Exploring Teachers' Knowledge and Practices of Self-Regulated Learning: A Case Study in China

Dr. Zou Fengmei

Abstract

This paper reports the knowledge and practice of self-regulation of English teachers in public primary and secondary schools in South-East China. The data were collected from multiple classroom observations of and in-depth interviews with two English language teachers working in Chinese schools. This study reported that despite limited knowledge of Self-regulated learning teachers' classroom practices reflected an extensive use of SRL strategies positively impacting students' learning engagment. However, the workload and the traditional grade-focused assessment systems influenced teachers' consideration of self and their students' learning motivation, metacognition, and cognition. These findings indicate a need to strengthen English teachers' metacognition, cognition and motivational-emotional regulation to support student learning.

Keywords: China, learning motivation, metacognition, self-regulated learning, teacher knowledge and practices.

Introduction

Self-regulated learning (SRL) is one of the educational goals with growing global importance, as self-determined learner efforts towards academic performance are highly demanded. How the learners proactively engaged in thinking, performing, and reflecting using their metacognitive skills is equally influential for their future success in academic and other career paths. While many studies (e.g., Perry et al., 2007; Perry & Vande Kamp, 2000; Teng, 2020) have reported difficulties in promoting students' SRL skills as it requires a stress-free environment for creative thinking and independent learning, others have illustrated that students taught through an array of SRL have outperformed in achieving their goals. In their quasi-experimental study carried out on undergraduate students in academic writing courses in a university in Mainland China, Teng and Zhang (2021) concluded that the SRL-strategies-based instruction resulted in increased level of linguistic self-efficacy and performance self-efficacy. That said, SRL has been realized as a dynamic,

constructive process, in which the learners estabilsh goals, develop attitudes as well as monitor, regulate and control their cognition, motivation and regulatory behaviour (Zimmerman & Schunk, 2011).

SRL has also been introduced into the educational system of China through educational policies that emphasize teachers to develop instructional skills to support students' thinking as well as self-regulatory skills in the process of learning. A significant development can be seen in China's Ministry circulating "Notice on promoting typical cases of "Double Reduction in schools" that encourages the districts to develop digital programs for students self-regulated or independent learning (Ministry of Education, 2021).

To enhance SRL skills in students, teachers are expected to actively interact with the students during instruction, guide them to engage in active thinking, and cultivate their independence and autonomy in learning. However, very few research studies have reported on teachers' knowledge and practices of SRL in diverse teaching contexts of China. While there is an extant research literature on students' side of SRL, measuring their SRL ability and academic performances (e.g., Roll & Winnie, 2015; Xu & Ko, 2019), how the experienced and novice teachers conceptualize SRL and practice in their classroom has not been well-documented yet. This paper fills this gap by exploring teachers' understanding and application of SRL in their respective teaching contexts of primary and secondary schools in Mainland China. In Chinese education system, there is an increase in the emphasis on SRL promoted by the curricular policies. Engaging learners in self-regulatory processes is the overall goal of the teaching and learning. In this context, this paper's focus on understanding how teachers perceive and practice SRL is relevant. To explore this concern, two major questions posed in this study were:

a   What is the status of primary and secondary level teachers' knowledge of SRL?

b   How do they implement their SRL knowledge in their respective classrooms?

Review of Literature

Research literature has shown that in engaging in the SRL process, individual learners required the active deployment of several strategies to activate, sustain and adjust their cognitive capabilities, affect and behaviour to achieve their previously set learning goals (Boekaert et al., 1999; Zimmerman & Schuck, 2011). In the sub-sections that follow, I discuss the conceptualisation of self-regulated learning including metacognition, cognition and motivation followed by teachers' beliefs and knowledge of SRL.

Conceptualizing Self-regulated Learning

Self-regulated learning is referred to as an ability to take responsibility for one's learning which develops learners' autonomy and control, especially through monitoring, direction, and regulatory actions towards the goals of information acquisition, expanding expertise, and self-improvement (Paris & Paris, 2001). Nunan (1997, p. 26) proposed five characteristics of self-regulated learning: "awareness," "participation," "intervention," "innovation," and "beyond." SRL is used to describe independent, academically effective forms of learning in terms of metacognition, intrinsic motivation, and strategic action (Zimmerman, 2002).

Three main dimensions; metacognition, motivation, and cognition are the commonly discussed aspects of SRL that focus not only on the capacity or skill but also on the engagement of learners in a goal-directed process through which learners transform their mental abilities into academic

skills (Zimmerman, 2000). Studies have also reported the positive role of self-regulation in language learning, such as learning vocabulary (Katsarou et al. 2020). The metacognitive dimension means planning, setting goals, organizing, self-monitoring and self-evaluating during the process of learning. The motivational dimension stresses high self-efficacy, self-attributions and intrinsic interest. The cognitive dimension which refers to the process of optimizing learning and creating the thinking ability of the students includes selecting, structuring and creating an environment that optimises learning (Puustinen & Pulkkinen, 2001).

Teachers' Knowledge of Self-regulated Learning

Most researchers agree that the teachers' beliefs and knowledge directly influence their classroom practices (Pajares, 1992; Woolfolk et al., 2006; Lehmann, 2022). Spruce and Bol (2015) studied about teacher beliefs, knowledge, and practice of SRL and concluded that teachers most frequently encouraged students' SRL during the monitoring phase of learning events in their classroom, and the gaps emerged in their planning and evaluation stages of learning during their classroom practice. Wilson and Bai (2010) reported that teachers' metacognitive knowledge affects their understanding of how to create an SRL class and motivate students to learn, and that eventually impacts the way students are engaged in learning. Meanwhile, Charlotte and Greetje (2012) carried out an empirical study with 47 primary school teachers and found that only few teachers metioned strategy instruction when being asked about their understanding of SRL (teacher knowledge). Besides, Alenezy et al. (2022) revealed that teachers have acquired a high level of knowledge about SRL, but they rarely practice SRL in their classrooms to develop their student's SRL skills, and there was a statistically significant impact of SRL knowledge on practices of SRL.

Teachers' Practice of Self-regulated Learning

Teachers' knowledge and beliefs influence their practice of SRL in the classroom. Teachers' management of classroom climate has been equally influential in students' learning achievement (Castillo et al., 2020). For teachers to be able to align their teaching with the instructional goals, it is equally important that the teaching and learning conditions and the curriculum facilitate them to do so. The teachers' practice is affected by professional interventions such as teacher training and activities regarding the SRL, which they explicitly and implicitly use while conducting classroom instruction. Teachers' use of strategies such as cooperative planning, critical questioning and group projects ., can promoet students' cognitive and metacognitive thinking.

Empirical studies such as Rojas-Drummond and Zapata (2004) ;Parker and Hurry (2007), and Wang et al., 2013 show that when teachers continue to adopt explicit questioning strategies, students might come up with several opinions and share their independent thinking on the issues raised, and by doing so they learn and gain extensive knowledge from interacting with others. Some studies have reported significant positive relationships between the use of SRL strategies and English language test scores (Wang et al., 2013) in which SRL affected positively students' learning as well as teachers' teaching behaviour. Bolhuis and Voeten (2001) in their study in secondary schools in Germany found that teachers' use of process-oriented activities was rare, and they did not concentrate on teaching students how to learn. Hence, literature shows mixed and diverse patterns of teachers' practices of SRL and students' learning, and this trend informs the current study to identify what teachers 'do' in

relation to the implementation of SRL in their English language classrooms. These studies reveal the significant role of teachers in promoting autonomous learning in their classroom.

Conceptual Framework

This paper draws on SRL models of several scholars such as Zimmerman (2002, 2008), Borkowski et al. (2000), Pintrich (2002), and Winne and Hadwin (1998), all of which commonly emphasise the development of learners' independent learning. Although the models were referred to, this study generated a conceptual model that was used for data analysis. Meaning that I did not exclusively focus on the selected conceptual model, rather the themes reported in the findings and discussion section were inductively generated from the data. A brief elaboration of the model below provides further clarity.

Figure 1

The Conceptual Framework
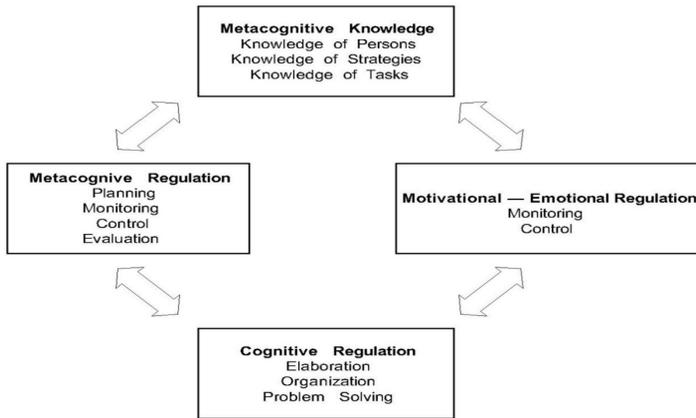
The framework in Figure 1 includes four interrelated components of the SRL process. It helps me to understand how the SRL can be developed and be implemented by teachers in their respective contexts of language teaching. The metacognitive knowledge component includes knowledge of persons, knowledge of strategies and knowledge of tasks. The metacognitive regulation contains planning, monitoring, control and evaluation. In this, the planning can be understood as students' selection for performing individual or interactive tasks. Second, the monitoring indicates the ongoing on-task assessment of the quality of task performance (of self or others) and the degree to which performance is progressing towards a desired goal. The control refers to a change in the way a task had been conducted (by self or others), as a result of cognitive monitoring, and the evaluation urges to review task performance and evaluation of the quality of performance (by self or others). Similarly, cognitive regulation includes organization, elaboration and problem-solving to deal with the learning tasks and challenges in the process of learning. While elaboration refers to gaining knowledge about learning, organization relates to the creation of learning situations and developing a study plan, and the problem-solving component deals with tasks and individual choices during the study. The last component, motivational-emotional regulation, includes monitoring and control. In this, monitoring indicates the assessment of current emotional and motivational experiences regarding the tasks, and control refers to regulating students' emotional and motivational experiences while on task. The main use of this model in exploring teachers' knowledge and practices is for the understanding of which

behavior of teachers' spontaneous teaching relates to which specific component stated in the model.

Methodology

Design and Participants

This study adopted a qualitative case study as a methodological design (Yin, 2018) to explore teachers' knowledge and practice of SRL in their respective workplaces. For this, multiple classroom observations and in-depth interviews were conducted with the two purposively selected English teachers from the two schools: primary and secondary, in Shenzhen, China. As this is a case study, I selected only two teachers working in aprimary and a secondary school. While the teacher A (Emily) had more than twenty years of experience in teaching at the primary level, teacher B (May) had one year of experience in teaching at the secondary level. The purposive selection of the participants was made expecting to identify differences between teachers having different levels and duration of experiences in teaching English. Table 1 illustrates the details about the participants.

Table 1

Demographic Information about the Participants

Demographic Information				
Teacher	Age	Highest Degree	Years Teaching Experience	Grade Level	Subject Taught
Emily (teacher A)	47	Bachelor's degree	20	3, 6	English
May (teacher B)	27	Masters degree	1	7	English

Tools and Procedures of Data Collection

This study used observations and in-depth interviews as the tools for data collection. Eight classroom observations, each lasting for 45 minutes, were conducted on each participant while collecting the data from a naturally occurring classroom instruction. Observation checklists were prepared beforehand drawing on Adagideil et al. (2017), and the self-regulation model of Zimmerman (2008). The observation included a list of 28 observable behaviour, which were related to either of the categories: metacognitive knowledge, metacognitive regulation, motivational-emotional regulation and cognitive regulation. The observation data were categorised based on the categories mentioned above and were triangulated with the data obtained from in-depth interviews. Triangulation is an attempt "to map out, or illustrate more fully, the richness and complexity of human behaviour by studying it from more than one standpoint" (Cohen et al., 2010, p. 254), and this has strengthened the reliability of the data. In this sense, the observation data were integrated with the interview data while reporting the findings in terms of the themes that related to the components presented in the framework in Figure 1.

Following each classroom observation, the teachers were approached for in-depth interviews based on open-ended questions, which provided me with participants' perceptions, knowledge, and practices of SRL. The interview protocol was adopted from Adagideil et al. (2017) and Zimmerman's (2002) model of SRL associated with the stages of planning, monitoring and evaluation of instruction. Some additional interview questions were added based on the author's observation of the respective teacher's classroom instructions. The interview protocol was summarised into three categories:

metacognitive knowledge and regulation, motivational-emotional regulation, and cognitive regulation as well as plan, monitoring and evaluation, which adhered to the organisation of the observation checklist, all of which were related to the framework mentioned earlier. As the teachers were comfortable talking in Chinese, the language of interview and observation was Chinese.

Data Analysis

The data from observation and interviews were thematically analysed. All the interviews were transcribed verbatim and translated into English (as required). The thematic analysis started with data reduction, a form of analysis that sharpens, sorts, focuses, discards and organizes the data to come to the final rational conclusion (Miles, et al., 2014). In this paper, the data from observation and interviews were integrated and presented together in thematic categories illustrated in the conceptual framework. The data from each of the teachers have been coded (e.g., for those from Emily, labelled as E-1, E-2…, and for those from May were labelled as M-1, M-2,…). The use of the conceptual framework as well as the inductively generated themes of the study helped me to strengthen the reliability of the findings reported in the following section.

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Results

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The analysis of the data from two teachers showed that each of the participants developed diverse forms of teaching methods based on their prior experiences and understanding of the philosophy of teaching. Although they did not explicitly show their awareness of SRL lacking systematic formal training in SRL, they implicitly practised SRL during classroom instruction. Initial data analysis of the cases showed that they exhibited an implicit understanding of metacognition, motivational-emotional regulation, cognitive regulation and metacognitive regulation towards developing better strategies for SRL interventions in their respective pedagogical contexts. The findings are reported case-by-case, and they are discussed collectively following the findings.

Teacher A (Emily)

Metacognitive Knowledge

As discussed in the conceptual framework above, the metacognitive knowledge is the knowledge of persons, strategies. and tasks. It is the knowledge about knowledge. Emily, with her more than 20 years' experience of teaching in rural and urban schools of Mainland China, utilised her knowledge base by understanding individual students' dispositions and tried to modify her activities in the classroom. She was aware of the fact that her choice of strategies should fit into the level and ability of students and their learning goals. She was stuck to the understanding that teachers' knowledge of their students, strategies and tasks significantly impact their students' academic performance and goal attainment. She has a limited understanding of SRL knowledge and was not familiar to the ways SRL can be taught. Although she had limited formal knowledge of SRL her practice showed an implicit knowledge, practice and motivation to implement SRL to develop students' independent thinking and learning habit.

Emily's classroom behavior reflected her understanding of the components of metacognitive knowledge and was accordingly translated into practice of SRL-based instruction. She said that SRL could play significant role in students' learning. This was also reflected in her activities of differentiated task design for different level of students in the English language class. She said:

I focus on SRL by stimulating my students to learn actively. I understand SRL to some extent

but not too detailed. I think that students may become eager to learn and think from their heart, and that is SRL. Whenever I design the lessons, I think of developing more varied tasks for my students (E-1*)*

She understands that design of diverse tasks benefits students' learning motivation. Some researchers (Negretti & McGrath, 2018; Teng, 2020) have also mentioned that problems in second language learning may emerge from the lack of knowledge of one or more components of the metacognitive knowledge. Here, Emily's implicit knowledge of metacognition showed that she had developed this knowledge out of her experiences of teaching and engagement in several professional development activities even though the professional development activities she attended did not have an explicit mention of SRL as such. This also reflected that metacognitive knowledge, experiences and strategies are interrelated in developing pedagogical competence on the part of teachers, and that ultimately benefits students' learning. Emily further added:

I try to talk to each student, and try to find what particular problems they are going through while learning English. Some are very smart and some are not much. So, I sometimes provide more time for those who are struggling, and give other higher-level tasks to the good students to engage them while I work with the weaker ones. (E-2)

Her knowledge of task differentiation and support for weaker students illustrates that she is aware of the nature of students and the required strategies in supporting students having comparatively stroger and weaker English language ability. She provides the tasks that support students develop critical thinking ability expecting that the students will gradually grow as independent learners. She said:

I had to work a lot to encourage weak students to participate in reading. For that, I had to ask the students to listen to the text 5 times before the actual reading takes place. This helped them get familiar with the text, and at the same time practice listening to the text. I think this helped all students to develop their independent reading of the text later. (E-3)

This 5-time repeated listening and some thinking questions she asked following this listening guided the students towards the actual reading. Although the nature of such strategies and tasks differed across the lessons, most commonly she asked thinking questions that relate to the vocabulary of the texts, contents and contexts of the English reading texts were common in Emily's lessons. These choices of strategies and the tasks are the result of her professional development opportunities while she was in pre-service and in-service teacher training. She compares these changes to her experience of previous workplace in rural China. She said:

I still remember the situation of my first lesson. At that moment, I talked and taught all the time in class, and I wrote many notes in the whole blackboard. However, teachers from Shanghai told me that as a teacher, it's not the best way to act in that way in class, instead, giving more time to students to think and learn is more reasonable. (E-4).

This reflection also illustrates that she utilized her metacognitive knowledge and previous teaching experience in developing good practices in enhancing students' English reading.

Metacognitive Regulation

Metacognitive regulation refers to activities the individuals are engaged in facilitating their learning. It is also the process of developing the understanding of the planning, monitoring, control

and evaluation of their own learning. Emily provides strong support to the students to develop their planned learning. For instance, she develops several ways to engage students in self-monitoring and control skills during the learning process. She said:

> I usually set up a study plan and let them preview according to the plan. For any new reading text, I let them listen and read the words. Based on their understanding, I ask them to find something related to the meaning of the words and texts. For example, names of museums, places, animals or any other incidents they know and they can relate to the reading text. (E-5)

She perceived that such processes develop students' self-evaluation and self-control as they will be making their decisions on what to relate to, based on their self-judgment. She continued, "*Some students actively take part on such activities because they want to show their spoken English*" (E-6). This is their intrinsic motivation, and is self-generated. She thinks that teachers' role is crucial in enhancing such motivation. She reported that she made some small changes temporarily to mobilize the interest of students at that time. This reflected her strategic control over students' metacognitive regulation in self-regulated learning process.

Cognitive Regulation

Teacher A provided students with a number of examples relating to their real-life experiences and contextual knowledge while elaborating the content of the reading text. She said:

> I provide them with realistic examples. For example, when I needed to teach them read the text that includes contents regarding driving a train, I use a puppet train and show them how it is driven. Then I ask them to try driving the train, following each step. This experience makes them understand the text easily when they start real reading after the practical activity. (E-7)

This process of elaboration of the content of learning made the teaching and learning more organised. She thought that if some students wish to learn more deeply about the content of the text, then they are asked to engage in 'think and write' activity in which they will be answering questions such as 'what are the requirements for the train drive?', 'what problems might emerge?', and 'why is the driving like this?'. She understands that such questions further help them to engage in thinking and problem-solving tasks. Therefore, the processes of cognitive regulation such as elaboration, organization and problem solving are interrelated and simultaneously take place in the process of task accomplishment.

Motivational-emotional Regulation

Teacher A thinks that students' emotional and motivational experiences are very important for them to succeed in the learning. Motivational-emotional regulation includes learners' monitoring of their emotional and motivational experiences as well as their control such experiences in regulating self-paced learning. Emily tried hard to mobilize the motivational strengths of the students in classroom activities. For instance, she said:

> I want to use group learning to stimulate the progress of the students, increase their interest in learning English, and develop a sense of collective honor to the task and the process of learning. When they learn in a group, everyone feels responsible for the outcome of the process, that connects to their emotion and motivation". (E-8)

She also continued to mention that she used a number of student-drawn pictures while engaging them in the tasks of reading. She asked some good students to draw pictures based on the content of the

reading text and used that in the class during preview and actual reading of the texts. She conducted peer-support techniques by asking some good students help the weaker ones in reading texts. This was a form of mentoring that student did for some other students. Similar other activity she used was role-play in which she took part together with students, that made her closely monitor students' learning. She said, "I found that students were weak and not smooth while reading, so I tried to be with them, play with them, help them and observe them" (E-9). In addition, she asked students self-reflect what they did and what problems they observed during the reading task. In that, she assumed that students developed sense of control over their learning, by managing time, seeking teacher and peer help, and focusing attention on their goals of learning (performance control).

Teacher B (May)

Metacognitive Knowledge

May had less teaching experience compared to Emily. The understanding of SRL was rather shallow in the case of May. She understands that students' self-paced and self-regulated activities would contribute to better learning. Despite her limited familiarity with SRL, she continues to design activities that promote students' independent learning. However, it was found that she did not consider the level of differentiation of the tasks and strategies according to students' capabilities into her English language instructional practice. She said:

> I think there are students with different levels and interest, but I have been using the same techniques of teaching for long time. I do not know how to make such activities fit into every student's favor. You know it is very difficult to do so. I am trying my best to understand what the students need and how they learn. (M-1)

Here, she revealed her awareness of the need to make some changes in her instruction, but she did not know what makes the best in addressing learners' needs and their abilities. With this confusion, she has been following the traditional modes of learning such as drilling, recitation and memorization, not taking strong actions in redesigning the tasks and strategies in the classroom. The classroom observation of her teaching illustrated that she tried to provide some tasks to create a difference but most of the lessons were taught with similar repetitive strategies. It might be the case because she began teaching at middle school just a year ago. She expressed positive attitude toward using new methods and strategies. She said, "I think we need to change the techniques in teaching reading. But the classroom environment and discipline are equally important, because if the students do not follow the instructions well in reading, then the class will be messy" (M-2). It shows that she prefers strict disciplines in the classroom. Most often, she provided the tasks with more rigid rules and procedures. Although she thinks that understanding of students' strengths and weaknesses is important, she was unable to develop strategies and tasks to fit to each student's needs and capabilities. She said, "I think all students are not perfect and do not have same pace of learning, but I am still thinking how to make my teaching more appropriate at least to the majority of students" (M-3). She has a fragmented knowledge of persons, strategies and tasks, but it can be hoped, like that of Emily, that with her expansion of experiences, she will gradually develop a holistic metacognitive knowledge.

Metacognitive Regulation

The planning, monitoring, control, and evaluation are the categories of activities that fall under metacognitive regulation. May considered planning is important than enabling students develop

their self-control over their actions. She claimed that students' planning helps them to meet their learning goals. However, she thinks that students are not fully able to control over their own actions and evaluate them. This illustrates her partial confidence on students' work and independent learning skills. She said,

> I provide them with clear learning goals in the beginning. There is an objective of learning in every lesson. I do this planning. But I do not think without my support, they can handle their learning independently. You know this is a middle school, not the university level (M-4).

> For her, students' self-control might need teachers' as well as peer support. To facilitate this, she makes plans beforehand, informs them of the goals and tries to involve in the process of learning.

> She added that students needed scaffolding in decision-making related to their learning. For instance, she said, "I think they need support to make decisions to meet the goals of learning. Their evaluation of their actions and decisions might be at times defective" (M-5). This type of understanding of May regarding metacognitive regulation potential of individual students might have emerged from her relatively short-term experience on teaching.

Cognitive Regulation

Cognitive experience consists of three elements: elaboration, organization and problem solving (figure 1). May, like Emily, tried to provide an elaboration of the content taught through contextual examples. For instance, while delivering the reading lesson on topics such as endangered animals, she brought the pictures from the collection and conducted some preview exercises before asking students to read the text. It was also found that in some lessons, she read the text and translated into Chinese while communicating the meaning of some of the words in the text. She said, "I sometimes elaborate the meaning in Chinese also, as some students do not understand well. I think this is useful sometimes, but I know that I need to use English most often while teaching reading in English" (M-6). Here, her concern is about making a meaningful learning of the contents, which is important for her to engage students in the set tasks. She continued saying, "If the students do not understand the overall ideas, and their organization, then they will not be able to actively engage in the class work" (M-7). During the class, she asked students to engage in some creative tasks such as thinking of a story out of the set of pictures. The students were asked in group to develop their own stories out of the pictures displayed on the board. While she was asked about the rationale of this task, she said, "You know students are very creative. When I show them the pictures, they can make different stories organizing in different ways, which is so interesting. I think they like such activities" (M-8). These activities reveal her focus on elaboration with contextualised examples, development of organisational skills and problem solving on the part of the students. Although she was not aware of these components of cognitive regulation, she was practicing them in the classroom.

Motivation-emotional Regulation

May showed high level of teacher control on students' learning. It was found that students' creative arguments were less emphasised during the reading lesson. Even in the group work activity, she asked students to report the stories they developed but provided less time to elaborate and appreciate the good performances of the students. Instead, she tried to emphasise her own story and told them that the story she created is the most logical. This type of teacher behaviour narrowed down students' ability to monitor others' tasks and develop self-control over their learning process. In

the interview she expressed that she would put students' independent learning and engagement into priority, however this value did not translate to the practice in the classroom. She said, "You know we have a lot of very much fancy ideas, such as independent learning, but due to classroom environment and students' low-level readiness, I cannot put such ideas into practice" (M-9). Despite the resource constraints and other pedagogical factors that affected her potential practice of several strategies to help students developed monitoring and control skills. She said:

> I arranged those students who got less than 70 scores to translate the text or make word cards. I just wanted to help students understand the text more quickly, but of course in their own pace, and help the low proficiency students to lay a good foundation in English reading. (M-10)

During the interview, she mentioned that she would love to learn useful techniques to support students' independent and self-paced learning thinking that such techniques might benefit both slow and fast learners in her classroom. While regulating their motivational-emotional aspects of learning, the students use various tactics to maintain and increase their efforts and persistence in the tasks inside and outside of their classroom contexts (Wolters, 1999). However, as teacher B said and also practised, teachers' control over the tasks might be needed until teachers develop confidence that students can monitor and control their motivational-emotional regulation.

The thematic analysis presented above reveals Emily and May's SRL knowledge (what they know about SRL), their expectations of SRL knowledge (what they want to know) and how they have been transferring their knowledge and beliefs into practice in her instruction. The details about how these teachers' knowledge and practices differ has been elaborated in the discussion section.

Discussion

The SRL framework used in this study consisted of four major dimensions of learning: metacognitive knowledge, metacognitive regulation, cognitive regulation and motivational-emotional regulation. These components have dynamic relationships and work throughout the process of learning, which Zimmerman (2011) claims an active and constructive process in which individuals are involved in understanding, regulating, monitoring and controlling their learning through utilization of cognitive and metacognitive strategies. In this process, teachers' roles are equally important to develop students' SRL capabilities (Kistner et al., 2010). Both Emily and May showed that their knowledge, beliefs, and actions reflected the components of the framework despite the lack of formal SRL training during their teacher education and training. However, given the different contexts of schooling, and the differences in their prior teaching and learning experiences, there were differences across their knowledge of SRL, perceptions and strategies practised in their classroom instruction.

Although both teacher A and B tried their best in bringing innovation in their teaching strategies, their classroom practices continued to maintain the traditional values of teaching such as teacher authority and control. Between the two, Emily showed higher level of flexibility in learning and task differentiation than May. May exercised more control over students' task performance. The class observation and interviews showed increasing knowledge and orientation towards SRL. Emily reported that her experiences and engagement in occasional teacher trainings and networking in professional communities developed her acquaintance with student-centered methods and activities. For instance, Emily had more than 20 years' teaching experience and some opportunities for professional development training in Shenzhen which made strong positive impact in her

understanding of students' self-regulated learning whereas May had some reservation in students' ability to self-monitor and control their learning since she had very limited opportunities to engage in professional development activities.

Both teachers claimed that they respected students' self-paced and independent learning. The classroom behavior showed that they continued to practise more restrictive strategies in students' independent thinking in general. This means that there were considerable gaps between their knowledge of SRL and their practice in the classroom. Both said that students' growing dependency in technology, and higher trust of teacher authority in terms of the source of knowledge were challenging for them to take initiative in pushing students towards their cognitive and motivational-emotional regulation. Compared to May, Emily was confident that all sub-processes of SRL (Zimmerman, 2002) are extremely useful for developing students' independent learning skills. May thought that the students that she was dealing with were from middle school and therefore thought that self-monitoring and control requires higher level maturity in terms of knowledge and skills in SRL. Therefore, May provided less freedom for students than Emily. Several other activities such as memorising games, guessing meanings, paragraph writing, reading passages, etc. were conducted in subsequent lessons of both teachers that showed that teachers were trying to enhance students' engagement and task accomplishment. They believed that these activities develop cognitive regulation on the part of the students. That said, both teachers perceived SRL as a cyclical process (Spruce & Bol, 2015, Zimmerman, 2002, 2008), in which multiple sub-processes are involved in language learning tasks such as picture descriptions, mind-maps, open-class brainstorming and many others.

Both teachers reported that their past and the present contexts of schools facilitated as well as constrained their practice of SRL strategies. While the full implementation of SRL, in other words, creating a high-SRL classroom (Perry & VandeKamp, 2000), was challenging in the first place given the typical social, cultural, and political contexts schooling, as some studies (e.g., Xu & Ko, 2019) also suggested that there were gradual changes in the teachers' knowledge, skills and practice of SRL. Qi's (2021) study in China revealed that SRL strategies such as elaboration, metacognition in understanding and remembering, metacognition in summarizing, control strategy and enjoyment of reading were conducive to students' reading literary. Not only in China, studies conducted elsewhere (e.g., Naderi et al., 2021) also have reported higher beneficial effects of SRL on students' learning achievements. The teachers' also realized an important role of students' involvement in learning in changing teachers' understanding of SRL-based instruction. These instances show that promotion of teachers' knowledge and skills through professional development initiatives would be beneficial for changing the current English language teaching and learning in Chinese schools.

Conclusion and Implications

The results in this study suggest that teachers engagement in pre-service and in-service teacher education programmes (e.g., trainings) did not include SRL component as a learning content. Given this situation they had limited knowledge and understanding of SRL processes. However, their classroom observation revealed that both Emily and May had implemented SRL strategies with no prior conscious planning. However, this claim cannot be generalizable to all the schools as the rural contexts of schooling largely differ from the urban schools' resources and opportunities. Teachers

attempted to develop learners' self-control on learning by engaging them in the tasks and activities that motivate them, this shows that SRL is likely to expand in other contexts of China.

Hence, the research findings in this study showed that teachers were influenced by the belief that SRL is a combination of regulated thoughts and actions planned and cyclically adapted to the attainment of learning goals. All these were directly or indirectly associated with metacognitive knowledge, metacognitive regulation, cognitive regulation, motivation-emotional regulation processes of learning (figure 1). They did so in all skills (such as listening, speaking, reading, and writing) and aspects (grammar and vocabulary) of English language learning. In this way, this study contributes to the body of knowledge claiming that there is an intricate relationship between SRL practiced by teachers and students' motivation for learning a foreign language, i.e., English. This finding is significant not only for learning English as a foreign language, but also for educating the current generation to meet the 21st century learning goals. This study, with its limited data, and in the specific contexts of two schools in Shenzhen, relies on the two teachers teaching in primary and secondary level. Therefore, further research with larger coverage of school contexts in several provinces (including the rural ones) will be essential to capture the complete picture of the knowledge and practice of SRL and English language teaching and use of SRL in China.

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Dr. Zou Fengmei is a lecture in College of Foreign Languages of Huizhou University, China. Dr Zou obtained her doctoral degree from The Education University of Hong Kong. In her doctoral program, she researched on teachers' knowledge and practices of Self-regulated Learning in primary schools in Mainland China. Dr Zou works in the area of foreign language teaching, especially English as a foreign language teaching in China. She has a wide range of teaching experience in schools and colleges.