CHUN NR. 26/2011, S. 45–66

Development of Chinese Character Learning Strategies among Beginners: A Sociocultural Perspective

郭志岩 GUO Zhiyan

1. Introduction

Learning Chinese, especially learning to read and write Chinese characters, has been perceived as a 'bottle neck' amongst learners of Chinese as a foreign language (CFL), due to the differences between the Chinese script from that of European languages. The difficulty lies in the fact that, unlike alphabetical scripts where a word's pronunciation derives more directly from its orthography, the relationship between pronunciation and orthographic form of the Chinese character is rather opaque, and it is harder to establish the link between pronunciation and print. In Chinese, there are only about 420 different syllables, or about 1,200 including four tones (Wang/Higgins 2008), so there are characters whose pronunciations are exactly the same, but can only be discriminated by their written forms.

Guder (2007) summarised the special features of the Chinese writing system as a 'third dimension' as opposed to linguistic and cultural elements as first and second dimensions of learning. This further confirms that learning Chinese is different from learning other foreign languages and learning to read and write in the Chinese script requires particular attentions from the learners, especially European language speakers who have never experienced characters as part of their prior learning. This third dimension of learning Chinese is of vital importance in that characters are the carrier of the linguistic and cultural dimensions, without the knowledge of which, the learning of Chinese becomes rootless. In other words, it appears important to read and write characters when learning Chinese. Beginners of Chinese, in particular, can be so intimidated by the Chinese script as not to progress into a higher level of learning. If one accepts that to achieve literacy in Chinese is the premise of further learning of the language and culture, it appears necessary for students, especially beginners, to learn *how to learn*, i.e. to have strategies for learning Chinese characters.

In this article, I will briefly review the literature on learning strategies and strategy instruction in teaching English as a second/foreign language (ESL/EFL) and in particular, learning strategies of Chinese characters among CFL learners. Then I will explain my study of beginner classes at a British university, which will be followed by the analysis of the small set of data derived from students' questionnaires and self-reports. Finally, I will discuss

the development of students' character learning strategies from a socio-cultural perspective.

2. Learning Strategies and Strategy Instruction

2.1. Learning *how to learn*

The study on learning *how to learn*, i.e. learning strategies in ESL/EFL, started in the mid 1970s (see Rubin 1975; Stern 1975). Learning strategy was defined as 'operations employed by the learner to aid the acquisition, storage, retrieval and use of information' (Oxford 1990: 8). This was referred to as language learner strategy (LLS) for the first time by Cohen and Macaro (2007). Among the six categories summarized by Oxford (1990), I chose the three most relevant ones: cognitive, meta-cognitive, and social/affective strategies, as this study focuses on learning Chinese characters, and has little to do with listening and speaking Chinese. Cognitive strategies are specifically related to learning activities and higher order functions of analysing and synthesising, such as enhancing attention, selective attention, perception, memorization, and resourcing (Oxford 1990). Meta-cognitive strategies refer to those higher order functions and processes of knowing about learning (O'Malley et al. 1985; Oxford 1999), and how students manage their own learning, such as monitoring, evaluation, planning, preview, review, and self-assessment. Social/affective strategies acknowledge the importance of interacting with others and the involvement of students' feelings in language learning (Oxford 1990). It has been found that the more successful students tend to exert more meta-cognitive strategies on their learning processes. (O'Malley et al. 1985). There appears to be less research on social/affective strategies than on cognitive and meta-cognitive strategies (ibid.).

There are researchers who advocated that students should be taught learning strategies in order to enhance their language learning processes (Ellis/Sinclair 1989). Griffiths (2004) argues that if students are provided with answers the immediate problem is solved; but if they are taught the strategies to work out the answers themselves, they are empowered to manage their own learning. The belief that language learning strategies are teachable and that learners can benefit from coaching in learning strategies underlies much of the research in the field (e.g. Oxford 1990; Larsen-Freeman 2001). In a classroom-based study which aimed to analyse whether learner strategy training makes a difference in terms of knowledge, skills, and attitudes, Nunan (1997) designed a programme involving the students that asked them to reflect on their own learning, to assess their own progress, to develop their knowledge of learning strategies and ability to apply their language skills beyond the classroom. He found that language classes should have a dual focus, teaching both contents and an awareness of language processes.

Oxford (1990) summarised that in second language learning, strategy instruction has taken the forms of strategy sharing between students, for example, through informal strategy discussions, strategy bulletin boards, and students' demonstrations of strategies to each other. Therefore, in a classroom learning environment, it seems that the language learning strategies of the more successful students can be learnt by the less successful students and the teacher can assist the language learning process by promoting awareness as well as the use of language learning strategies and by teaching and practising effective strategies among learners of different levels. The strategy training helped students use new strategies beyond their normal stylistic boundaries (Oxford/Schramm 2007). It has been suggested that the strategic classroom can make a contribution to effective learning, and the classroom as a nurturer to strategy development can help improve individual ability to learn languages (Takeuchi/Griffiths/Coyle 2007). As Grenfell and Harris proposed, the

> emphasis on *learning to learn* marks an intention to approach language learning from a different direction: rather than a perfect method, it focuses on the learner-their particular competence profile, learning styles and developmental stages […] (Grenfell/Harris 1999: 50).

2.2. Studies on learning Chinese characters

With the increasing number of CFL learners in each sector of education throughout the world, specialists and practitioners have been endeavouring to tackle the difficulty in learning characters. The last two decades have seen more explorations into learning strategies in CFL among different levels of learners. Different models have been proposed for how to teach Chinese characters effectively, for example, Jiang (2007) claimed that CFL learners should aim to be able to recognise more characters than what they can write. In terms of the number of characters that these learners should learn to write, Ding (2007) summarized about 922 Chinese characters which CFL learners should learn to both read and write, implying that the rest, over 2,000 characters, can be learnt for reading only or maybe not be learnt at all. While the feasibility of these proposals was yet to be established, practitioners came to divert their attention to how characters are learnt as Zhang and Li (2010) claimed that the cognitive process of CFL learners deserves sufficient attention.

2.2.1. The process of character recognition

What is happening in a student's mind when trying to recognise Chinese characters? Studies on learning characters revealed the relationship between phonology and character recognition. Perfetti and Zhang (1995) hypothesised

that characters' phonological information contributes to character recognition. Weekes et al. (1998) found that phonological processes are activated automatically in recognizing compound characters. In terms of morpho-graphic processing versus character recognition, Taft and Zhu (1999) set up the interactive-activation model which stated that characters are recognized through activating the information about their component radicals. With these insights into how characters are generally processed in a learner's brain, scholars have looked into specific learning strategies in processing Chinese characters. Hayes (1988) based his experiments on subjects of Chinese learners, analysed the types of subjects' errors made among phonological, graphic, and semantic distracters, and concluded that the learners used both visual and graphic strategies to encode Chinese characters in a word context. However, this study did not base itself in the actual classroom learning, and thus may have paid little attention to the multiple factors in the process of recognising Chinese characters situated in regular classroom learning.

2.2.2. Classroom-based studies on character learning strategies

Researchers found that students employed certain strategies in learning Chinese characters, based in their weekly teaching and learning in the classroom. Through his five week summer immersion programme with twenty-nine English-speaking students, McGinnis (1999, cited in Shen 2005) found that beginners of Chinese tend to deploy the rote repetition learning and creation of mnemonics such as idiosyncratic stories in remembering particular characters, whereas orthographic knowledge was not preferred among them. Also by getting data from the daily classroom of English-speaking first-year college CFL students, and analysing students' self-evaluation of their own learning, Ke (1998) pointed out that radical knowledge appeared more useful than creating stories among his students.

Tseng (2000, cited in Shen 2005) adopted the instrument of self-report among German-speaking college students of both beginners and advanced levels, and found out 15 kinds of learning strategies such as repeated writing, flashcards, decomposing compound characters into radicals/smaller components, but this study did not analyse why and how the choices of strategies are affected. As a study involving a large number of participants, Shen (2005) investigated the strategy used by 95 university students from beginner to advanced levels, and through three surveys within one year and factor analysis, found that students of all levels depended on orthographic knowledge in learning characters although the beginners' ability in this respect appeared limited and therefore orthographic knowledge did not appear very useful to them. Although the students in Shen's study used both cognitive and meta-cognitive strategies, there seems to be no mention of how they deployed social/affective strategies in their learning processes.

2.2.3. Character learning strategies and strategy instruction

As previously explained, students adopted a number of strategies in their character learning. Are these strategies affected and developed due to the instruction received in their classroom? There are two existing studies from which we can find the answers to this question. Jackson, Everson and Ke (2003, cited in Everson 2007) asked students to guess the meaning or sound of characters that they have never learned before by circling the answers to the multiple-choice questions to best represent the meaning of those characters. For example, after learning the radical 火 *huǒ* (meaning: fire), they were asked to tell the meaning of 燃 *rán*, with the four choices in English of discolour, scratch, burn, and shred. After learning the radical 同 *tóng* (meaning: same), students were asked to mark the pronunciation of 桐 *tóng* in *pinyin*. They found that the students can transfer their knowledge of semantic and phonological components of characters learned in class to recognise new characters, but the finding that these students performed better in semantic elements can actually be attributed to the classroom instruction, more of which was focused on semantic radicals than on phonetic radicals. Another study carried out by Shen (2004) indicated that instructor-guided elaboration of orthographic structures help students retain sound and meaning of more characters than in students' self-generated conditions and enable students to receive instructions not just about various orthographic knowledge, but also on how this knowledge can be linked and transferred to new characters.

The review so far suggests that more research can be done on explicit strategy training across different levels, in particular beginners. More attention should be paid to beginners using different strategies, especially social/affective strategies.

3. The Current Study

In this section, I will explain my study of a group of beginner students, explore what strategies they employed in learning Chinese characters, and discuss how these strategies have been possibly affected and developed in their learning process.

3.1. Research design

With the aim of gaining a clearer understanding of how beginners learn Chinese characters, I conducted the current study among 63 CFL beginners who took Chinese as their optional modules with 69 contact hours during the three terms. They were from different countries but all with English as their instructional language. I adapted Shen's (2005) questionnaire into a relatively short online survey (using software called Quia) consisting of 39 questions: 3

bio-data questions, 33 statements, and 3 free-response questions. The adaptation was mainly based on these students' understanding of the character knowledge and on the practical consideration that it did not take more than 15 minutes to complete the survey. Apart from the six questions that required their own responses, the students were asked to provide the Likert-scale rating between 1: *never true of me* and 5: *always true of me*, for the 33 statements which covered most of the strategies that they possibly used in their process of learning Chinese characters during the academic year.

That is, they were asked to rate the frequency with which they used a particular strategy, rather than only indicating if they used it or not. The formal request for completing the online survey was made at the end of the academic year. Prior to the request, I emailed them the consent letter which stated the purpose of the study. On a voluntary basis sixty-three students completed the online questionnaire. Apart from the online survey, another part of data came from the students' self-reports which were provided as their answers to the three free response questions and in individual discussions with their teacher about their character learning, in which they summarised and evaluated their ways of learning Chinese characters with examples of their successes.

The study aims to answer the following questions:

1. What are the strategies that the beginners use?
2. Is there any pattern among these beginners' strategies?
3. How these strategies possibly affected by and developed in their social learning contexts?

3.2. Data analysis

The analysis of students' responses was carried out in both quantitative and qualitative methods by inputting their ratings to each of the 33 statements into SPSS (Statistical Package for the Social Sciences) and coding the students' self-reports.

3.2.1. Quantitative analysis

The sample size of the study allowed the use of SPSS to carry out the analysis for students' answers. The descriptive analysis demonstrated that reliability is 0.707 which means that the data obtained in this study can be relied on and the descriptive analysis can be validly used to gain insights into the strategy use by these beginners.

The descriptive data also answered the research questions 1 and 2. A series of strategies was identified among these beginners learning Chinese and these strategies can be further categorised into three types: cognitive, metacognitive, and social/affective. According to the data shown in Table 1,

among the 33 strategies, 21 strategies can be taken as more commonly used strategies with the mean 3–5 and 12 strategies with the mean 2–3 as less commonly used. The strategies with the mean of higher than 4 indicated that they were used most frequently among these beginners: *Say the character to myself as I write it repeatedly; Try to recognize the radicals (components) that I have already learned; Look in the textbook or dictionary to check a character's (or word's) meaning or pronunciation when I am not sure of them.* The strategy with the lowest mean still exceeded 2 (> 2): *Discuss with other students the methods of memorizing characters.* The descriptive statistics so far demonstrated that the statements of strategies were highly relevant to these students' character learning; and that the students' use of social/affective strategies appears less frequent than their use of cognitive strategies.

Table 1: Use of strategies among the beginners of Chinese

	Mean	Std. Deviation
Q4 Listen carefully to the pronunciation and tone of the character and associate them with pinyin.	3.5833	1.05221
Q5 Repeat the character several times aloud or silently to myself in order to remember its pronunciation, shape and meaning.	3.8611	1.15022
Q6 Try to use the character in a sentence orally.	3.2500	1.07902
Q7 Try to associate the sound of the character with its shape and meaning.	3.1667	1.40408
Q8 Feel that I remember the character better if I know how to pronounce it first.	3.6111	1.45951
Q9 Look carefully at the stroke order in writing a character, and try to visualize it.	3.3056	1.11661
Q10 Find it more useful to demonstrate stroke orders by computer animation than manually.	3.0278	1.44393
Q11 Do not find it useful the demonstration of a stroke order in any way to remember the character.	2.3611	1.15022
Q12 Listen carefully to the explanation of how the sound or meaning of the character is derived.	3.6111	.90326
Q13 Try to recognize the radicals (components) that I have already learned.	4.0278	.99960
Q14 Observe what radicals are in a character and try to make sense of why certain phonetic and/or semantic (meaning) components are there.	3.6389	1.04616
Q15 Try to make a story of the radicals/components in a character.	2.8611	1.12511

	Mean	Std. Deviation
Q16 Associate the new character with previously learned radicals to find connections among sound, shape and meaning.	3.8056	1.03701
Q17 Say the character (or word) to myself as I write it repeatedly.	4.1111	.88730
Q18 Say the character (or word) over and over again to myself, trying to picture what the character looks like in my mind.	3.4571	1.19663
Q19 Write the character many times in the air, visualising it in my mind.	2.8889	1.36858
Q20 Write a character many times, covering the one previously done to avoid the pure copying.	3.5833	1.27335
Q21 Use my imagination to associate a character with a picture/image, as if each character is a picture.	2.8611	1.04616
Q22 Group the characters/words with similar shapes/appearances, similar sound, or similar meaning.	3.0857	1.14716
Q23 Classify characters/words into different categories according to their shared radicals.	2.6944	1.03701
Q24 Make my own flashcards and flip through them many times to familiarise myself with sound, shape and meaning, then I write down many times of those I don't remember.	2.5833	1.46141
Q25 Discuss with other students the methods of memorizing characters.	2.0833	1.07902
Q26 Memorize the characters (or words), then have someone (friends, language partner, etc.) quiz me.	2.6111	1.27117
Q27 Quiz myself during the memorization; for example, given the sound, I try to think of the character's shape and meaning.	3.4722	1.15847
Q28 Memorize the shape of the character first, then the pronunciation.	2.3889	1.12828
Q29 Make sentences or phrases with the new characters, and/or write the sentences down.	3.0278	1.23024
Q30 Find the teacher's worksheets about characters more useful than the workbook exercises.	3.4444	.87650
Q31 Convert the character (or words) to my native language and find an equivalent in meaning.	3.0556	1.28607
Q32 Ask others (e.g. teacher, classmates, language partner, friend) and remember better, when I don't know what a character or word means and/or how to pronounce it.	3.2778	1.18590

	Mean	Std. Deviation
Q33 Look in the textbook or dictionary to check a character's (or word's) meaning or pronunciation when I am not sure of them.	4.0556	1.04045
Q34 Plan my time to preview the new characters before learning the lesson in class.	2.1389	.99003
Q35 Plan my time to review the characters/words regularly.	2.9444	.95452
Q36 Review characters only before exams.	2.8611	1.29069

Source: Author's own compilation.

In order to determine the factors underpinning the strategy use among these beginners of Chinese, a factor analysis was conducted, using Principal Component Analysis and Varimax Rotation Method. KMO & Bartlette's Test showed the Sig. of .000, which indicated that the factor analysis can be used validly.

Table 2: Heavily Loaded Components/Factors

Component	Initial Eigenvalues		
	Total	% of Variance	Cumulative %
1	5.701	17.275	17.275
2	3.587	10.869	28.144
3	3.098	9.389	37.534

Source: Author's own compilation.

Table 3: Rotated Component (Factor) Matrix[a]

	Component		
	1	2	3
Q4	-.277	.118	.677
Q5	.024	.050	.757
Q6	.366	.127	.352
Q7	.171	-.201	.470
Q8	-.122	-.026	.426
Q9	.137	-.045	.557
Q10	.131	.389	.235
Q11	.061	-.581	-.330
Q12	.306	.126	.533
Q13	-.226	.569	.028

	Component		
	1	2	3
Q14	-.058	.771	.168
Q15	-.123	.391	.232
Q16	.099	.831	-.012
Q17	.461	.110	.354
Q18	.580	.235	.176
Q19	.121	.604	-.150
Q20	.315	.441	-.118
Q21	.149	.441	.269
Q22	.089	.435	-.161
Q23	.098	.592	-.252
Q24	.498	-.137	-.054
Q25	.714	.167	-.066
Q26	.665	.014	-.400
Q27	.657	.140	.068
Q28	.546	.499	.225
Q29	.465	.151	-.183
Q30	.040	.054	-.013
Q31	-.508	.151	-.083
Q32	.163	-.190	.044
Q33	.432	-.217	.238
Q34	.698	.171	.133
Q35	.559	-.061	.317
Q36	-.384	-.007	-.523

Note: Extraction Method: Principal Component Analysis. Rotation Method: Varimax with Kaiser Normalization. a Rotation converged in 5 iterations.

Source: Author's own compilation.

Altogether three heavily loaded factors were extracted from all the strategies used by the beginners of this study. Tables 2 and 3 showed the total variance explained by these three factors and the rotated component matrix, in which I chose those values higher than 0.5 to interpret these factors. Factor 1 explains 17% variances and represents 7 strategy items (Q18, 25, 26, 27, 28, 34, 35). It can be mainly related to three processes of character learning: applying phonological knowledge, planning their character learning by preview and review, and learning characters through interacting with others. Factor 2 is heavily loaded in 5 strategy items (Q13, 14, 16, 19, 23) and explains 10%

variances. It is suggested that these beginners learn characters through the orthographic knowledge, with awareness of the important role of radicals and repeated writing. Factor 3 explains 7% of variances and represents 4 strategy items (Q4, 5, 9, 12). It further suggests that the students depend on the assistance of phonological processing in memorizing characters, getting more aware of the phonetic-semantic way of constructing characters.

3.2.2. Qualitative analysis

From the students' self-reports and their answers to the following three questions:

> Q37. Do you use additional materials other than the textbook to learn or review characters? If so, what are they, and how do you use them?
> Q38. What is the most interesting way of learning Chinese characters in this year's study? How useful is it?
> Q39. What are the ways that you use in learning Chinese characters, but not mentioned in this survey?

it was found that they used other resources than the textbook, including self-made flashcards, their own mini-dictionary containing the words to be learned, other recommended reference books,[1] listening to the CD of the textbook, the online resources such as the ones with computer animation of characters, online dictionaries, online chatting in Chinese through QQ or Skype or by typing in *pinyin* to choose from a list of characters. The self-reports also suggested that the students not only adopted the traditional way of learning through reading paper-prints, but also deployed kinds of the Information and Communication Technology to make good use of websites and online materials.

In the students' responses to the most interesting way of learning Chinese characters during the year, three themes emerged. The most highly regarded were contextualizing character learning through reading exercises and writing on paper or typing in *pinyin* to choose from a list of characters, listening and using dialogues including role-play, online chatting with native or non-native speakers of Chinese. The second most frequently cited strategy was making up stories in order to remember characters. The almost equally frequently mentioned strategy was learning and recognizing radicals.

[1] An example can be *Learning Chinese Characters* by Alison and Laurence Matthews (2007) which associated character learning with making up stories around certain characters.

4. Findings and Discussion

4.1. What are the strategies used by this group of beginners and what is the strategy pattern?

This group of beginners was found to use a series of strategies to learn characters and these strategies can be categorised into three types: first, cognitive strategies such as the employment of phonological knowledge and the use of repeated writing in memorising characters' shape and meaning, being aware of graphic structure and orthographic knowledge embedded within characters and being able to apply them in learning new characters; second, meta-cognitive strategies such as planning their character learning by preview and review; third, social/affective strategies such as learning characters through interacting with others. Specifically, the most frequently used were repeated writing with the aid of pronunciation, recognition of the radicals already learned. The repeated writing seems to be consistent with McGinnis' (1999) study and Tseng's (2000); however, the use of radicals in learning new characters appears to support Ke (1998) and Shen (2005) findings that the orthographic knowledge was largely applied in character learning.

It is worth noting that the beginners of my study made use of their social groups such as language partners or classmates in learning characters, though not as frequently as they do with cognitive strategies. This suggests that while cognitive strategies were taken as most often adopted, social/affective strategies were already in place of these beginners' character learning processes. In terms of frequency of use, meta-cognitive strategies stood between cognitive and social/affective strategies of learning characters. It seems certain that this group of students, in spite of being at the beginning stage of their Chinese learning, have adopted not just cognitive and meta-cognitive strategies, but also social/affective strategies, which other previous studies did not seem to reveal much about.

There are three possible causes for the relative increase in use of the social/affective strategies among these beginners than in the previous studies. First, due to the fact that native Chinese speaking students took up the largest population of international students on campus, it was quite easy for these beginners to find someone of similar age to practise their Chinese with. Also one student society of the University had an exchange scheme to establish language partnerships between native and non-native speakers, via which some of the beginners in my study had native Chinese speakers as their linguistic partners outside the classroom. Secondly, the substantial use of communication technology such as online synchronous chatting tools allowed the learners to interact with people throughout the world in the target language. Even online social networking tools, such as Facebook and Skype, enabled the learners to receive quicker responses from their language partners, which

further encouraged the use of social strategies in their Chinese learning. Furthermore, the use of pair/group work in learning characters in their classrooms may also lead to the habit of sharing their strategies with their classmates, which in a sense also promoted the social learning.

These beginners' strategy patterns seem to be repeated writing, with the aid of Chinese orthography and phonology, as well as the use of social interactions in their character learning processes. These patterns can be further supported by the sociocultural approach to learning, which I will explain next.

4.2. How are these strategies affected and developed by their social learning contexts?

In this section, I will mainly draw on the sociocultural perspectives to discuss how social learning contexts affect and develop beginners' character learning strategies.

4.2.1. Sociocultural approach to character learning strategies

In the last two decades, learning theory has evolved and produced a variety of models which view learning as a process of social, historical, and cultural activity (Cole 1996), i.e. sociocultural theory of learning. It emphasizes the interdependence of social and individual processes in learning and describes the learning process and the knowledge to be learned as distributed among participants and situated within the context of activity (Cole/Engestrom 1993; Lave/Wenger 1991). In other words, learning can be perceived as a social practice and knowledge be taken as socially constructed. This situated cognition suggests that learning happens in specific sociocultural environments including the workplace, classroom, and even family homes (Lave/Wenger 1991). In the case of beginners of Chinese, the development of their character learning strategies can be closely linked to the type of learning contexts in which they are situated. Their learning contexts can be perceived as constructed by their teachers and peer students in their Chinese classes, and thus 'classroom culture' appears pivotal in determining the use of character learning strategies. Thus, the development of strategies in learning Chinese characters can be seen as situated in the beginners' classroom. In other words, the strategy learning can happen as an indirect product of both explicit and implicit instruction of strategy within the classroom. Moreover, it should be admitted that students' learning contexts can be extended outside the Chinese classes, constructed by the related Chinese learning opportunities such as native speakers as language partners and virtual learning friends through Facebook and other online social networking tools.

Scaffolding is also one of the key concepts in the sociocultural approach, according to which learning is mediated by more experienced others (Vygotsky 1978). These experienced others include the teacher and other more capable learners. The more experienced others offer scaffolding to help the less experienced internalize the knowledge. It is in the interaction that the learners gradually achieve the skill and become increasingly self-regulated (Oxford/Schramm 2007). In a class of those learning Chinese as a foreign language, students of different abilities come to build up a Chinese learning community where they initially follow their teacher and then learn from each other while doing pair/group work during face-to-face hours and sharing information with each other via an online environment. Beginners of Chinese do not just learn from their teachers, but also learn from peers, thus this seems to be a process of enabling experienced peers to play the traditionally conceived role of a teacher. To some extent, students become empowered in their learning process, as Cohen argues that

> language learning and language use strategies can have a major role in helping shift the responsibility for learning off the shoulders of the teachers and on to those of the learners (Cohen 1998: 21).

As part of the sociocultural approach, the activity theory describes learning as the consequence of interaction with other people, objects, and culture in socially organized and goal-oriented activities (Engestrom 1999). This suggests that one's learning context can be mediated by the tools involved, such as a computer, digital technology, online discussion tools, etc. Therefore, the beginners' learning is not only situated in face-to-face conditions inside and outside the classroom, but also mediated by the technological tools available.

4.2.2. Strategic classroom culture for learning Chinese characters

As explained earlier, the classroom can play an important role for beginners who are learning characters. On the basis of teaching practices, I will analyse in this section how the inclusion of a classroom culture of strategy use can possibly nurture strategy development for beginners. The strategic classroom culture mainly consists of the following three elements.

I. Early exposure to Chinese characters

The difficulty in learning Chinese characters causes some practitioners to avoid them at beginner level. The teaching of Chinese in UK Higher Education institutions has experienced stages of teaching when the focus is only on *pinyin* and spoken Chinese rather than teaching characters at the beginning. Thus all the reading texts are presented with *pinyin* on top of corresponding characters. One of the benefits in doing so is that students who

are used to learning alphabetic languages resp. scripts can develop their spoken Chinese relatively quickly. However, the drawbacks soon become apparent in that students only focus their attention on *pinyin*, seldom on the authentic scripts: Chinese characters, and hence their development in reading and writing is disadvantaged and very slow. More adversely, when they go up to a higher level, their dependency on *pinyin* tends to hinder their overall progress in learning the language. Students found themselves repeating some topics learned before but presented again in Chinese characters. The learning becomes less stimulating, and also due to a lack of the systematic knowledge of the basics of Chinese characters, students tend to feel overwhelmed. More often than not, they tend to lose their incentives for further learning. To resolve this situation and to increase students' progression into higher levels, I adopted a systematic approach to character teaching and started character teaching at the very beginning of the first year of Chinese learning. I introduced the writing system in the first lesson so that early exposure to characters enabled the students to have the necessary mindset for learning characters. This engaging introduction turned out to stimulate students' interests in the language, rather than intimidating them.

II. Simultaneous development of spoken and written Chinese

As mentioned above, the written Chinese development has undergone stages of being delayed until after the development of spoken Chinese, which has been proven not conducive to character learning (Wan 2007). According to Luo (2007), in the curriculum design for students who learn Chinese as a major or as a foreign language, the beginning stage (first year) does not set up particular hours to learn Chinese characters, rather, the character learning has been mixed with learning other skills such as listening and speaking Chinese. Moreover, there is another type of practice, i. e. separating the learning of spoken Chinese and characters. For example, one book is on oral Chinese involving daily life topics in order that students can speak Chinese to survive different situations, and another book on learning characters which starts with basic strokes and radicals, commonly used single-component characters and semantic-phonetic compound characters. Although this approach appears to pay more attention to character learning, it has been found that vocabulary acquired from these two routes tend to be irrelevant to each other; in particular, many single-component characters such as 力 *lì*, 刀 *dāo*, 火 *huǒ*, 口 *kǒu* are rarely used in speaking about daily life topics.

As a result, students found it hard to retain those characters learned, especially among non-Chinese major students with very limited contact hours per week. Therefore, an approach needs to be taken to integrate the learning of speech and characters (Wan 2007). In my teaching, I used the textbook *New Practical Chinese Reader* (NPCR) which was aimed to develop listen-

ing, speaking, reading and writing skills of Chinese. While I followed the book to develop speaking and listening skills, I re-arranged its contents on characters. For example, I moved the contents on strokes together into beginning sessions, although within the textbook the basic strokes and compound strokes are placed respectively in Chapters 1, 5, 6. It was in the second week that I explained basic strokes and compound strokes with the examples from the materials for speaking and listening. I did similar re-arrangements for single-component and compound characters in the later chapters, at the same time as teaching vocabulary to develop the skill of speaking. Therefore, the learning of spoken Chinese and characters becomes more integrated with each other. Students not just improved their speaking, but also enhanced their knowledge of characters.

III. Explicit strategy instruction on learning characters

The strategy instruction on learning characters was aimed to reveal the regularities and inner patterns of Chinese characters systematically but gradually. I focused primarily on six explicitly taught strategies.

a. Establishing a holistic view of characters

In the introductory sessions, I covered the types of characters in order to given a holistic overview, with appropriate examples of picto-graphic, ideographic, associative and semantic-phonetic characters. This was followed by explaining basic meta-languages such as stroke, radical, character, and word. I also illustrated types of strokes, position of radicals, how characters are constructed and how words are formed by single, double or multiple characters, the relationship between single-component characters and compound characters.

b. Raising orthographic awareness in character recognition

The learning of characters was always accompanied by analysing the phonological and graphic cues. When students learned a number of characters, teachers could create more worksheets by putting together the characters which looked very similar to each other. The teacher categorized these characters into groups according to common radicals. For example, 再 *zài*, 在 *zài*, 坐 *zuò* were put together, the common radical/component 土 *tǔ* was taken out, students were asked to write it back in to compose characters that made sense to them. This was demonstrated to students as a revision tool. After that, students were encouraged to explain the similarities and differences between them. The grouping could also happen to the characters of homophones or those with similar pronunciation. In this way the characters learnt

randomly were grouped meaningfully. Also, some class time was allocated to explaining new radicals and characters in detail and helping students associate them with the previously learnt ones. This activated and transferred the knowledge learned to the new characters. All these exercises may have helped students establish the orthographic system of characters as early as possible and improved the retention of characters. The effects of this strategy seem to show in the responses to the online survey, with the average rating of 4.02, 3.63 and 3.80 for the three relevant statements (Q13, Q14, Q16).

c. Learning characters in context

When writing new characters in class, a word composed of the characters and a sentence were always articulated clearly at the same time, so that the meaning of the characters was reinforced in the students' minds. During the first term, the teacher said most of these words and sentences, but in the second term, students were able to say more themselves and were encouraged to do so in their own independent learning. The evidence from the online questionnaire was that 73% of the participants used the related strategy, with the average rating of 3.25 for the relevant statement (Q6).

d. Making and using flashcards

When students learned a large number of characters, memorizing them became more and more difficult. At the end of 12 hours of learning Chinese, the teacher made some flashcards with coloured cardboard, gave out the cards in class so that each student has one flashcard with at least one character on. The student was asked to say a word, a phrase or a sentence with the character. Afterwards, the teacher asked students to summarize the functions of flashcards in practise speaking and pronunciation and recognize characters. With the modelling in class, students made their own flashcards and brought them back to the classroom to share with other students. These flashcards together with the teachers' were used to play a SNAP game and a Bingo game for character recognition in later classes.

e. Using updated multimedia technology

The actual character writing was guided in class, rather than assuming that beginners could write themselves and leave everything related to writing characters for students to tackle outside the classroom. Computer animated demonstration of character writing was used for the first year. The websites with character animation offered students useful tools both inside and outside the classroom. From the student response to the online survey, we can see that the participants found it more useful than manually writing them, with overall rating of 3.02 (Q10). This way of teaching echoed the findings of the

Luo (2007) study where students were attracted with the vivid, useful and direct effects of the multimedia technology.

Another relevant practice was fostering the skill of typing in Chinese. He (2009) argued that learning Chinese should involve typing in characters, as the fifth skill in addition to listening, speaking, reading, and writing. Applying this to my teaching, I set up a half-an-hour workshop to familiarise beginners with the tools of how to type in Chinese characters using *pinyin* after students were able to read a list of characters and select the one they needed. Through this process, students improved their reading and recognition of characters. As part of informal assessment, students were asked to type one paragraph in Chinese characters on a certain topic and uploaded to a virtual learning environment (Moodle) as an assignment. This was before they started their hand-writing characters to compose paragraphs; their typing in Chinese seemed to have played a transitional role for them to handwrite characters. Students became familiar with the images of the characters before they actually wrote them from memory, in a way this eased their processes of handwriting characters.

f. Nurturing social learning of characters in class and via online environment

As explained earlier, learning can occur not just between teachers and students, but also between students themselves. As a teacher, I encouraged more social learning between students. As a commonly used activity, pair or group work was used for students to learn characters in class, for example, organizing a few groups of three to discuss how they can remember complicated characters such as 照 *zhào*, 教 *jiào*. Some groups analysed different radicals and related the meanings of the radicals to the characters; some groups invented mnemonics and made up stories using different components; some made sentences with them, others wrote them down on flashcards so that they would read them repeatedly every time they played with the cards. When they reported all these methods back to the whole class, it appeared that these beginners developed their strategies amongst their peers, rather than always directly from their teacher. Outside the classroom, students participated in language partnerships (e.g. a language exchange scheme on campus with native Chinese speakers) and elicited more discussions on learning strategies through online discussion via voice tools, e.g. Wimba Voice Conference. The evidence from the online questionnaire was that the participants used the related strategy, with the average rating of 3.27 for the relevant statement (Q32).

As mentioned before, in analysing students' self reports, the strategy of separating characters and making up stories with the components was found to be very interesting and motivating to students. It might be the case that this

strategy was developed from students' social learning between themselves in class.

The above mentioned strategies were all demonstrated and illustrated with the specific examples during the lessons. Students commented: "modelling each strategy in class is very useful", "some learning techniques are useful for future" (quotes from students' self-reports).

So far it is suggested that students raised their awareness of the strategies particular to Chinese character learning and that students did use certain strategies that had been explicitly demonstrated in class. This supports Shen's (2005) finding that it is likely to be helpful to inform learners overtly of particular behaviours or strategies and guide them as to how to use them and how to transfer them to new learning situations. My study also suggests that beginners can use the orthographic knowledge of Chinese characters to a larger extent when their attention has been diverted more towards it in classroom learning. It can be argued that the students' use of orthographic knowledge in their learning of Chinese characters may well stem from their classroom learning with their teacher. The classes with explicit strategy instruction seem to have affected beginners' learning in the development of the use of characters. Furthermore, students' strategy use tends to be influenced by elements of their social learning contexts, such as support from more experienced peers, language exchange partners and the mediation of technologies such as online social networks and a virtual learning environment.

5. Conclusion

As a concluding remark, it should be noted that, whilst strategy instruction on learning Chinese characters can serve as the necessary scaffolding for beginners to lay a solid foundation for their future learning, beginners' use of these strategies may change over time and with their later instructional situations. Also, the formation of beginners' strategies is largely affected by teaching as well as their prior experiences of language learning. Future research may investigate how individuals with different personalities and learning styles use learning strategies and can also explore whether strategy instruction in character learning has any impact on proficiency and achievement in learning to read and write Chinese.

References

Cohen, A. 1998. *Strategies for Learning and Using a Second Language*. Essex: Longman

Cohen, A./Macaro, E. 2007. *Language Learner Strategies: Thirty Years of Research and Practice*. Oxford: Oxford University Press

Cole, M. 1996. *Cultural psychology: A once and future discipline*. Cambridge, MA: Belknap

Cole, M./Engestrom, Y. 1993. "A cultural-historical approach to distributed cognition". In: G. Salomon (ed.). *Distributed cognitions: Psychological and educational consideration*. New York: Cambridge University Press, 1–46

Ding, C. 2007. "Chinese Character Teaching and Learning Strategies for Western Learners". In: Guder, A./Jiang, X./Wan, Y. (eds.). *The Cognition, Learning and Teaching of Chinese Characters*. Beijing: Language and Culture University Press, 398–409

Ellis, G./Sinclair, B. 1989. *Learning to Learn English*. Cambridge: Cambridge University Press

Engeström, Y. 1999. "Innovative learning in work teams: Analysing cycles of knowledge creation in practice". In: Engeström, Y./Miettinen, R./Punamäki, R.-L. (eds.). *Perspectives on Activity Theory*. Cambridge: Cambridge University Press, 377–404

Everson, M. 2007. "Developing Orthographic Awareness among CFL Learners: What the Research Tells us". In: Guder, A./Jiang, X./Wan, Y. (eds.). *The Cognition, Learning and Teaching of Chinese Characters*. Beijing: Language and Culture University Press, 33–50

Grenfell, M./Harris, V. 1999. *Modern Languages and Learning Strategies: In Theory and Practice*. London: Routledge

Griffiths, C. 2004. *Language Learning Strategies: Theory and Research*. School of Foundations Studies, AIS St Helens, Auckland, New Zealand, Occasional Paper No. 1, February 2004

Guder, A. 2007. "The Chinese Writing System as Third Dimension of Foreign Language Learning". In: Guder, A./Jiang, X./Wan, Y. (eds.). *The Cognition, Learning and Teaching of Chinese Characters*. Beijing: Language and Culture University Press, 17–32

Hayes, E. B. 1988. "Encoding strategies used by native and non-native readers of Chinese Mandarin". In: *The Modern Language Journal*, 72, 188–195

He, W. 2009. *Chinese Learning among English-speaking Students*. Conference presentation at 7th International Conference on Chinese Language Pedagogy, August 1–4, 2009 in Guilin, China

Jiang, X. 2007. "Dividing the Learning of Chinese Characters: Read More and Write Less". In: Guder, A./Jiang, X./Wan, Y. (eds.). *The Cognition, Learning and Teaching of Chinese Characters*. Beijing: Language and Culture University Press, 372–395

Ke, C. 1998. “Effects of strategies on the learning of Chinese characters among foreign language students”. In: *Journal of the Chinese Language Teachers Association*, 33, 93–112

Larsen-Freeman, D. 2001. “Individual cognitive/affective learner contributions and differential success in second language acquisition”. In: Breen, M. (ed.). *Learner Contributions to Language Learning: New Directions in Research*. London: Pearson Education, 141–158

Lave, J./Wenger, E. 1991. *Situated learning: Legitimate peripheral participation*. New York: Cambridge University Press

Luo, W. 2007. “西方学习者汉字学习情况调查与分析 (xīfāng xuéxízhě Hànzì xuéxí qíngkuàng diàochá yǔ fēnxī)”. In: Guder, A./Jiang, X./Wan, Y. (eds.). *The Cognition, Learning and Teaching of Chinese Characters*. Beijing: Language and Culture University Press, 411–426

Matthews, A./Matthew, L. 2007. *Learning Chinese Characters: A revolutionary new way to learn and remember the 800 most basic Chinese characters*. Tokyo: Tuttle Publishing

Nunan, D. 1997. “Designing and adapting materials to encourage learner autonomy”. In: Benson, P./Voller, P. (eds.). *Autonomy and Independence in Language Learning*. London: Longman, 192–203

O’Malley, J. Michael/Uhl Chamot, Anna/Stewner-Manzanares, Gloria/Kupper, Lisa/Russo, Rocco P. 1985. “Learning strategies used by beginning and intermediate ESL students”. In: *Language Learning*, 35/1, 21–46

Oxford, R. L. 1999. “Relationships between second language learning strategies and language proficiency in the context of learner autonomy and self-regulation”. In: *Revista Canaria de Estudios Ingleses*, 38, 108–126

Oxford, R. L. 1990. *Language learning strategies: What every teacher should know*. New York: Newbury House

Oxford, R. L./Schramm, K. 2007. “Bridging the gap between psychological and sociocultural perspectives on L2 learner strategies”. In: Cohen, A./Macaro, E. (eds.). *Language Learner Strategies: Thirty Years of Research and Practice*. Oxford: Oxford University Press, 47–68

Perfetti, C. A./Zhang, S. 1995. “Very early phonological activation in Chinese reading”. In: *Journal of Experimental Psychology: Learning, Memory, and Cognition*, 21, 23–24

Rubin, J. 1975. “What the ‘good language learner’ can teach us”. In: *TESOL Quarterly*, 9, 41–51

Shen, H. H. 2005. “An investigation of Chinese-character learning strategies among non-native speakers of Chinese”. In: *System*, 33, 1, 49–68

Shen, H. H. 2004. “Level of cognitive processing: Effects on character learning among non-native learners of Chinese as a foreign language”. In: *Language and Education*, 18, 2, 167–183

Stern, H. H. 1975. “What can we learn from the good language learner?”. In: *Canadian Modern Language Review*, 34, 304–318

Taft, M./Zhu, X. 1999. “Morphemic processing in reading Chinese”. In: Wang, J./Inhoff, A. W./Chen, H.-C. (eds.). *Reading Chinese Script: A Cognitive Analysis*. Mahwah, NJ: Lawrence Erlbaum Associates, Inc., 91–114

Takeuchi, O./Griffiths, C./Coyle, D. 2007. “Applying strategies to contexts: the role of individual, situational, and group differences”. In: Cohen, A./Macaro, E. (eds.). *Language Learner Strategies: Thirty Years of Research and Practice*. Oxford: Oxford University Press, 69–92

Vygotsky, L. 1978. *Mind in Society*. Cambridge, M.A: Harvard University Press

Wan, Y. X. 2007. “Contents and Methods of Chinese Character Recognition”. In: Guder, A./Jiang, X./Wan, Y. (eds.). *The Cognition, Learning and Teaching of Chinese Characters*. Beijing: Language and Culture University Press, 88–106

Wang, L./Higgins, L. T. 2008. “Mandarin teaching in the UK in 2007: a brief report of teachers’ and learners’ views”. In: *Language Learning Journal*, 36, 1, 91–96

Weekes, B. S. /Chen, M. J./Lin, Y.-B. 1998. “Differential effects of phonological priming on Chinese character recognition”. In: *Reading and Writing: An Interdisciplinary Journal*, 10, 201–222

Zhang, G. X./Li, L. M. 2010. “Chinese language learning in the UK: present and future”. In: *Language Learning Journal*, 38, 1, 87–97

摘要

本文主要探讨汉语初学者的汉字学习策略，以及可能影响这些策略形成和发展的因素。根据学习的社会文化论，学习者是在一定的社会交往及社会环境中获取知识和技能的，汉语初学者的社会环境中既有教师的指导，又有同学的相互帮助，还有现代化技术的引入和推动等因素。本研究指出：汉字初学者不仅使用机械记忆、利用汉字偏旁部首的知识辩别和记忆汉字的音形义，还很明显地利用了社会交往的机会提高汉字学习质量。研究还指出：教师在课堂上的明确的策略讲解是初学者了解和掌握汉字规律不可缺少的渠道，只要目标明确，策略得当，初学者可以尽早地形成和发展适于汉语汉字的学习策略，为他们发展读写能力和继续深造学习打下良好的基础。