

SOCIAL SCIENCES & HUMANITIES

Journal homepage: http://www.pertanika.upm.edu.my/

A Systematic Review of Chinese Language Learning Strategies in the Past Decade (2011-2020)

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ABSTRACT

Empirical studies and literature on Chinese language learning strategies (CLLS) in China and abroad have outlined theoretical introductions and case descriptions for nearly a decade. Reportedly, studies on CLLS indicated the following characteristics: The study respondents were primarily international students in China gearing towards regionalisation, nationalisation, or localisation. Furthermore, the qualitative study method followed an empirical, comprehensive, and descriptive learning strategy, such as observations and interviews. However, although the factors influencing learning strategies were gradually becoming diversified, several study limitations were identified (uneven regional studies, insufficient research samples, single research methods, and lack of theoretical paradigms in training learning strategies). Hence, researchers needed to conduct in-depth studies and deeply perceive CLLS to promote Chinese learning and teaching.

Keywords: CLLS, influencing factors, nationalisation, regionalisation, strategy training

ARTICLE INFO

Article history: Received: 16 July 2021 Accepted: 04 October 2021 Published: 30 November 2021

DOI: https://doi.org/10.47836/pjssh.29.S3.15

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ISSN: 0128-7702 e-ISSN: 2231-8534

INTRODUCTION

Studies on learning strategies began in the 70s. Influential scholars, such as Stern (1983), Rubin (1987), Oxford and Nyikos (1989), Oxford (1990), and O 'Malley and Chamot (1990), defined, categorised, and summarised second language learning strategies from different perspectives. Regardless, learning strategies in this

context primarily emphasised theoretical illustrations. Consequently, more empirical studies have emerged with the gradual progression and soundness of theoretical principles. Although research on foreign language learning strategies contributed to a broader comprehension of the relevant challenges, past studies were limited to European languages following the Roman alphabet (English, French, and Spanish). Unsurprisingly, CLLS-oriented research remained lacking. Concerning language type and internal composition, the Chinese language (Mandarin) was an ideographic language system involving unique symbols as opposed to Indo-European languages. Hence, the process of Chinese language acquisition varied from the phonetic system of the English language.

Foreign scholars researched the learning strategies of Chinese characters in the 1980s (Hayes, 1988), whereas a doctoral thesis studied the implementation of reading strategies in Chinese (Everson, 1986). In this vein, the studies above pioneered research on CLLS. To date, more CLLS-based studies, specifically the comprehensive study of learning strategies (Cao, 2010; Chen, 2008; Lin & Lv, 2005; Wu, 2007) and the utilisation of single-skill learning strategies by international students (Jiang & Zhao, 2001; Qian, 2006; Zhou, 2004), have gained due attention. Also, with the proposal of China's "One Belt and One Road" (Hong & Jieyan, 2013) strategy, China's influence in the international community is gradually enhanced, and the number of Chinese learners both in China and abroad

is increasing year by year. Therefore, the research achievements on Chinese acquisition are increasingly rich, especially in recent years, the research on Chinese learning strategies shows an obvious upward trend.

Despite extensive research on CLLS, attempts towards systematic study reviews remained scarce. As such, this study aimed to bridge the gap in comprehending and determining CLLS attributes and propensities. In this vein, a systematic review proved essential in identifying, choosing, meticulously evaluating pertinent studies and gathering and assessing the study data from the review. The systematic literature review enables the researcher to understanding the main issues and development trends of CLLS research in the past decade, which serves a more specific guiding significance for the said research area. It also helps to identify research gaps in the current understanding of CLLS. On the other hand, the systematic literature review can further optimise the training module of CLLS and improve the pedagogical effect of Chinese as a Second Language or Foreign Language. Consequently, the authors' research rigour, gap identification, and study directions required for future studies could be perceived. This research aimed to analyse CLLS study outcomes quantitatively and qualitatively in the past decade with statistical techniques to perform an in-depth analysis of current CLLS concerns and attributes (regionalisation, localisation, or nationalisation).

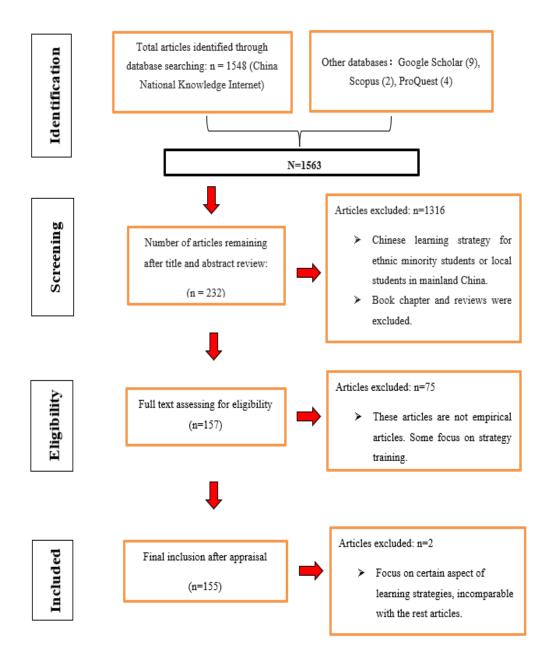
Generally, regionalisation denoted "societal integration and the often undirected process of social and economic interaction" Hurrell (2007, p. 4). In Wei (2012, p.151), Regionalised Chinese Teaching implied "to study Chinese teaching according to different geographical divisions, with a definite object in sight, to better improve the teaching effect". Additionally, Gan (2004) previously highlighted "nationalisation" incorporating various Chinese teaching and studies across different nations. Meanwhile, "localisation" encompassed the ideas, teaching content, teaching (teachers, textbooks, and teaching methods), and services associated with local settings (Li & Shi, 2017). On another note, Wu (2013) denoted that although "localisation" was occasionally interchangeable with "nationalisation", "nationalisation" distinctly indicated the country as a unit. This CLLS study outlined all three elements that would be duly illustrated.

METHODOLOGY

This paper uses the systematic review method to evaluate Chinese learning strategy research development in the past ten years. Systematic literature reviews use systematic and clear methods to select literature based on clear, stylised questions and critically evaluate relevant research (Petticrew & Roberts, 2006; Higgins & Green, 2008). This paper searches the literature on the study of learning strategies of Chinese as a second language or foreign language collected in China National Knowledge Infrastructure (CNKI) as well as Google Scholar, Scopus, and Proquest from 2011 to 2020 through keywords. It does a systematic review according to the research aims.

In the first step, the records determined through the database search were chosen if their titles complemented the specific study topic. In the second step, chosen record references and topic meta-analyses and reviews were sought for further records. The third step implied screening the selected record abstracts (to be omitted if the selection criteria were unmet). Lastly, the full-text articles were evaluated for eligibility. Notably, the articles were only incorporated into the review if the following selection criteria were fulfilled: (a) the study subject merely encompassed students who learned Chinese as a second or foreign language in China or abroad; (b) The literature only encompassed empirical CLLS articles (review articles, book series, books, book chapters, and conference proceedings were omitted); (c) The article should be peerreviewed; (d) only literature between 2011 and 2020 were utilised.

Summarily, 1563 articles appeared to meet the criteria (based on the titles and abstracts). Specifically, 1316 were omitted following title and abstract reading. Lastly, only 155 articles that fulfilled the search criteria were presented (Figure 1). Following the literature analysis, specific CLLS-based attributes and limitations from the past decade and potential CLLS counterparts required due regard.



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Figure 1. PRISMA flow chart for systematic literature review

RESULTS

For almost three decades, CLLS-related studies were primarily conducted by local Chinese scholars. Past research mainly emphasised the advent of learning strategy theories abroad. Specifically, most of the CLLS study results concerned international students in China. With the improvement of comprehensive national strength in China, the number of people learning Chinese worldwide is gradually escalating. Likewise, Chinese language teaching was also becoming more diversified. The tremendous increase of Chinese learners on a global scale subsequently widened the vision and scope of the research. Figure 2 presents the development trend of CLLS articles over the past decade.

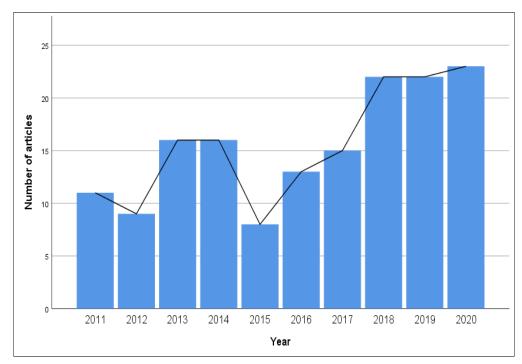


Figure 2. The CLLS articles by year (CNKI)

Figure 2 presents a decade long CLLS research development pattern. Resultantly, CLLS scholars between 2011 and 2020 demonstrated an overall ascending trend (excluding a slight decline in 2012 and 2015). Notably, 22 and 23 CLLS articles were published in 2019 and 2020, respectively (the highest number of CLLS articles published in the past ten years). Thus, the study indicated the rising popularity of CLLS-oriented studies among researchers.

On another note, the study results demonstrated the following characteristics: First of all, at present, the research on Chinese learning strategies is mainly focused on the background of the target language environment. Secondly, with China's comprehensive national strength, the research on the nationalisation and regionalisation of Chinese learning strategies is gradually increasing, showing an upward trend. Finally, the research on influencing factors of Chinese learning strategies is becoming more extensive and in-depth.

Analysis of CLLS among International students with Diverse Cultural Backgrounds

Regarding CLLS-oriented studies, much research selected international students in China as the study respondents and performed comparative analyses on learner differences strategy implementation. In the study context, 95 out of the 155 CLLS articles belonged to the Chinese setting and accounted for 61.29% of the total number of articles (Figure 3).

Most studies comprehensively depicted the CLLS of foreign learners from a macro

perspective (Cai, 2014; Cui & Yan, 2011; Guo, 2019; Liu & Yuan, 2017; Lv, 2013; Wang, 2015; Xu, 2018; Yang, 2012). Based on current articles, most scholars selected study measures (following local conditions) and samples (international students in specific regions) to demonstrate similarities and differences. Chinese students' learning strategies were also compared to various native language contexts as Chinese language teaching in China mainly involved mixed-class teaching with students from diverse cultural backgrounds. A survey on Thai and American students' learning strategies reported that Thai students' choice of learning strategy was more diverse (Chen, 2013). Specifically, both Thai and American Chinese students often implemented social strategies. Additionally, American learners utilised less memory and emotional strategies. Given the variances

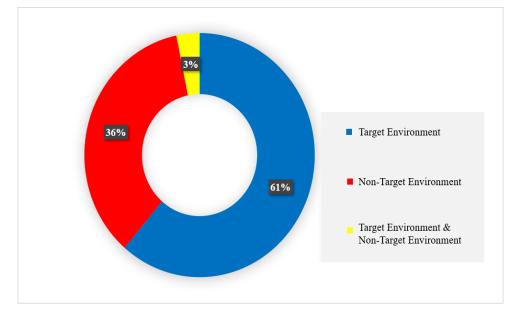


Figure 3. The proportion of articles on different language learning contexts (CNKI)

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between Thai and American learners' choice of learning strategy, bias was a consistent factor. Most students preferred social, metacognitive, and compensation strategies, whereas the least preferred strategies were cognitive and memory. Although the finding corresponded to Jiang (2000), the results differed from Wu (2007). Additionally, Yu & Huang (2016) revealed that African students' metacognitive and memory strategies among were remarkably higher than the overall data. In contrast, compensation, emotional, social and cognitive strategies were significantly lower than the overall data. Based on a t-test using 103 independent samples (second language learners of Chinese), it was reported that African students used various learning strategies compared to second language learners of Chinese.

Comparisons on learning strategy utilisation in various cultural backgrounds and linguistic contexts denoted one of the studies attributes in this period. For example, L. Zhou (2013) compared Thai students' learning approaches in the target language environment against non-target language counterparts. Consequently, the overall CLLS frequency incorporated by primarylevel Thai students within the targetlanguage context proved higher than nontarget language counterparts. Meanwhile, Zhang (2012) compared learners CLLS utilisation in different contexts during and post-class. Additionally, Li (2016) compared Indian and Filipino students as second language Chinese language learners. Furtherly, some other studies on students' learning methods between Chinese and non-Chinese character circles were compared with writing and reading Chinese characters (Ding, 2018; Liu, 2018; Wang, 2018). For instance, Huang (2018) compared Thai students listening methods within two linguistic settings. The comparative studies encompassing students from distinct cultural backgrounds: showed that different cultural backgrounds and mother tongues impacted learning strategy alternatives. In this vein, Chinese language teaching should duly consider learners' cultural backgrounds and mother tongues.

Meanwhile, the foreign learners in China demonstrating characteristics of expertise selectivity, and the foreign learners who primarily studied traditional Chinese medicine reflected different CLLS. For example, Liu et al. (2019) examined South Asian medical students in China and reported that the overall CLLS usage varied from ordinary students (high to low) and the frequency of metacognitive, social, compensation, cognitive, memory, and effective strategies. Regardless, it was revealed that Western learners were prone to holistically implement compensation and memory strategies (Jiang, 2011). Additionally, B. B. Li (2014) indicated that respondents often utilised metacognitive as opposed to memory strategies. Resultantly, the similarities and variances of learning strategies among medical students in China reflected that most medical learners tended to use metacognitive compared to memory strategies. In this vein, the internal influencing factors could be

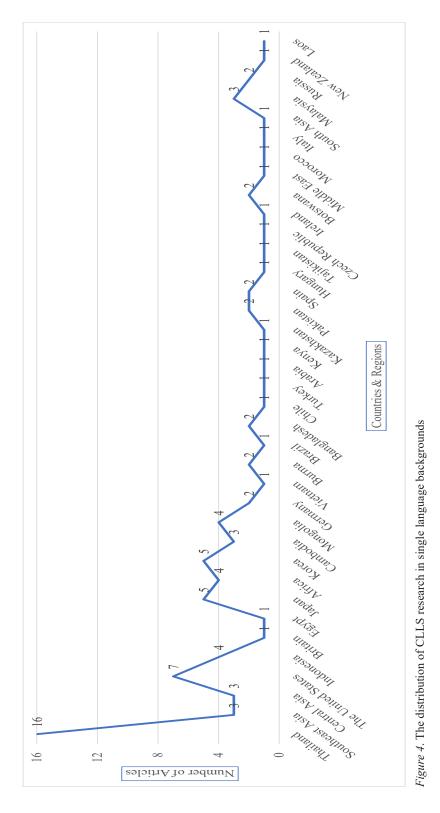
identified from the differences. Based on the similarities, the medical students in China inadequately implemented memory strategies, consequently providing ideas for the next level of strategy teaching.

The Country-Specific Distribution of CLLS Research

Given the rapid internationalisation of the Chinese language, more countries were involved in Chinese language teaching. According to CLEC (2020), there have been 541 Confucius Institutes and 1,170 Confucius classrooms set up in 162 countries and regions. Consequently, studies on nationalised Chinese teaching have gained researchers' attention. As each country had various national conditions, languages, and culture, the similarities or differences in students' learning processes were worth studying. Based on the literary analysis, studies on nationalised CLLS currently consisted of 34 countries on five continents. Specifically, Thai, American, and South Korean students were the most studied respondents (Figure 4).

In Thailand, different learning strategy groups were studied with varying conclusions. For example, Zhang (2014) assessed Thai high school students' learning strategies and discovered that learning strategies were commonly implemented in Chinese language learning. Specifically, social and memory strategies were commonly used by learners. Likewise, J. Li (2014) performed a CLLS survey among Thai students in Sarawittaya (Sara) Middle school, Thailand. It was revealed that the students frequently implemented cognitive and social strategies, whereas the choice of memory strategies was less commonly used and lacked methods, thus contradicting the past results. As additional CLLS research on different learning groups in Thailand (Zhang, 2017; Lin, 2016; Zhou, 2019; Li, 2018; Zheng, 2014; Lu, 2012) varying results in strategy use, further CLLS-based studies proved necessary. Researches on CLLS among American students were also conducted. A survey on American students taking short-term classes at Zhejiang University indicated that compensation and social strategies were often implemented by American students, whereas memory and emotional strategies were infrequently used (J. Wang, 2011). However, the study findings slightly varied from Zhang (2011). For example, Zhang (2011) performed a survey of Chinese learners in two American universities and reported that metacognitive and social strategies were most commonly implemented by American students, whereas compensation and emotional strategies were the least commonly used. Thus, learners with the same language and cultural backgrounds portrayed particular variances in the choice of CLLS various influencing factors, such as learning, target language, and non-target language environments, as discussed below.

Apart from research on learners from a single country, the study of regional learning strategies in a particular region was also emphasised. For example, Yuan et al. (2011) investigated the relationship between the CLLS, attitudes, and motivations of Southeast Asian students. It was reported



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that the most frequently employed CLLS by Southeast Asian students were emotional strategies with a significant correlation between learning strategies, attitudes, motivations, self-evaluations. Regardless, a study on the CLLS of students from five Southeast Asian countries indicated that social and metacognitive strategies were most commonly employed, whereas memory and emotional strategies were least often implemented (H. Li, 2014). Regional studies on the Chinese language also involved specific areas, such as the Middle East (Ma, 2019), Central Asia (Cui & Yan, 2011; Liu, 2013; Wang, 2013; Wang & Li, 2013; Zhang & Wan, 2019), Africa (Luo, 2019; Wu, 2018; Yu & Huang, 2016; Zhao, 2012). Given that different area involved different usage of learner strategies, studies on CLLS implementation and the influencing factors of various regions regarding Chinese language teaching and cross-cultural communication had specific practical implications. Overall, countryspecific research on learning strategies significantly facilitated TCFL (Teaching Chinese as Foreign Language). The results reported that different countries reflected different learning strategy alternatives. Thus, strategy training for students from different countries was proposed.

Research on the Relevant Factors Affecting CLLS

Due to individual differences and environmental factors, students demonstrated different learning strategy alternatives and implementation, hence resulting in palpable differences regarding learning effects in the same environment. Concerning the influencing factors of learning strategy classifications, Ellis (1994) stated that students' factors could be categorised into background factors (Chinese proficiency, duration of learning Chinese, Chinese score levels, and the number of students learning a foreign language) and personal factors (age, learning style, learning motivation, learning anxiety, and tolerance of ambiguity). According to studies on domestic and foreign researchers on the factors influencing learning strategies, the external learning context was a key determinant that could be classified into the classroom and social contexts. The classroom context mainly denoted teachers, textbooks and teaching tasks, whereas the social context primarily denoted the mother tongue and target language environments.

Apart from past studies, more research on the relationship between individual factors and learning strategies has been conducted. Although most works of literature emphasised individual factors (gender, age, learning level, and learning period), the influence of gender on learning strategies was deemed controversial. Nevertheless, some studies revealed that gender significantly affected CLLS usage. For example, P. Wang (2016) surveyed on 78 Brazilian students reported that male students often utilised learning strategies than their female counterparts. Contrarily, J. Wang (2011) revealed that women employed learning strategies more often than men in correspondence to Lin (2016), Ou (2018), T. Xie (2018), Wang, 2015, Zhao (2012), Zhang (2014), and Zhang & Ge (2015). Furthermore, Gu (2014) indicated significant variances between genders regarding selecting memory, cognition and social strategies. Similarly, some studies also concluded that gender influenced strategy selection (Chen, 2017; Li, 2017; Li, 2019; J. Q. Wang, 2011; Zhang, 2017; Zhai, 2019; Zhu, 2018). Regardless, some other study results reported that no significant correlations between gender and learning strategy were identified (Li, 2019; Luo, 2019; Y. Wang, 2017; Zhang & Wan, 2019).

Other factors also impacted learning strategies. For example, it was indicated that learning time remarkably affected learning strategy choices (Zhai, 2019), learning concept was positively correlated to learning strategy implementation (Xie, 2019), and learning motivation was significantly correlated to learning strategies (Zhou et al., 2014). Additionally, Sheng (2019) examined the correlation between ambiguity tolerance and learning strategies among Burmese learners and indicated that ambiguity tolerance and learning strategy implementation frequency was negatively related to gender among primary Chinese language learners. In contrast, the intermediate Chinese learners' ambiguity tolerance and learning strategy use frequency reflected a positive correlation. Yang (2019) also indicated that social identity, other second language learning experiences, and the fundamentals of the Chinese language were significantly correlated to learning strategy usage. Chen (2017) pointed that

gender, age, nationality, learning duration, and other factors influenced the alternatives and implementation of learning strategies for international students. For example, Yang (2015) indicated a positive correlation between students' self-evaluation and CLLS in various grades and years of study.

On another note, Guo (2019) mentioned that the disposition of international students directly affected the choice and implementation of learning strategies. Furthermore, Wang (2015) demonstrated that students' utilisation of learning strategies pertained to teaching methods. In a survey on international students' learning strategies at Hebei University, Y. Wang (2017) revealed that students did not generally have a clear understanding of learning strategies (consciously or unconsciously) as teachers paid little attention to international students' learning strategies. Zhang and Ge (2015) examined the interaction between Mongolian students' factors (majors, learning years, and CLLS). It was demonstrated that Chinese language proficiency and the ability to mould international students influenced learning strategies. Although researchers generally affirmed that several factors influenced learning strategies, studies on the area above remained lacking.

Although sufficient research exists on students' factors, the influences of environmental factors (social, cultural, and teaching environments) and learning strategies remain disregarded. Hence, in-depth explorations on the different factors influencing CLLS usage should be conducted for theoretical and practical guidance to improve the effects of teaching and to learn the Chinese language.

Conclusively, CLLS studies are rapidly increasing on a global scale. Furthermore, research on learners from various countries and regions highlighted a novel CLLS pattern in this period. Studies on the key determinants of CLLS is also gaining more depth and cohesion with emphasis on individual and environmental aspects. In this regard, the research facilitated a relatively objective and sound understanding of CLLS with a basic knowledge of CLLS attributes with various cultural backgrounds. Consequently, CLLS training proved relevant as a significant reference to teaching Chinese as a second and foreign language.

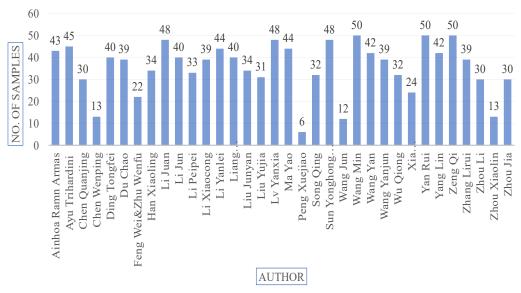
DISCUSSION

For almost a decade, CLLS studies reflected an overall upward trend. In this regard, scholars are gradually focusing more on the students' "learning" process. Current dissertations and literature reviews also emphasised studies on a single country, multi-angle studies on learning strategies and relevant influencing factors and presented specific similarities and differences. Regardless, research on CLLS as a second language reflected several deficiencies.

First, an incongruence between nationalisation and regionalisation studies involving CLLS was identified. Studies on international students' CLLS in certain countries are gaining momentum following researchers' focus on CLLS among students from Central and Southeast Asia, Europe and America, East Asia, and Africa. However, studies on students from South Asian countries revealed uneven results. For example, more CLLS studies involving Thailand were identified compared to other countries (Yang, 2015; Zhang, 2017; Zheng, 2014). In contrast, CLLS-based studies in Malaysia only amounted to three relevant articles (Chen & He, 2017; Cheng, 2018; Xu, 2018), whereas only Chen and He's (2017) study consisted of local students. Hence, the regionalisation and nationalisation of learning strategies needed to be established.

Secondly, the study samples were small with single research methods. Although studies on learning strategies in Master's and Doctoral theses and dissertations have been annually increasing, scholars were too constrained in sample selections. Based on the statistics, 34 out of the 134 theses samples were lower than 50 (Figure 5).

The research methods were also too simplified. In current works of literature, the main research methods employed quantitative and descriptive analyses. Moreover, the data mining process was not in-depth, thus failing to resolve the fundamental issue. In contrast, only several articles were qualitatively analysed (He, 2011; Jiang, 2011; Peng, 2017; Zhang, 2015; Li, 2017) or employed a hybrid research method (Du, 2018; Ding, 2018; Kuo, 2015; Liu, 2012; Lin, 2016; Ning, 2019; Shu, 2013). Although research methods on domestic learning strategies employed quantitative interviews, many studies did not disclose the interview content and findings



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Figure 5. Number of samples

(L. L. Zhang, 2013; Li, 2016), which only utilised a single research method.

Regarding CLLS strategy training, domestic CLLS training was included in the final part of the literature. Specifically, researchers' proposals were derived from personal teaching experiences and methods (Li, 2017; Liu, 2012; Tan, 2018). The lack of a systematic teaching mode that integrated theory with practice insufficient policy-based intervention studies led to the incomprehensiveness of current empirical studies on CLLS training. Hence, it was vital to explore adequate language training modes to guide Chinese language teaching and learning.

CONCLUSION

By categorising literature on CLLS (locally and globally) in the past decade, it was reported that researchers primarily emphasised international students' learning strategies in different cultural backgrounds. The study also reflected that students with different cultural backgrounds selected different CLLS.

Based on the review of the prior research, there is a population gap. Studies on the learning strategies of Chinese learners with a single cultural background was a relatively new trend. Given the improvement of Chinese language internationalisation, many nations have included Chinese as an important foreign language. Consequently, studies on the nationalisation and regionalisation of CLLS was crucial for the effective acquisition of the Chinese language.

Also, a comprehensive and in-depth analysis of the influencing factors of students' CLLS in different countries and regions was carried out to guide Chinese learners' learning process and methods from different backgrounds through individual learning and environmental factors.

This study has identified an apparent theoretical gap in the prior research concerning CLLS. By using literary analyses from the past decade, it was believed that CLLS research content could be more detailed, and there is still much room for research on Chinese learning strategies outside of China. Meanwhile, the study samples could be more diversified. Mixedmethod research designs and the learning strategy training concept should also be elevated to the theory instruction paradigm to enhance the teaching activities between instructors and students.

In short, this study revealed the overall characteristics of the development of CLLS in the past decade, among which the trend of regionalisation and nationalisation has certain guiding significance for future research. The study has also thoroughly

identified the population and theoretical gaps, which are worthy of further investigation. Therefore, it is essential to research Chinese learners in different regions and countries. In addition, the diversified research perspectives of CLLS have far-reaching implications for future research on Chinese as a second language or foreign language teaching. Future researchers are highly recommended to explore the influencing factors and teaching modes of CLLS from different perspectives. Therefore, it deserves ample and substantial research space to explore in studying Chinese language learning strategies in the future.

ACKNOWLEDGEMENT

The author wants to express gratitude for all bits of help during the writing of this article. Deepest gratitude goes first and foremost to the main supervisor, Dr Ng Chwee Fang, for her constant encouragement and professional guidance. Without her consistent and illuminating instruction, this paper could not have reached its present form. The author is also greatly indebted to the co-supervisors, Professor Dr Azidan and Dr Ilyana, for their professional guidance and valuable support during the research. In addition, the author is also very grateful to those researchers who have made contributions to Chinese learning strategies, from which a lot of inspiration and reference materials were received.

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