently employed instrument in language learning strategy research" (Yeşilbursa & İpek, 2013). The items in Hsu (2012)'s questionnaire were adapted into the UNIMAS context with only minor modifications and grouped under the five strategies mentioned above.

Before filling in the questionnaire, the language instructor explained the purpose of the study to the learners, i.e., to understand the strategies they used in learning vocabulary. The term 'VLS' and related strategies were not mentioned specifically because the respondents did not need to know these terms in order to answer the questionnaire. The learners then responded to each questionnaire item by circling one number–1 to 5–with '1' being 'never or almost never true of me,' '2' being 'usually not true of me,' '3' being 'somewhat true of me,' '4' being 'usually true of me,' and '5' being 'always or almost always true of me.' Sufficient time was allocated for the learners to complete the questionnaire in the class.

Initially there were 169 respondents participated in the study. However, 33 of them did not fill in the questionnaire completely. As a result, only the responses from the remaining 136 respondents were subjected to analysis.

Results and Discussion

According to Schmitt (2000), cognitive strategies deal with the mechanical aspects of vocabulary learning instead of utilising mental processing on the learners' side. Some examples of cognitive strategies include verbally repeating newly learnt vocabulary, coming out with a vocabulary list, using flashcards, rewriting the same vocabulary many times, and note-taking. Table 1 shows that the learners in this study tended to use cognitive strategies the most. Echoing the results of previous studies such as Tan and Hoe (2010) and Hsu (2012), the finding was easily understood and makes sense as learners were learning a completely new language, and this was a straightforward way to scaffold their learning. A typical MFL classroom usually involves the language instructor reading out new vocabulary while learners read after the language instructor. Most learners will take notes on vocabulary or rewrite the new vocabulary in the margins of their book. The repetition of new vocabulary in terms of writing is also reflected in learners' written exercises in which some committed learners make it a point to rewrite the same vocabulary words many times.

By contrast, if an individual employs mental processing to recall or retrieve a vocabulary item by relating it to some background knowledge (Oxford, 1990), they will be applying memory strategies. Some commonly seen examples of memory strategies are comparing the sound of new vocabulary with thesound of a word already known by the learner or using one's imagination to relate the shape of a

Chinese character to its meaning (Lam et al., 2018). Ranked the second in terms of the frequency of use by the MFL learners in this study, memory strategies are indeed necessary because learners need to master a total of 143 vocabulary/characters together with the combinations within one semester in UNIMAS. It is necessary for them to achieve their learning objectives, namely to identify simple and basic words, and to write simple isolated words, phrases and sentences. Rote repetition alone will not take them far. Learners can learn vocabulary better when they have a mental representation of it, compared to mere repetition (Steingart & Glock, 1997).

Table 1. The Frequency of Use of Each VLS by the Learners

No.	VLS	Frequency (%)
1	Cognitive strategies	78.24
2	Memory strategies	76.14
3	Determination strategies	74.71
4	Social strategies	74.14
5	Metacognitive strategies	63.76

Determination strategies, on the other hand, refer to the kind of strategies used by learners to find out the meaning of newly encountered vocabulary, without depending on others (Schmitt, 2000). Guessing the definition of new vocabulary as seen in a paragraph, looking up a vocabulary in a dictionary or thesaurus, and looking at what appears before or after the new vocabulary, are all categorised under this VLS. On the other end of the spectrum is seeking help from others who know the vocabulary (Schmitt, 1997). Teacher, classmates, and native speakers of the foreign language are a good and easy source of assistance. Seeking such help to aid one's vocabulary learning is collectively termed 'social strategies.' Both determination strategies and social strategies are equally popular among MFL learners in UNIMAS, as can be seen in Table 1.

Although being able to help learners to identify VLS that are suitable for them to learn new vocabulary (Schmitt, 2000), metacognitive strategies were the least used VLS by the learners in this study, a finding that is consistent with those of Hsu (2012) and Vo and Jaturapitakkul (2016). Their respondents also did not use metacognitive strategies as frequently as the other VLS. Metacognitive strategies include monitoring, controlling, reviewing, and evaluating one's performance in the target language. Instances of metacognitive strategies include testing oneself, maximising self-exposure to media that uses the target language (such as songs and movies), paying extra attention to news broadcasters or anybody who uses the target language in the hope of improved exposure to the language. The low frequency of use of metacognitive strategies may be justified by the elementary level of the learners. At this stage, the vocabulary in their repertoire was still minimal and, hence, more time was needed before they could review and evaluate their performance.

Table 2 shows the breakdown of cognitive strategies employed by the learners based on their popularity of use. Corresponding with the findings in Shen (2005), Hsu (2012), Zare (2012), Vo & Jaturapitakkul (2016), and Wang (2018), the respondents in this study also tended to undertake frequent reviews of vocabulary—such as utilising the vocabulary section in textbook and verbal repetition—to aid their memorisation. Even though a frequent review of vocabulary and note-taking during lectures are commonly regarded as traditional learning strategies (Debevec, Shih, & Kashyap, 2006), they invariably show high vitality when it comes to vocabulary learning, as learners have used these strategies and are convinced that they are constructive. Repetition, note taking, recombination and auditory representation have been reported as among the most important and most frequently adopted cognitive strategies by language learners (Schmitt, 1997; Zare, 2012).

Table 2. Cognitive Strategies Employed by the Learners

Breakdowns of Cognitive Strategies	Popularity (%)
I take notes in class.	97.06
I use the vocabulary section of the textbook.	96.32
I use verbal repetition to memorize new words.	94.12
I use word lists to study new words.	91.91
I use written repetition to remember new words.	89.71
I review Chinese words often.	86.03
I keep a vocabulary notebook.	83.82
I note down examples showing the usages of the word I look up.	80.15
I make my vocabulary cards or word lists.	66.91
I listen to the tape of word lists.	60.29
I take my vocabulary cards or word lists with me wherever I go.	52.21
I put Chinese labels on physical objects.	45.59

The findings also shows that MFL learners in UNIMAS are more familiar with traditional VLS. In UNIMAS, a typical MFL classroom entails a language instructor first going through the vocabulary section of a particular lesson with learners before carrying out further classroom activities. The language instructor will guide the learners to read aloud after them, explain the meaning of vocabulary, and then ask them to jot down notes whenever necessary. This approach may have led the learners to become familiar with (and favour) the cognitive strategies as they progress.

Vo and Jaturapitakkul (2016) claimed that if learners were well aware of the importance of learning specific languages, they would tend to use cognitive strategies, which can help them understand and remember particular items of the language. This claim mirrors the case in UNIMAS as learners who choose to enrol in MFL course are usually keen learners of Mandarin and are well aware of the importance of learning the language, although Mandarin is not easy to master. They hope the language can improve their employment prospects after graduation. Nevertheless, the finding shown in Table 2 also reveals that the learners were still heavily dependent on readily available materials supplied to them and could not outsource at this stage. Realising this trend, language instructors could help to make learning more meaningful by encouraging them to create flashcards and explore multimedia resources. This would ensure that students are learning independently at their own pace and possibly make more progress.

Oxford (1990) stated that memory strategies are "techniques specifically tailored to help the learners store new information in the memory and retrieve it later" (p. 404). Memory strategies vary depending on the creativity of learners. They come in handy especially for learners of MFL, as learning new vocabulary in Mandarin often requires the learners to not only know and memorise its pronunciation, but to know its representation in Chinese character as well. In this respect, memory matters because good memorization of vocabulary, or 'vocabulary capability,' plays a decisive role in the learning outcome. Vocabulary capability, according to Hsu (2012), is an important indicator and serves as a stepping stone toward Chinese proficiency.

The top 12 most preferred memory strategies given by learners shown in Table 3 suggest that they like to study the visual and audio representation of a Mandarin vocabulary word, associate them with things they are familiar with, and group them according to specific categorisation. The learners are inclined to study the visual and audio representation of Mandarin vocabulary, probably because the stimulus is directly presented to them through their senses, whereas learning through associating and grouping has the apparent advantage of minimising one's memory burden. Lam et al. (2018), for instance, reported on a technique to improve learning Mandarin vocabulary in its written form (Chinese characters). The technique involved imagining and associating the Chinese character with a drawing that could give a clue

to its meaning, thereby maximising the learners' ability. Such a technique, represents "… a possible alternative for teaching characters in the initial stage, when characters are still foreign to learners" (Lam et al., 2018, p. 2). Such an approach can invariably serve learners of different learning types, especially the visual learners.

Table 3. Memory Strategies Employed by the Learners

Breakdowns of Memory Strategies	Popularity (%)
I study the sound of a word.	96.32
I study the spelling of a word.	91.91
I say a new word aloud when studying.	89.71
I think of relationships between what I already know and the new things that I learn in Chinese.	88.24
I visualize the new word to help me remember it.	84.56
I group words to study them.	82.35
I remember a new Chinese word by making a mental picture of a situation in which the word might be used.	80.15
I use new Chinese words in a sentence so that I can remember them.	78.68
I remember together words that sound similar.	78.68
I connect the word to personal experience.	74.26
I group words into categories (e.g., family members, places, etc.)	73.53
I associate a new word with a known Chinese word that sounds similar.	72.06
I remember new Chinese words or phrases by remembering their location on the page, on the board, or a street sign.	67.65
I use flashcards to remember new Chinese words.	66.91
I remember the sound of a word by breaking it into several visual parts.	66.18
I use rhymes to remember new Chinese words.	65.44
I physically act out new Chinese words. (i.e., do eating action when studying the word "eat" or "吃" in Chinese)	61.76
I put synonyms or antonyms together in my notebook.	52.21

The use of memory strategies by MFL learners suggests that they are not passive learners. In helping them to learn Mandarin vocabulary better, classroom input can be organised so that vocabulary of the same categories or of the same sounds (homophones are common in Mandarin) or even of the similar representation, are presented together, and followed by the necessary explanations.

One of the features that make the learning of Mandarin different from other non-logographic languages is the study of the stroke and radical, the components that make up Chinese characters. Nonetheless, not all Mandarin courses necessitate the learning of Chinese characters, especially those that focus on oral communication, in which vocabulary can be taught with the help of *Hanyu Pinyin*, a commonly used system that transcribes Chinese characters using Roman letters. Nevertheless, even in such courses, at some point of the teaching and learning process, learners will still very likely be exposed to some Chinese characters, as *Hanyu Pinyin* cannot entirely replace Chinese characters in cases of homophones (Rohsenow, 2006; Mushangwe & Chisoni, 2015). The MFL course in UNIMAS incorporated the teaching and learning of Chinese characters alongside the learning of vocabulary. Learners' ability to write basic Chinese characters by following the correct stroke order was assessed. Sufficient input and online materials were made available for learners to scaffold their vocabulary (character) learning. This

contributed to the high popularity of studying a character's stroke order and radical as two main breakdowns of determination strategies by learners (see Table 4).

Table 4. Determination Strategies Employed by the Learners

Breakdowns of Determination Strategies	Popularity (%)
I study a character's "stroke order."	89.71
I guess words from the textual context.	86.03
I study a character's "radical."	85.29
I use a bilingual dictionary.	68.38
I use a monolingual dictionary.	44.12

As the learners in this study were only in their elementary level, 'guessing words from textual context' refered to guessing the meaning of simple characters in their textbook passages as well as characters seen outside of the classroom since Chinese characters are widely used in the Malaysian context. Meaning-guessing from the textual context can motivate determined learners to progress faster and accumulate more vocabulary. They can test and validate their new knowledge by making use of the vocabulary they already know, hence boosting their confidence. For instance, by going through the sentences of 我有一个好老师 (I have a good teacher) and 我的爱好是看书 (My hobby is reading), determination strategies can help learners to discover the different meanings of the character '好'. In other words, the said strategies can facilitate learners to gather the meaning of a new word (Schmitt, 1997).

The current study also revealed that the popularity of using a dictionary was relatively low. This is most probably because English translation was provided throughout their textbook, predisposing learners to depend heavily on their textbook.

Experience in language teaching often informs us that vocabulary learning can be useful if the process is done through socialising among peers. As shown in Table 5, MFL learners in UNIMAS tended to take advantage of social strategies via group learning. In support of Vo and Jaturapitakkul's (2016) findings, learners liked to use social strategies because they felt more comfortable to learn with peers and they could develop cooperative learning. It also can be observed that learners prefered to learn and discover new vocabulary with peers who were at the same learning level; their next preference was interacting with native Chinese speakers. Surprisingly, the teacher appeared to be the last resort. This could be due to the perceived status difference between teachers and students, as is the norm of Asian communities, as also suggested in Spencer-Oatey (1997) and Yeung (2009). Students feel shy or have a fear of making mistakes in front of their teacher.

Table 5. Social Strategies Employed by the Learners

Breakdowns of Social Strategies	Popularity (%)
I ask classmates for meaning.	94.12
I discover new meaning through group work activity.	80.88
I interact with other non-native speakers of Chinese.	75.00
I interact with native Chinese speakers.	70.59
I ask the teacher for the English translation.	62.50
I ask the teacher for Chinese translation.	61.76

On the other hand, the translations provided in the textbook may have made it easier for learners to look up the meaning of new vocabulary, hence reducing the tendency to ask their teachers. In order to enhance learners' vocabulary learning experience, teachers could attempt to introduce many new vocabulary items that are related to the ones introduced in the textbook, and supplement this with

interactive activities. The purpose is to bridge the gap between teacher and learners so that the learners can benefit by interacting more with their teachers.

Interacting with speakers of Mandarin, regardless of whether they are native or otherwise, appears to be a more popular alternative in social strategies compared to approaching the teacher. In the case of Sarawak (or Malaysia in general), it is normal to see non-native speakers of Mandarin conversing in the language because they have attended Chinese school or they learnt it while young—a normal phenomenon echoing with the observations of Lam and Hoe (2013) and Ridge (2004). MFL learners can thus easily find someone to practice their Mandarin in an informal context compared to a classroom setting.

Oxford (1990) stated that metacognitive strategies are used by students to manage their inclusive learning. In other words, learners have to be aware of their learning and make a constant review of their progress. Learners who employ metacognitive strategies tend to be individuals who are active physically and mentally too. They tend to think about their learning and figure out ways to enhance it. Along the way, this kind of learner is likely to find a variety of ways that suits their learning style. Hence, Schmitt (2000) mentioned that metacognitive strategies assist learners in determining the appropriate VLS for acquiring new words.

Tables 1 data showed that metacognitive strategies are the least frequently used VLS among MFL learners in UNIMAS. Among those learners who employ metacognitive strategies, it can be deduced that they had an examination-oriented mindset, as can be observed in Table 6. This group of learners made regular reviews of new words that they have memorized and only focused on words that were directly

related to examinations. Some, however, did show initiatives to outsource and try to learn and validate

their new vocabulary by utilising the electronic media resources available. Language instructors can provide proper guidance and encourage learners to use more electronic media resources, especially online ones, as these suit the technoholic characteristics of the Z generation.

Table 6. Metacognitive Strategies Employed by the Learners

Breakdowns of Metacognitive Strategies	Popularity (%)
I make regular reviews of new words I have memorized.	88.97
I only focus on words that are directly related to examinations.	86.03
I continue to study the word over a period of time.	81.62
I use various means to make clear vocabulary items that I am not quite clear of.	77.21
I use Chinese-language media (songs, movies, newscasts, etc.)	66.18
I read Chinese books other than textbooks.	26.47
I read Chinese newspapers and magazines.	19.85

As metacognitive strategies can influence both the process as well as the end-result of an individual's learning (Zimmerman & Schunk, 2001), language instructors may help learners by enlightening them. For instance, when learning a vocabulary (e.g., 好 'good'), language instructors can guide the learners to make connections with other known vocabulary (e.g., 吃 'eat', 看 'see', 听 'hear'), so the students will see for themselves if this paired vocabulary concept can be used in real life situations, or is useful as a device to figure out ways to teach newly learnt vocabulary to peers so that they can learn faster together. Learners will be amazed to discover how much they can benefit from thinking about their thinking.

Conclusions

This study looked into the VLS employed by 136 MFL learners at the elementary level in UNIMAS. Specifically, it aimed to identify the frequency of use of each VLS by the learners and to illustrate popular ways under each VLS in the UNIMAS context. It was found that learners were inclined to use cognitive strategies the most, such as taking notes in class, using the vocabulary section in the textbook, and using verbal repetition to memorize new vocabulary. They also frequently use memory strategies, determination strategies, and social strategies. Among the factors that contributed towards this could be the nature of the language (vocabulary—and Chinese characters—often need to be memorised before they can be put together in a meaningful way by learners), keen learners, and the surroundings (the result may be different if the study was conducted elsewhere where Mandarin is not a common language). The least frequently used approach was the use of the metacognitive strategies. Among those who employed the strategies, regular reviews of the new vocabulary were undertaken, with a focus only on words that were directly related to examinations. Participants continued to study the word over a period and used various means to make clear vocabulary items. Most of the learners did not show a tendency towards lifelong learning but had an examination-oriented mindset.

It is beneficial for MFL teachers to have a better understanding of how their learners use different strategies to learn Mandarin vocabulary. On the other hand, MFL learners could have fewer problems in the process of learning Mandarin vocabulary if they could be guided to explore the range of VLS available (Hsu, 2012; Sung, 2014). Teachers could make particular use of the VLS by providing appropriate language activities and assignments to learners so that they could learn vocabulary more effectively. This would further strengthen the learners' skills in using VLS. Future studies could expand the number of institutions, look into the specific strategies employed by MFL learners in each of the four language skills, namely listening, speaking, reading and writing, or perform hypothesis testing. In addition, the VLS used by MFL learners in the higher levels of study (elementary to advanced) also could be studied to see if the current study results can be substantiated. Considering the real-life examples of instructional activities conducted by language instructors to support the different VLS would be another way to explore this topic from a different angle.

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