



ISSN 2185-3762

Studies in Self-Access Learning Journal
<http://sisaljournal.org>

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Flipped/Blended Learning Environments: A
Descriptive Study**

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Publication date: June, 2019.

To cite this article

Zhang, S. (2019). Chinese-as-a-foreign-language learners’ use of self-regulated learning in flipped/blended learning environments: A descriptive study. *Studies in Self-Access Learning Journal*, 10(2), 181-204.

To link to this article

<http://sisaljournal.org/archives/jun19/zhang>

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Chinese-as-a-Foreign-Language Learners' Use of Self-Regulated Learning in Flipped/Blended Learning Environments – A Descriptive Study

Shenglan Zhang, Iowa State University, USA

Abstract

Self-regulated learning (SRL) is especially important in blended/flipped learning environments. This study explored and described the use of SRL in a specific language learning context. It investigated what problems Chinese-as-a-foreign-language learners (CFL) had with their Chinese language learning, whether and how they solved the problems, what SRL strategies they adopted, and what support they needed to gain the maximum benefits from the blended/flipped learning environment. Nineteen CFL learners who were in their second semester studying Chinese in a blended/flipped environment participated in the descriptive study. Self-reported data were collected using WeChat in an individualized exchange format, which was designed to help with data richness, completeness, and accuracy. The results show that students had different problems in learning, and they would benefit if they had the opportunity to learn and incorporate SRL strategies. The areas in which they needed the most help were knowing how to set a goal, how to create a plan to achieve the goal, and how to use different strategies to manage their learning and manage their time. Implications for teaching are also discussed in this study.

Keywords: Self-Regulated Learning, Foreign Language Learning, Second Language Learning, Chinese as a foreign language, learner autonomy, Flipped Learning, Blended Learning

Rationale and Literature Review

Self-regulated learning (SRL) is a social-cognitive model that conceptualizes effective learning as a process of cognitive and motivational evaluation while completing academic tasks (Zimmerman, 1986; 1990; 2008). SRL includes three aspects of active participation in learning as follows: metacognitive, motivational, and behavioral. As a set of proactive processes that students use to acquire learning skills, such as setting goals, selecting and using strategies, self-monitoring effectiveness of learning, and self-evaluating the learning outcomes, SRL plays a critical role in student learning and is key to the question of how students become masters of their own learning (Zimmerman, 2008). SRL behaviors have been shown to not only predict the academic achievement of learners but also to contribute to learners' self-confidence (Pintrich, Smith, Garcia, & McKeachie, 1993; Zimmerman & Bandura, 1994; Zimmerman & Martinez-Pons, 1986).

SRL has been an important area of research in the fields of education and psychology over the last few decades, but it is still relatively new to the field of foreign language learning (Collett, 2014; Nakata, 2014). The focus of current research in foreign language learning is on the distinction between strategy learning and self-regulation (Collett, 2014; Dörnyei, 2005; Gao, 2007; Ranalli, 2012; Rose, 2012; Tseng, Dörnyei, & Schmitt, 2006). Some scholars use SRL as a framework to examine language learners' use of technology outside the classroom (Lai & Gu, 2011) and some adapt and use Tseng, Dörnyei, and Schmitt (2006)'s measures to investigate language learners' different aspects of learning. For example, Rose (2010) adapted Tseng et al.'s instrument to examine L2 learners of Japanese in their self-directed learning of Kanji. Mizumoto and Takeuchi (2012) used the adapted instrument by Tseng et al. in L2 learners of English in Japan to verify the validity of the instrument. Other scholars investigated how students self-regulated their language learning when they were in an individual instruction situation (Brown, 2009).

There are a few studies investigating SRL in specific language learning contexts. Brown (2009) examined how learners self-regulate their study during individualized instruction, a form of materials-centered self-instruction. The findings suggested that the learners' senses of themselves as agents in the learning process plays an important role in effective self-regulation. Azevedo and his colleagues (Azevedo & Cromley, 2004; Azevedo, Cromley, & Siebert, 2004) investigated learners' SRL in a hypermedia learning environment and concluded that this learning environment requires self-regulation skills such as goal setting. It also requires monitoring and controlling cognition, motivation, and behavior in order to navigate, organize, and synthesize information to achieve learning.

Flipped/blended learning, which combines flipped and blended learning together, includes an online component that learners can utilize on their own time. In most cases of flipped/blended language learning, the learners learn vocabulary and grammar as well as practicing listening and reading skills online (Zhang, Juvale, & Jaramillo, 2017). During Face-to-Face (FTF) meetings, learning focuses on speaking skills students develop by interacting with their peers and the instructor to complete meaningful tasks. The online component and the FTF meetings are integrated and connected. Generally speaking, the online learning component lays a foundation for the FTF practice. This approach is becoming an increasingly popular technique for learning (Lee & Wallace, 2018; Lo, Lie, & Hew, 2018). It benefits learners in many way,

such as by offering more interactions in the class (Lockwood, 2014) and increasing access and flexibility (Graham, Allen, and Ure, 2003; 2005).

Despite the advantages of flipped/blended classrooms, this style of learning requires more SRL strategies from the students than the traditional instructional approach. In the flipped/blended context, learners need to regulate their study well enough that they receive the maximum benefit from the approach. As is true in completely online learning environments, a lack of SRL could result in students spending very little time completing outside-of-classroom learning on their own, because the flipped/blended learning environment requires individuals to be more autonomous in their learning (Ally, 2004). If students exhibit this lack of preparation, their participation in FTF meetings and their learning in general are negatively affected.

Therefore, it is important to discover the current state of students' SRL skills used when taking flipped/blended courses. Discovering this information will help instructors better understand their students and design better flipped/blended courses by incorporating components that support students' self-regulated learning. In any kind of design, an analysis of learners' needs should be the starting point of the design, while the next step should be specifying the types of technology and pedagogical strategies that could be used to meet those needs.

Chinese, classified by the Foreign Service Institute (FSI) as one of the most challenging foreign languages for English-speaking students to learn, has unique features such as its tones and its logographic writing system. These features impose many difficulties for foreign language learners and cause high anxiety for English-speaking students who are learning Chinese (Luo, 2014; Zhou, 2017). Therefore, it is important to know the current state of the practice of SRL among the group of learners using the flipped/blended approach for Chinese language learning.

Scholars have called for more research to examine self-regulation situated in particular learning contexts (Brown, 2009; Collett, 2014; Martin & McLellan, 2008; Perry & Rahim, 2011; Zimmerman, 1990; 2008). The purpose of this study is to discover how Chinese as a foreign language (CFL) learners use SRL in unstructured and naturalistic settings when they are taking a flipped/blended Chinese class. It attempts to answer questions such as whether and how students self-regulate their learning, what SRL strategies they adopt, and what support they need so that they can maximally benefit from the flipped/blended learning environments. The findings of this study will contribute to the body of efforts to promote CFL learners' and other language learners' education in flipped/blended learning environments.

Theoretical Framework

This study is built upon Zimmerman’s social cognitive model of self-regulated learning (Zimmerman, 1995; 1998; 2000). Self-regulation was defined as “self-generated thoughts, feelings, and actions that are planned and cyclically adapted to the attainment of personal goals” (Zimmerman, 2000, p. 14). Based on this model, in addition to metacognitive knowledge and skill, self-regulation involves self-efficacy and personal agency. Learners’ motivational and behavioral processes help put their beliefs into effect.

According to this model, SRL is a cyclic process which consists of three phases: (1) forethought, (2) performance or volitional control, and (3) self-reflection. The forethought phase sets the stage for performance in learning, and it refers to strategic processes such as goal setting, strategic planning, self-efficacy, goal-orientation, and intrinsic interest. The process of strategic planning encompasses other processes such as time management and help seeking. The performance control phase focuses on behavior and involves strategies such as attention focusing, self-instruction, and self-monitoring. The self-reflection phase refers to strategic processes such as reacting to and responding to their self-regulated efforts in the learning process. The first and the third phases encompass strategic activities at different levels, whereas the second phase is focused on the behavioral level. An SRL learning cycle forms when the three phases interact and flow. See figure 1.

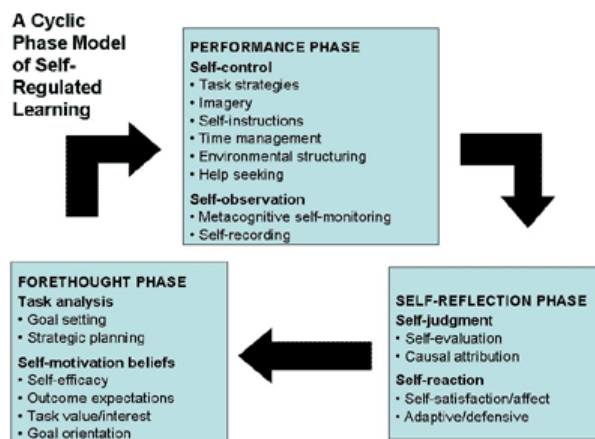


Figure 1. Phases and Sub-processes of Self-Regulation (Zimmerman & Campillo, 2003, p. 239).

Research Questions

In order to understand CFL learners’ use of SRL in the unstructured and naturalistic settings of a flipped/blended Chinese class, the following research questions were examined: What

problems, if any, do CFL learners in a flipped/blended learning environment encounter in learning Chinese, and to what extent do they self-regulate their learning in a flipped/blended learning environment to solve the problems?

Methodology

In this study, a survey conducted via WeChat in an individualized exchange format was used to collect data in order to answer the research questions. This data collection format allowed the researcher to follow up with each student to get more detailed explanations and clarifications.

Research context

When data were collected, the students were taking a five-credit Chinese as a foreign language course (Elementary Mandarin Chinese II) at a comprehensive Midwestern university in the United States. One of the credits was earned online using the flipped/blended approach. That is, the class met four times a week, each time for 50 minutes, while the fifth credit hour was administered online. For this credit, the students were required to find a time and location convenient for them to use instructor/researcher-made videos to learn vocabulary and grammar. Students were required to watch the videos and take detailed notes for their future review. The teacher/researcher administered a short quiz at the beginning of Monday's FTF meetings to test the students' comprehension of the video material. In addition, outside of class, students were required to talk about a topic by answering a few questions in Chinese via VoiceThread. During the four FTF meetings each week, the instruction mainly focused on practicing speaking and doing some writing.

Prior to each class meeting, the students had homework that was designed to help them improve their listening, reading, and writing skills using the content that was covered in class and learned online. Therefore, after each FTF meeting, the students had to find time on their own to complete the homework. Because of these requirements, some measures had been taken to help students regulate their learning, such as deadlines for homework, quizzes on the content in the videos, and grades given on students' note-taking while watching the instructor-made videos.

Participants

Nineteen second semester CFL students participated in the study. The average age of the students was 20.8. When they completed the survey, six students were first year students, six were sophomores, four were juniors, and three were seniors. They had different majors in

different colleges, including animal science, criminology, computer science, computer engineering, electrical engineering, English literature, linguistics, global resource systems, and music. Eleven students had studied Chinese for one semester and eight students learned some Chinese, some systematically and some unsystematically, when they were in high school.

Fourteen out of the 19 participants had taken some kind of online or blended course in some subject either in college or high school. Some had bad experiences with the courses, such as forgetting to take online quizzes, finding the courses too easy, or finding them to have too much of a workload. However, most participants liked the flexibility and the accessibility that blended or online courses provided. Most students mentioned in the survey that they liked the format of the CFL course they were taking because it gave them flexibility and accessibility. All students in the study were satisfied with the course as it was.

Data collection procedures

Self-reported data were collected for the study. Self-report has been identified as a technique commonly used in research to uncover learners' mental processes (Collett, 2014; Oxford, 2011). This study adopted an interactive, online, formative-survey format for collecting the data. WeChat was used as a data-collecting tool, as shown in Figure 2.

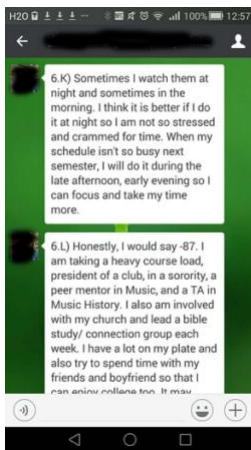


Figure 2. A sample screen capture of using WeChat to collect data

WeChat is a free, instant-messenger type application that supports asynchronous, semi-synchronous, and synchronous interactions with one-to-one, one-to-many, and many-to-many interactions.

The students were given a survey in class and were asked to type in their answers to the survey via WeChat using their laptops*. The initial survey had three components: 1) Demographic information; 2) Personal goals in learning Chinese; and 3) The use of self-regulated learning strategies in Chinese learning. The demographic information included not only basic information such as age, gender, and major but also included students' experiences in learning Chinese and their experiences taking online or blended courses.

The second component of the survey that asked about students' personal goals in learning Chinese was modeled after Colpaert (2010)'s method in detecting, eliciting, and formulating learners' personal goals and focus in their study. For example, for this component the survey asked students to finish a few incomplete sentences, such as, "When I think about my Chinese language learning, I think about the following problems _____." "When I think about these problems, I feel _____ because _____." These survey questions gave the students some background and purpose for the questions; therefore, when they completed the rest of the survey, which asked about their SRL strategies use, the survey questions sounded meaningful and their answers were focused and specific.

The third component of the survey that focused on students' use of self-regulated learning strategies explicitly asked about their habits in learning the language in general and their habits in using the online module of this flipped/blended course. This component built on the questions in the second component of the survey by asking further questions such as, "What problems mentioned above can be overcome by you, and what plan do you have to try to solve the problem?" "Do you need help, and what help do you need?" "Do you have a habit of procrastinating? If yes, what do you think is the root of this problem?" "When do you usually spend time watching the online video and preparing for the face-to-face meeting?" The SRL strategies surveyed in this component primarily included 1) Whether the students were self-reflective about their learning; 2) Whether they set goals for their learning; 3) Whether they sought help when needed; 4) Whether they initiated efforts to select or arrange the learning environment setting to make learning easier; and 5) What kind of time management skills they used.

* WeChat has both computer version and cell phone version. Even though the students are comfortable using cell phones to type in long messages, it was thought that if they typed answers using the computer they might give more detailed responses within a brief period of time.

After carefully reading the completed survey that each student took via WeChat, the researcher followed up with each student via WeChat to ask further questions for clarification, to complete an answer to which they failed to respond, or to fill in what was missing from the first round of the survey. The students replied by giving a more detailed description of what they meant in their original answers. By using WeChat and the follow-up method, the researcher was able to compile a more comprehensive, complete, and accurate picture of students' current state in regard to using SRL strategies than could be obtained using a conventional survey.

Data analysis procedures

To address the research questions, the researcher did an open coding of data to find patterns of SRL use by the participants (Strauss & Corbin, 1990). The answers to the follow-up questions and the answers to the initial survey were combined. A table was used to categorize the answers. Since this is an exploratory study, the researcher chose to examine each participant's answer to each question from the ground up, which permitted the possibility of identifying all possible patterns that could emerge.

Findings

Problems in learning and plans for solving the problems

In general, all students were aware of the problems and challenges they had in learning Chinese. Most students expressed their eagerness to change the situation through expressing their frustration and anxiety. Most of them had a plan to tackle the problems, but they were not confident about their plans and their plans were vague. They did not think much about strategy changing or seeking external help.

Problems CFL learners encountered. All the students listed at least one problem that they had associated with Chinese language learning. The problems mentioned included learning Chinese characters and learning grammar and structure as well as problems with speaking speed, listening skills, and study methods. The most common problem listed was learning and memorizing characters, which was noted by nine students. Some said that it was challenging for them to memorize characters from previous chapters, and some reported that it was hard for them to memorize how to write the new characters. Five out of 19 students reported having problems with grammar and structures. It was hard for them to form sentences with appropriate structure and to use the correct grammar when speaking. Five out of 19 students reported that they were

frustrated with their speaking speed and speaking fluency. Some of them considered it a problem that there was such a large disparity between their own speaking of Chinese and speaking of Chinese by native speakers.

Three students reported that their biggest problem was listening. They had a difficult time comprehending spoken words in Chinese, and some of them had to translate everything into English. Only one reported that the problem in her learning was how she could best learn on her own. She said about her challenges, “Another problem I think about is trying to figure out how best to continue learning Chinese on my own when I am out of class and what strategy is best.”

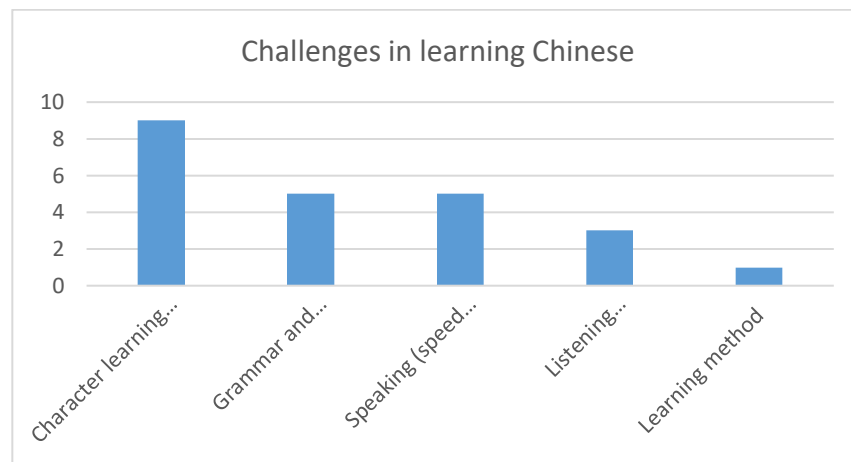


Figure 3. Problems and challenges that the students had.

When it came to addressing the problems, there were mixed feelings among the students. Fourteen students reported negative feelings such as being frustrated, upset, depressed, discouraged, worried, overwhelmed, or just bad. The main reason they had negative feelings was that they felt that they had put in a lot of effort, especially into learning new words, but their brains did not retain the words. They also felt that there were too many new things to learn and they had limited time for learning them. Another reason for the negative emotions was that there was a discrepancy between their ability to speak and their ability to write. Some were frustrated because they felt that they were not learning all that they could, and some were frustrated because their learning goal was to speak the way the native speakers do, and it was hard for them to reach that goal. One student said because of his frustrations with these learning problems, he was hoping that he could find more time to learn Chinese in the summer.

Some students (N=4), however, were able to be neutral and even optimistic about the problems they had. One said that it was okay to have challenges, because she had quite a few native speakers to help her solve the problem she had through her interaction with them. One student said that he just needed to put in more time and practice more. Another wrote that those problems were not so great that he could not solve them, and another expressed that she was actually excited and anxious (“good anxious,” using her words) because of those problems. She felt excited that she could speak and understand at a certain level and would continue to get better. Regardless of whether their feelings about their problems were positive or negative, it is easy to see that all students were highly motivated and eager to learn Chinese well.

Plans to solve the problems. When asked what they planned to do to solve the problems, most of them (N=10) knew that they needed to study harder, set aside more time in the week to study Chinese, put in greater effort, and/or practice more. Some answers were more specific, such as these: review the previous chapters more, participate more often in classroom activities such as speaking activities, and listen to the dialogues from previous chapters more often. Three students knew the importance of speaking Chinese with native speakers. One of them said she would like to call her friends in China more often, and another said she would like to seek out more friends from China. Three of the students mentioned that they would like to practice writing characters more, e.g. memorize 5 characters right after class every day and write characters every night.

While a majority of the students (N=16) had a vague plan that mostly focused on the learning itself, three students were able to meta-cognitively plan their study. For example, one student said that she was confident that she could overcome the problems she had because she had been adopting a new study method. Another student said that she should be more tolerant with something she did wrong and accept that as a learning process. Another student reflected upon his learning of characters and wrote: “I need to learn more about the radicals and the origin of the words in order to connect the meaning to the characters so I can better remember how to write them.”

When asked what help they thought they needed in order to solve the problems, five students did not write anything about help they would need. The rest of the students expressed that they needed help; however, the types of helps they said they needed varied. Some needed help that related directly to improving their use of the language. For example, some students

wrote that they needed help with grammar when writing essays. One student said that she needed help to learn the use of “le” (了**). Some students said they needed help that was less directly related to the language itself. For example, one suggested that the instructor change her instructional approach by giving more examples. Another suggested the instructor to give them more time to review the previous chapters and give them more time to write on board during the face-to-face meetings. Some suggested spending more time watching Chinese drama, finding native speakers with whom they could have conversations, and/or listening to and seeing the characters at the same time so both the sound and image could be retained in the brain simultaneously. One student even wanted the instructor to give more assignments in character writing to force them to practice writing.

The use of SRL in learning.

Most CFL learners set goals for their learning, seek help when needed, and reflect upon their learning. However, the goals they set could be more effective if they were more specific and the reflection could be more systematic to help them start the next learning cycle more prepared. Additionally, having a variety of resources from which they could seek help would give them more options for reaching their goals. Six themes were identified in their use of SRL (see Table 1).

Table 1. Themes identified in participants' use of SRL strategies

Themes identified in Participants' Use of SRL Strategies
<ul style="list-style-type: none">• Goal setting• Time management• Use of language learning strategies• Structuring learning environment• Seeking help• Reflecting upon their learning

Goal setting. Out of the 19 students, 10 students set goals and 9 did not. Most of the goals that the students set were long-term, general, and performance-oriented. Four students set grade-related goals, such as getting an A at the end of the semester. To achieve the goal, i.e. get an A, they said that they either “strive to get the best scores on all of the assignments and tests,” or work “to retain the information and be able to use it effectively which in turn leads to

** 了 as an aspect marker is a very challenging grammar point in Chinese.

hopefully an A,” or to “make sure I know the material and actually understand it.” Two students set life goals, but they never set goals for courses. For example, one student wrote, “I sometimes journal about my personal/life goals, but never really for school courses.”

Some students set goals that are not achievable in the short term and got frustrated. For example, one student wrote “I often get very disappointed when I don’t meet the goals.” Another student set her goals for Chinese learning, that is, to “understand what Chinese people talk about in real life.” She felt frustrated because she had not reached that goal yet: “On campus, there are many Chinese who are talking about something. I try to figure it out, but it’s really fast and I barely understand a word. Listening is very hard.”

Out of the ten students who set goals, one of them had a hard time finding the appropriate steps and approaches for reaching the goals. She wrote, “while I don’t mean to blow things off, I wait for details for how to do the projects [to reach the goal] properly and that can often be a day or two before the thing is due.” Another one of these students set her goal for completing the course work by “making a to-do list and sticking to it.” However, other things took priority and would “sort of restrict me from sticking to my weekly to-do list.”

Time management. On average, students’ self-perception of their time management skill was 6.4 out of 10. For the online part of the course, a majority of the students did not study the online component until the night before the FTF meeting when there would be a quiz. Some students knew that it was not a good practice to review the online materials right before the quiz and only review the material once. They were aware that was not good for retention and that they should learn the online materials earlier in the week and then review what they had learned before the quiz. Some even rushed through the online vocabulary and grammar videos that they needed to learn in order to practice speaking during the FTF meeting so that they could get more sleep. However, a few students set up two times during the week to learn and review the online materials.

Among the 19 students, thirteen students reported that they procrastinated and six did not. Students mentioned different causes for procrastination. The first reason students mentioned was that there was very limited time for learning Chinese. Either the available time was taken up by priorities other than Chinese, or their schedule was simply too tight due to double majors, double minors, or other responsibilities for social and campus organizations. The second reason they mentioned was that the procrastination habit had been there for many years and “it’s easier to

work fast when you have no time to waste.” One student wrote, “I am a really big procrastinator. I think the root of this problem comes from being lazy with my free time. I am used to procrastinating since I've done it for so long, but I still almost always get everything turned in on time, so I haven't changed the habit.”

The third reason students mentioned for procrastination was that the feelings of frustration and being overwhelmed disabled their power to take action. One student said he procrastinated because of panic before graduation. The other said that he generally did not procrastinate, but he occasionally did, especially when the homework overwhelmed him. The fourth reason students gave for procrastination was that they were easily distracted from working on learning by other more interesting and more entertaining activities. One student wrote that he felt learning was a burden so he put it away. On the contrary, one of the six students who did not procrastinate said that he procrastinated on everything else but not on Chinese. The fifth reason given was that they were naturally reactive rather than proactive; in other words, being without a plan naturally led to procrastination. One student wrote, “I definitely procrastinate. I am easily distracted and since my life is busy, I allow other things to interfere with study time. Also, I cram the night before tests. I usually have another test earlier in the week, so I will spend all my time studying for that course, and then I will study for the second test.”

Strategy use, environment structuring, and help seeking. When asked to report what learning strategies they adopted to help them learn Chinese, some students were not aware of what could be considered strategies. For example, some reported the strategies that they used to memorize characters while some reported that they did not use any strategies in learning Chinese.

Despite the fact that they did not identify the behaviors as learning strategies, the students did note that they engaged in behaviors that were considered strategies by the researchers. Most students found time to complete their online work, but a few of them used the strategy of intentionally arranging their physical environment to avoid potential interruptions while they worked, such as turning off their cell phone and finding a quiet place to study.

Out of the 19 students, 16 students sought help and only three did not. Eight out of the 16 students often sought help and another eight said that they sought help sometimes. The resources they sought help from varied from student to student. Some asked for help from people such as the instructor, their peers, their undergraduate teaching assistant, and their Chinese friends. Some

used Google translate and/or Pleco. The reasons that the three students who did not use the “seeking help” strategy gave for not seeking help varied. One wrote that because he procrastinated a lot, there was no time for him to seek help. Another wrote, “If I know what kind of question to ask, then I will ask it. The problem is that sometimes I don't know what to ask and that is a confusing mess.” Another one said that she rarely sought help, but her friends were very helpful.

Reflection. While only two said that they never reflected on their learning, a majority of students reported that they sometimes reflected on their learning. However, the students had different understandings about what reflection meant. To some students, reflection meant to review. For example, one student wrote, “I do try to reflect on my learning. There have been a few times when I go back and read through all the chapter dialogues or all of their grammar instructions, and I find it very beneficial because it reminds me of structures and words I don't use as commonly.” Another student wrote, “yes, [I reflect in order] to retain what I learned.” Another student wrote that she reflected because she did “have the habit of reflecting on my learning so that I do not lose what I have learned.”

A majority of students who reflected usually reflected on what mistakes they made in the homework or in the exams and some of them reflected on the reasons why they made certain mistakes. One student wrote that she did reflection only when she felt bad about learning and about her situation because she thought that reflection made people do better the next time.

Only two students usually reflected on the learning method. One wrote that she did reflection because reflection helped her “understand which study methods are most useful for the course.” Another student wrote he reflected very often because “it is important to know how you learn so that you can make more efficient use of study time.” Students usually used informal methods for reflecting when they reflected on their learning. For example, one student wrote that “I reflect on what I have learned but usually in a rather informal way. I will be walking to another class or at work and think back on the material and my personal progress.”

Discussion

The CFL students who were learning Chinese in a flipped/blended course in their second semester had a high motivation for learning Chinese and liked the course and the course format. They had different problems in learning Chinese and tried their best to take steps to solve these

problems. However, only a couple of students could calmly face and understand the problems they had, set goals, manage their time well, plan their online learning task well, reflect on their learning method, and actively seek help from good sources. A majority of students, after identifying the problems in their study, needed a systematic way of learning about different methods they could use to strategically solve their problems, reflect on their learning process, and make improvement for the future.

When it came to identifying problems in their Chinese language learning, a majority of the students could identify their weaknesses in learning different aspects of the language. For example, some identified character learning as the most challenging aspect, while some realized that they needed to work harder on the structure and grammar. Unfortunately, only very few students (N=2) were aware of their weaknesses in the use of learning strategies in learning the language. Self-knowledge of strengths and weaknesses, as part of a general emphasis on monitoring, is very important in achieving good learning outcomes. However, from the perspective of the general social-cognitive model of motivation and cognition (Garcia & Pintrich, 1994; Pintrich, 1989; Pintrich & De Groot, 1990; Wolters, Yu, & Pintrich, 1996; Zimmerman, 1990; 1995; 2008), learners also need to be aware of their own strategies for learning and the relative effectiveness of those strategies. These strategies for learning include everything from cognitive learning strategies, such as doing extensive reading and using flashcards, to help with vocabulary learning, finding native speakers to talk to in order to improve listening and speaking, and so on.

In addition to self-knowledge and cognitive learning strategies, the social-cognitive model of motivation and cognition also emphasizes the importance of self-regulatory strategies such as goal-setting, planning, monitoring, and regulating (Corno, 1986; Zimmerman & Martinez-Pons, 1986). Most CFL students in this study needed support in different aspects of these self-regulating strategies.

Goal setting is very important because it can motivate learners. Slightly more than half of the participants set goals for their learning, while the rest simply reacted to what needed to be done and finished doing what had to be done immediately before the deadline. In addition, the goals that most of them set were long-term goals (or medium-term goals). Research shows that, in addition to long-term goals, short-term goals, or proximal goals, are needed because these short-term goals are able to energize and guide behavior (Pintrich & Schunk, 2002; Watson &

Tharp, 1997). With short-term goals, learners are better able to “monitor their progress toward these goals and regulate their behavior to come closer to achieving their long-term goals” (VanderStoep & Pintrich, 2003, p. 21).

Furthermore, the participants who did set goals for their learning generally set performance or extrinsic goals, such as getting an A in the class. According to goal orientation theory (Ames, 1992; Dweck & Leggett, 1988; Maehr & Midgley, 1991), there are two sets of goals: mastery or learning goals and performance or extrinsic goals. With performance-oriented goals, learners focus on “getting grades for approval from others, seeking rewards, or besting others” (Hofer, Yu, & Pintrich, 1998, p. 72). On the contrary, when setting mastery-oriented goals, learners focus on learning and mastering the material and seeking self-improvement. Having an extrinsic goal (such as getting a good grade) shows that the learner at least cares about grades and is positively correlated to the use of self-regulatory strategies (Pintrich & Garcia, 1991). However, research suggests that adopting a mastery goal orientation is positively correlated to learning performance and outcomes (Ames, 1992; Pintrich & Schunk, 1996). In the case of learning Chinese, proximal goals should include specific goals for the course as well as for the different academic tasks for this course.

For some participants who set mastery goals, the goals were too vague and overly challenging for CFL learners who had just studied Chinese for one semester. These overreaching goals included being able to understand native speakers’ daily conversation and talk with them fluently. To have goals energize and guide behavior, these goals should be specific, measurable, and realistic (VanderStoep & Pintrich, 2003). For example, being able to understand native speakers’ daily conversation can be set as a long-term goal. Setting up short-term, weekly goals could help learners achieve this long-term goal. Short-term, specific, and measurable goals could be things such as these: meeting with two native speakers this week and having a short conversation on topic x and topic y while recording the conversation, learning what native speakers talk about and how they respond, recording a very short conversation between two native speakers (with planning and permission), and listening to a recorded conversation to identify the most challenging parts to understand and then asking for help to understand that part of the conversation.

The last types of self-regulatory strategies are regulating strategies. While regulating strategies are not cognitive or metacognitive strategies that may have direct influence on

students' learning, they can help or hinder students' completion of academic tasks (Zimmerman, Greenberg, & Weinstein, 1994). These strategies include time management, learning environment structuring, and seeking help. The participants can improve in all of these areas if they get support or training. For example, eighty-six percent of the participants procrastinated for various reasons. To help them solve this problem, a few things could be done using regulating strategies.

First, instructors can help students form a habit of setting up specific, measurable, and mastery-oriented short-term goals, as mentioned above. Once there are specific goals in place that can be reached in a short term, learners will be more confident and motivated to start working on tasks and complete them on time. Second, learners should be made to be aware of the importance of effort and learned industriousness (Eisenberger, 1992; Winne & Stockley, 1998). Deliberate practice for approaching expertise in regulation "requires effort and is not enjoyable" (Ericsson, Krampe, & Tesch-Römer, 1993, p. 368). For example, in some students procrastination was a deeply rooted habit, which takes deliberate practice to overcome. Third, instructors can help students find interest in the language and interest in learning the language. Among the six students who did not procrastinate, one student procrastinated on everything else, but not on Chinese. Another student said that he did not procrastinate because he liked learning Chinese gradually every day. Therefore, interests play a very important role in preventing procrastination.

Most of the participants knew that they should actively seek help. However, since their goals were vague and their plans were not specific, it was hard for them to seek help to support them in achieving their learning goals. The help, if they did seek help, usually temporarily helped them solve a specific problem; for example, it helped answer a question they were not sure about in the homework. Some of them sought help from native speaker friends; however, the help they requested and received seemed to lack a specific target for improving their language skills or learning methods. Students need to know how to widen their awareness of the resources that they can access and how to plan ahead for the kind of help that would give the maximum support for them to achieve their learning goals.

Self-reflection, an important aspect of SRL, needs to be taught to CFL learners. According to Zimmerman (1990), learners need to engage in a cyclic self-oriented feedback loop, which requires self-reflection and self-evaluation in order to monitor whether their use of

learning strategies and self-regulatory strategies are effective. Chinese, with its features that are so distinctly different from English, requires different strategies and special methods in learning. It is particularly important that Chinese learners reflect on this process so that they can improve their learning and improve their acquisition of the language. The results of this study indicate that participants failed to complete the reflection step in this loop, which puts them in a position where they are less likely to achieve as much as what they expect to achieve.

Conclusion

Not only cognitive strategies, but also meta-cognitive and self-regulatory strategies are linked with higher L2 outcomes (Graham & Macaro, 2008; Huang, Chen, & Lin, 2009; Kolic-Vehovec & Bajanski, 2007; Schoonen, Hulstijn, & Bossers, 1998; van Gelderen, Schoonen, de Glopper, Hulstijn, Simis, Snellings, & Stevenson, 2004). By examining the current state of students' SRL skills, the findings of the study will no doubt contribute to the efforts of designing valid SRL teaching components for courses, especially flipped, blended, and online language courses. The study shows that it is necessary to design and test different approaches to improving learners' use of SRL skills in the context of online or flipped/blended learning environments. In addition, it shows in what aspects of SRL the students need to improve and what causes students' lack in some of the SRL skills. Considering these findings, teachers and researchers can develop diverse ways to improve the situation. For example, one way to improve learners' SRL skills is to integrate required tasks into online learning components, tasks that could hold students accountable for studying the online components well. These tasks could include quizzes, note taking, and answering embedded questions in videos. Tasks that hold students accountable for their learning could help them set some mastery-oriented goals and motivate them extrinsically to work hard. Furthermore, designing the homework carefully to make it engaging and interesting could help students with their time management problems.

However, in order to systematically foster learners' SRL, some training modules need to be designed and tested for their effectiveness in the context of language learning. These SRL training modules could start by asking the students to identify the problems and challenges that they are facing and then ask them to set long-term and short-term goals to solve those problems and overcome those challenges. In the process of reaching their short-term goals, students will learn to try different cognitive strategies, manage their time, structure their learning

environments to reduce distractions, identify sources of help, take actions to seek social help, evaluate their use of strategies, and reflect upon every step of the process in order to improve their SRL continuously. Furthermore, because learning requires effort, we also need to teach students how to exert their industriousness until the task is completed.

The findings of this study also indicate that, despite the fact that the lack of SRL is a general problem for most students, each student has individual problems in language learning and different approaches and plans for solving the problems. Therefore, it would make sense to have the approaches designed for improving SRL be individualized approaches in the form of academic coaching and in the context of language learning. By so doing, individual differences will be recognized and acknowledged and the learning of SRL will be more targeted and hopefully more effective than a general, one-size-fit-all approach.

There are limitations to this study. First, the survey used in this study ignored some aspects of students' learning strategies. For example, it did not ask the learners details about the strategies they used in learning the language and managing their learning during the online part of the blended/flipped course. With more details about the students' habits, more detailed advice in designing the SRL training module could be provided in this study. Second, even though this study used the interactive program WeChat to collect data that comprehensively reflected students' thinking, opinions, and attitudes, these self-reported SR measures might still need to be complemented through the trace measures of events process (Malmberg, 2014; Perry & Winne, 2013; Siadaty & Gašević, 2016). More details of students' thinking processes related to SRL could be revealed by using the trace measures.

As Collett (2014) stated, SRL is still a relatively under-researched area in the field of foreign language education, which offers a broad range of research possibilities. This study has touched upon some of them, such as the emotions and the management of learning space. These themes are worth further exploration.

Notes on the contributor

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