CHAPTER 4

UNDERSTANDING ENGLISH LANGUAGE LEARNERS' SELF-REGULATED LEARNING STRATEGIES

Case Studies of Chinese Children in U.S. Classrooms and Home Communities

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ABSTRACT

Drawing upon the social cognitive and sociocultural perspectives of self-regulation, this study examined the development of four Chinese elementary school students' self-regulated learning strategies and how these strategies were learned and employed across home-based and school-based contexts. Qualitative data collected from multiple resources (interviews, observations, reading and writing tasks, and school documents) suggested that students reported more strategies in reading activities than in writing activities. The most commonly used strategies employed were seeking social assistance, seek-

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ing information, reviewing records, and environmental structuring. Further analyses indicated that the inclusion of self-regulation in classroom practices and parental scaffolding facilitated the development of children's self-regulated learning strategies.

Self-regulation involves the interaction of personal, behavioral, and environmental triadic processes (Bandura, 1986) and has been defined as a process that involves "self-generated thoughts, feelings, and actions that are planned and cyclically adapted to the attainment of personal goals" (Zimmerman, 2000, p. 14). Within an academic context, the process of self-regulation "includes planning and managing time; attending to and concentrating on instruction; organizing, rehearsing, and coding information strategically; establishing a productive work environment; and using social resources effectively" (Schunk & Zimmerman, 1997, p.195). Studies suggest that self-regulated learning (SRL) behaviors facilitate students' motivation and academic achievement (Pape & Wang, 2003; Paris & Paris, 2001; Schunk, 1996; Schunk & Ertmer, 2000; Wood, Bandura, & Bailey, 1990). Teaching students about different cognitive and self-regulatory strategies can improve actual performance on classroom academic tasks (Pintrich & DeGroot, 1990). Student performance has been shown to be significantly improved after the training of SRL strategies (Butler, 1998; Neilans & Israel, 1981; O'Malley, 1987), and students trained to use strategies have become more self-regulated (Travers & Sheckley, 2000).

Studies indicate that SRL strategies are also important components of the second language learning process (Pajares & Miller, 1994; Pajares & Valiante, 1997; Pape & Wang, 2003; Schunk, 1994; Zimmerman & Martinez-Pons, 1986, 1988, 1990). For example, when compared with other students, higher achieving students are found to have higher self-efficacy beliefs and employ more SRL strategies in learning from a greater range of categories. However, Huang, Lloyd, and Mikulecky (1999) argue that the topic of perceived self-efficacy in the field of English as a second language, for example, has been rarely investigated even though it is an important consideration for second language learning. Chamot and El-Dinary's (1999) longitudinal study indicated that, for children learning second languages, high-achieving children used a greater proportion of metacognitive strategies while low-achieving children used a greater proportion of cognitive strategies. According to Gourgey (1998), cognitive strategies are defined as those that allow an individual to build knowledge. In contrast, metacognitive strategies allow a learner to monitor and improve upon this knowledge. Studies on second language (L2) acquisition show that students might also be more likely to persist in solving the language problems once their motivation is enhanced (Ely, 1986; Hashimoto, 2002). Students can benefit from having access to varieties of SRL strategies to tackle problems they might encounter in the second language learning process.

While SRL has been widely explored in mainstream academic contexts, few studies have examined how students who are culturally and linguistically diverse incorporate SRL strategies in their learning of English as a second language (ESL). Given the positive relationship between SRL and academic achievement, incorporating SRL strategies into instruction is one way to support the academic and social development of English language learners (ELL).

In the field of teaching ESL, many researchers have conducted studies to investigate adult learners' use of language learning strategies (e.g., Chamot, 1987; Oxford, 1990). Since adolescents are cognitively and developmentally independent and have a greater level of self-control (Pintrich & Schunk, 2002), older students are more often studied than younger students (Chamot & El-Dinary, 1999). Dramatic increases of Latino students in U.S. schools have made this immigrant population the research focus in the ESL literature (Wainer, 2004; Wortham, Murillo, & Hamann, 2002) with far less emphasis placed on Asian students. Thus, the primary purpose of this research study was to explore the ways in which Chinese ESL students at the elementary level developed their SRL strategies in both American classrooms and their home communities. An investigation of children's use of SRL strategies can inform both teaching and learning. Focusing on an under-studied population has great pedagogical implications and can help support the academic success of ELLs. Findings from this study will also fill in gaps in the existing research literature.

REVIEW OF THE LITERATURE

Building on socio-cognitive and sociocultural perspectives, self-regulation is defined in this study in the context of second language acquisition as a person's continuous adjustment of the use of language-learning strategies to achieve the self-set goals through interactions with their peers and adults across social and cultural contexts.

Cultural Considerations

When working with ELLs, the element of culture must also be considered. In order to understand self-regulation for academic achievement from the students' perspective, it is important to understand the concept of "self" as a personal agency. Self-concept and beliefs regarding capability for academic performance have distinct relevance based on suggested differences between Western and Eastern perceptions of "self." Societies with collective cultures as opposed to individualistic cultures have a greater

focus on community and collective achievement. Recent research describes this idea as it relates to students' psychological and cognitive processes for self-regulation for Asian students, including the Chinese, which may differ from the Western perspective of individual and personal accomplishment (Chong, 2007). Nevertheless, the constructive roles of self-efficacy and beliefs are fundamental in operational nature in both collective and individual cultural systems (Bandura, Caprara, Barbaranelli, Gerbino, & Concetta, 2003). As a result, to meet the expectations of teachers, parents, and peers is an important affective layer of the self-regulatory process for students from a collective cultural system (Caraway, Tucker, Reinke, & Hall, 2003).

Factors that Impact Self-Regulated Learning

Research indicates that situational variables as well as individual factors have an influence on the choice of SLR strategies (Bialystok, 1981; Nyikos & Oxford, 1993). Situational variables are related to the classroom context, home environment and social setting as well as the teaching method, quality of materials available, and opportunity to practice. Individual factors include learners' age, gender, ethnicity, length of exposure to the target language, motivation, and preferred learning styles. Other individual factors that have an influence are learner's self-efficacy beliefs, beliefs about the usefulness of the task, and motivation (Huang & Chang, 1998; Pajares & Valiante, 1997; Wenden, 1987; Zimmerman, Bandura, & Martinez-Pons, 1992).

Motivation may be the single most powerful influence on the choice of language-learning strategies (Ely, 1986; Oxford & Nyikos, 1989; Hashimoto, 2002). For example, Oxford (1990) has found that second language learners who were highly motivated to learn a language used a variety of strategies. In addition, gender, years of study, course status, and language proficiency all had significant effects on the choice of strategies. The higher the students' perceived proficiency in each of the language skills, the more frequently they chose to use learning strategies. Students who elected to learn the language used more strategies than students who took the course as a graduation requirement. Moreover, the longer they learned the language, the more strategies they used.

English Language Learners Choice of Self-Regulated Learning Strategies

As for strategies employed to learn a second language, significant differences in individual strategy use were also found between beginning and intermediate level students (Chamot, 1987). Metacognitive strategies favored

by intermediate level students were primarily self-management, advance preparation, and self-monitoring whereas those favored by the beginning level students were selective attention and delayed production. Students of both levels showed many similarities in the use of both cognitive and social-affective strategies. For instance, they both favored such strategies as repetition, note-taking, questioning for clarification, and cooperation. Contextualization, however, was used more often among intermediate level students while translation and imagery tended to be favored by beginning level students.

High-achieving elementary school students used a greater proportion of metacognitive strategies whereas low-achieving elementary school students used a greater proportion of cognitive strategies (Chamot & El-Dinary, 1999). For example, low achieving students relied extensively on the decoding of words but high-achieving students used background knowledge. Differences in strategy use between successful and unsuccessful language learners were also observed by Abraham and Vann (1987). Using case studies of two learners of English, they found that the very successful learner was much more concerned with the correctness of forms, was more willing to guess the meaning, showed higher perseverance, used more production tricks such as paraphrasing to make himself understood, and employed many more clarification/verification learning strategies.

Effective learners are more flexible with their repertoire of strategies and more effective at monitoring and adapting their strategies. Less effective learners are more likely to overuse ineffective strategies. Moreover, less effective learners become focused on details whereas more effective learners focus more on the task as a whole. For instance, more effective learners are more comfortable guessing or skipping some individual words when they are decoding words. They use background knowledge and inferences while using the dictionary only is the dominant strategy employed by less effective learners (Chamot & El-Dinary, 1999).

Self-Regulated Learning Framework

Zimmerman and Martinez-Pons (1986) developed 14 classes of SRL strategies using data collected from middle school students. These classes include: self-evaluation, organizing and transforming, goal setting and planning, seeking information, keeping records and monitoring, environmental structuring, self-consequences, rehearsing and memorizing, seeking peer assistance, seeking teacher assistance, seeking adult assistance, reviewing tests, reviewing notes, and reviewing texts.

Using the work of Zimmerman & Martinez- Pons (1986) as a framework and applying it in the ESL context, Pape and Wang (2003) grouped the

TABLE 4.1 Categories of SRL Strategies in the ESL Context

Category definitions according to Pape and Wang (2003)	Examples within ESL sample
1. *Self-evaluation:* Self-initiated evaluations of the quality or progress of students' work.	Check the writing before turning it in to the teacher.
2. *Organizing and transforming:* Self-initiated overt or covert rearrangement of instructional materials to improve learning.	Translate English into their native language to help memorize the word.
3. *Goal setting and planning:* Setting educational goals or subgoals and planning for sequencing, timing, and completing activities related to the self-set goals.	Adjust what to write in a journal entry by checking how much time is left.
4. *Seeking information:* Self-initiated efforts to secure further task information from nonsocial sources.	Look for the meaning of a word in a dictionary.
5. *Keeping records and monitoring:* Self-initiated efforts to record events or results.	Take down an unknown word to ask for help later.
6. *Environmental structuring:* Self-initiated efforts to select or arrange the physical setting to make learning easier.	Study in one's own room.
7. *Self-consequences:* Student arrangement or imagination of rewards or punishment for success or failure.	Jump up and down when one gets good results of study.
8. *Attentional control:* Self-initiated performance of a particular personal behavior to improve learning.	Listen carefully in class.
9. *Rehearsing and memorizing:* Self-initiated efforts to memorize learning materials by overt or covert practice.	Write the word many times on paper in order to memorize it.
10. *Seeking social assistance:* Self-initiated efforts to solicit help from adults, teachers, or peers.	Ask the teacher, parents, and peers for help.
11. *Reviewing records:* Self-initiated efforts to reread notes, tests, or textbooks.	Reread the textbook before a test.

subcategories of seeking social assistance (i.e., from peers, teachers, and adults) and the subcategories of reviewing records (i.e., from tests, notes, and texts). Environmental structuring was split into physical environmental structuring and attention control. These changes resulted in a more parsimonious 11 category scheme. The definitions of each category with examples from ESL children are presented in Table 4.1. These categories of SRL strategies in the ESL context were used as the framework for data analysis in this study.

The following research questions guided this study:

1. What SRL strategies do ESL children employ in learning English across different learning tasks and across home-based and school-based contexts?

2. How do ESL children use SRL strategies across different learning tasks and across home-based and school-based contexts while learning English?
3. What are the differences in SRL strategies among ESL students across different learning tasks, and across home-based and school-based contexts, while learning English?

RESEARCH DESIGN

This study explored the SRL strategies of four Chinese children learning ESL at an urban public school. The aim of the study was to investigate the participants' use of language-learning strategies to accomplish specific English language tasks. Self-regulatory capabilities were thus established with the internalization of private speech in either English or Chinese in this study. The study also examined contextual factors that might have an impact on the children's SRL strategies.

This qualitative study design, therefore, focused on in-depth, long-term interaction with relevant people in several sites. We used participant observation and on-going interviews as the primary modes of data collection for this study. According to Glesne (1999), participant observation considers the perspectives and experiences of the participants and enables the researcher to investigate the complex and rich social phenomena in greater depth and detail.

A case study design was used because it "offers insights and illuminates meanings that expand the readers' experiences. These insights can be constructed as tentative hypotheses that help structure future research" (Merriam, 1988, p.32). Case study data, which were gathered from observations, verbal protocols, student reading and writing assignments, and interviews, provided information for a "thick description" (Geertz, 1973) of the participants through the "intellectual effort" (Geertz, 2001) of the researcher. We conducted "emic analysis" (from insider's perspectives) to produce this thick description and to stratify a hierarchy of meaningful structures in terms of how the activities were "produced, perceived, and interpreted" (Geertz, 2001, p. 58). Moreover, we used cross-checking by asking the same question in different contexts, member checks, and peer debriefing to triangulate data.

SETTING AND PARTICIPANTS

The selection of the participants and the school for this study was based upon both homogenous sampling and convenience sampling. Similar cas-

es, all Chinese boys in the same community and from the same school, were purposefully selected in order to describe this subgroup in depth. The school site was located in a suburban district in the Midwestern United States and was the recipient of the *No Child Left Behind* (U.S. Department of Education, 2002) Blue Ribbon Award, a national award given to schools with high academic achievement (reading, writing and mathematics standardized test scores are above the national average). There were 18 teachers (one African American and 17 Caucasians) at this elementary school, all of whom had state-authorized certification or licensure in elementary education. The average years of teaching experience of these teachers was 18 years. The students at this school represented 35 different countries, and ELLs in this school attended regular mainstream classes but participated in pull-out classes to receive ESL services.

In addition to the school, the researchers observed the participants on the playgrounds within the participants' home community. The community was centered within a large public university with a large international student population (approximately 3800 international students or 8% of the total student population) from 124 different countries. As the rent for housing in this community was comparatively lower than the market price, a large proportion of international students who had families chose to live here. We observed what Bogdan and Biklen (2003) described as *naturalistic settings,* spaces where there was no intervention. For this reason, we collected data in the setting where the participants felt comfortable and spent most of their time.

The four boys that we called *Kelvin, Richard, David, and Jeff* were originally from China. Since the participants used American names rather than their given Chinese names, we gave them common American pseudonyms. One or both of their parents were enrolled in the graduate schools at local universities. All four boys were in elementary school and had some experience in learning academic and social English in U.S. schools. At the time of the study, Kelvin had only studied English for one year while Richard had studied for four years. David had three years and Jeff had completed two years of English study. Even with varying numbers of years of English instruction, all of the participants exited the "pull-out" ESL program at the time of data collection. As a result, all classroom observations were conducted in their regular mainstream classes.

DATA COLLECTION

Formal data collection began in the summer of 2003 and ended in the spring of 2004. To gain a deep understanding of ESL students self-regulated learning strategies, we collected data through six different resources that

included: parent interviews, child pre-interviews, observations at play, classroom observations, follow-up interviews, reading and writing tasks, post interviews, and review of school documents. As a native speaker of Mandarin and a member of the cultural group and community studied, one member of the research team conducted all the observations and interviews. The interviews were conducted primarily in Chinese. There were some situations when the child participants could not understand certain academic vocabulary. In such situations, English was used to facilitate communication. When neither the Chinese nor the English versions were understood by the children, the researcher simplified words to explain the meaning of the question asked. Field notes and interview transcripts were coded, analyzed, and interpreted by the research team.

Parent Interviews and Child Pre-Interviews

These interviews were conducted at the beginning of the study. Although the guided interview questions were the same for each parent and child, the length of the parent interviews varied from 10 to 80 minutes. Some parents gave more information than elicited to provide additional context, while other parents just answered the questions directly. All the children answered the questions directly without elaboration. Parent interviews helped us gain information about parent involvement with the students' learning of English with respect to the children's use of SRL strategies. They also helped us explore how home environment affected the students' use of SRL strategies. Children's pre-interviews helped to elicit students' demographic information, motivation to study English, and perceived usefulness of English.

Observations at Play and in the Classroom

Twenty-one observations (about 17 hours) of participants at play provided data to examine participants' behavior within informal English language-learning settings. The participants were observed interacting while playing on monkey bars, video games, computer games, soccer, chess, card games, as well as trading Pokemon and/or Digimon cards. These observations helped us understand the contributions of social factors to students' choice of SRL strategies. In addition to the observations at play, twenty-one classroom observations (approximately 21 hours) provided sources to examine participants' behavior in class (formal English language-learning setting) with a focus on English reading and writing tasks. Notes were taken with the understanding and permission of the teacher. These field notes

helped to explore the impact of classroom context on students' SRL strategy choices. In addition, follow-up interviews were conducted on an on-going basis and followed each observation. We created questions that emerged from the observations as a way to help us further understand the children's behavior. These interviews also helped us investigate factors contributing to their SRL strategies.

English Reading and Writing Tasks

Third- and fourth-grade students were presented *Amazing Book of Questions and Answers* (Guest, 2002) and were asked to choose a chapter to read. They were informed that they could use all the resources they could think of to read and understand the chapter and were asked to speak out loud whatever they were thinking when they were reading. For the writing task, participants were given an option to either write a book summary or a journal entry. They were told to use whatever resources they could think of in order to complete the task. They were also asked to speak out loud whatever they were thinking when they were working out the writing task. Before students actually proceeded to do the reading and writing tasks, we observed their use of SRL strategies to triangulate their self-reported use of SRL strategies during previous interviews.

Post-Interview

At the end of the study, each participant was interviewed about their SRL strategies related to the language-learning tasks across home-based and school-based contexts. Questions for this interview were adapted from the self-efficacy and self-regulation questionnaires in Wang and Pape's (2005) study. This interview triangulated students' previously reported use of SRL strategies and helped us understand some issues in the preliminary data analysis.

School-Related Documents

Participants' report cards and English reading and writing assignments were collected. These documents provided information about the participants' English proficiency and helped us understand the English reading and writing activities in which the children were engaged at school. Teachers' comments about the participants' progress on report cards and their

writing documents also served as triangulation to our interpretations from the observations and interviews.

DATA ANALYSIS AND DISCUSSIONS

Data analysis began during data collection and was ongoing throughout the study (Merriam, 1988). We analyzed the data holistically and analytically while taking the participant perspectives into account. We reviewed all the data to understand the content of the observations as well as to search for emergent patterns, issues, or themes related to the research questions of this study.

Ryan and Bernard (2000) discussed how themes are identified in qualitative data analysis:

> Themes are abstract (and often fuzzy) constructs that investigators identify before, during, and after data collection. Literature reviews are rich sources for themes, as are investigators' own experiences with subject matter. More often than not, however, researchers induce themes from the text itself. (p. 790)

In the present study, cognitive map analysis was used to identify emerging themes. Cognitive map analysis combines the intuition of human coders with the quantitative methods of network analysis (Ryan & Bernard, 2000). The purpose of using cognitive map analysis is to simplify text to the fundamental meanings of specific words. These reductions help researchers identify general patterns and make comparisons across texts. Field notes from observations were used as texts in this study. We compared the participants' behaviors noted on the field notes by analyzing repeated words and used maps to show the relations between students' behaviors.

Emerging themes were identified from the observation field notes according to the number of occurrences of the same pattern. A pattern was considered a theme if it repeatedly occurred in the data analysis process. Specifically, SRL strategies were coded using the 11 categories of SRL strategies regrouped by Pape and Wang (2003) from the 14 classes developed by Zimmerman and Martinez-Pons (1986). All data were coded preliminarily in both table formats and field notes while they were collected.

Trustworthiness

Case study design is an effective way to demonstrate the interplay between the researcher and the participants through "thick description." Detailed descriptions based on careful observations constitute an important part of

the experimental findings. Such observations, if carried out objectively and with scientific rigor, have the status of validated fact (Vygotsky, 1978). According to Denzin and Lincoln (2000), for each quantitative methodological procedure for establishing reliability and validity, qualitative inquiries have aligning and parallel procedures. These procedures involve examining the credibility, transferability, confirmability, and dependability of the obtained data.

The credibility of qualitative inquiry is especially dependent on the credibility of the researcher because the researcher is the instrument of data collection and the center of the analytical process. This was established through prolonged engagement and persistent observation (long-term acquaintance, six months of observations, and on-going interviews), member checks, peer debriefing, and triangulation of data. Spending time to build strong relationships with the participants allowed proper trust to be developed, leading to more honesty, frankness, and completeness in the participants' responses (Glesne, 1999). Repeated interviews throughout the study helped in developing rapport and increased the validity of the interviews. The on-going interviews also allowed the participant time to think more deeply about their own feelings, reactions, and perceptions.

After data coding, the analyses were reported to the participants' parents. We discussed the initial observations with the participants and their parents in order to member check. Member checking gave participants an opportunity to scan the data and analyses to ensure that they were represented correctly. Member checks attempt to bring the voice of the "researched" into the research process (Lincoln & Guba, 1985). We also used peer-debriefing with colleagues to check methods, assumptions, and data representations throughout the study. This gave additional insights from the perspectives of a peer who is not involved in the research project.

According to Denzin and Lincoln (2000), the concept of transferability is a suitable substitute for generalizability. Lincoln and Guba (1985) claim that the degree of transferability is a direct function of the similarity between two contexts and defined this similarity as the degree of congruence between the "sending" and "receiving" contexts. Therefore, the thick description with "emic analyses" facilitated transferability judgments on the part of the "receiver" who may wish to apply the study results to his/her own situations.

The confirmability of a qualitative research parallels the objectivity of quantitative research (Denzin & Lincoln, 2000). To achieve confirmability, the qualitative inquirer must ensure that the data secured from the participants, along with the interpretations and findings from the inquiry process, are "grounded in events rather than the inquirer's personal constructions" (Lincoln & Guba, 1985, p. 324). In other words, the researchers' responsibility is to document the findings without judgment. We triangulated the

data through multiple sources/angles and used member checks and peer debriefing to check our own attitudes, beliefs, assumptions, and data representations as means to establish confirmability of the data. In addition, an audit trail was maintained with careful documentation of the data (all field notes, students' reading and writing documents, audio- and videotapes, transcriptions, and data analyses).

THE CASES: KELVIN, RICHARD, JEFF, DAVID

Kelvin—A First Grader

Kelvin was the youngest of all the participants and the only child in his family. His mother was a doctoral student at a Midwestern university and his father was a student at another university in the same city. His parents, both from Mainland China, always checked his homework and sometimes gave Kelvin extra work in mathematics and Chinese. Kelvin was six years old and was in the first grade at the time of the study. He came to the United States in July, 2002 and started his schooling in kindergarten in September, 2002. Although everyone thought that his English was good enough to catch up with average learners in his class after staying in the ESL program for a year, he was still placed in the ESL program for the first grade. He stayed in the ESL program for a total of 18 months (the average length of stay in the ESL program was 12 months for a child in this school) but he exited successfully from the program by the time the data collection for this study finished.

Four observations were made of Kelvin at play, and four were made of Kelvin when completing reading and writing tasks. We observed a total of 65 behaviors that helped to provide evidence of his self-regulation. Kelvin reported six out of the 11 categories of SRL strategies regrouped by Pape and Wang (2003). He was able to seek information from course materials or ask questions from the teacher when he met difficulties in completing language-learning tasks in the classroom. He used the strategy of organizing and transforming during communication with his peers. When no social assistance was available, Kelvin wrote down his question on a piece of paper to keep records. In order to memorize the spelling of new words, Kelvin used the strategy of rehearsing and memorizing. Kelvin was also able to use the strategy of environmental structuring by turning off the TV in order to read.

Our classroom observation data suggested that the teacher can be credited for Kelvin's use of these strategies. She consistently and purposefully incorporated many of these strategies within her classroom to engage her students in the curriculum. Overall, Kelvin's use of SRL strategies varied across the language-learning tasks. For example, he used organizing and

transforming for reading and speaking activities but not for listening or writing activities. Kelvin's use of the strategy of rehearsing and memorizing was limited in activities related to memorizing new words or information.

Jeff—A Fourth Grader

Jeff was nine years old and in the fourth grade at the time of this study. He spent the first half of his early years in school in Portugal when his father was on a post-doctorate appointment at a university there. Therefore, he could speak Portuguese in addition to English and Chinese. Jeff's unique language background made his use of SRL strategies somewhat different from the other participants. Jeff's experience in learning Portuguese as a second language may have influenced his use of strategies in learning English as his third language. He came to the United States in 2001 with his parents and stayed in the ESL program for the first year. Since Jeff's father was very busy with his post-doctoral work, it was usually Jeff's mother who took the responsibility of helping Jeff with his studies. She helped Jeff doing his homework during Jeff's first half year in the school because Jeff could not understand his homework in English at that time. Over time, Jeff grew more confident and stopped asking his parents to help him with the homework any more.

From six observations of Jeff at play, five visits to his class, and four observations of Jeff performing reading and writing activities, we observed a total of 73 behaviors that may provide evidence to his self-regulation. Jeff reported seven out of the 11 categories of SRL strategies regrouped by Pape and Wang (2003). He always checked his homework on his own and reread his writing to check for errors. When he came across an unknown word in reading, Jeff sometimes used the dictionary and some times tried to guess the meaning by reading the sentences before and after the word. When more experienced members were available, Jeff employed the strategy of seeking social assistance by asking them questions. Furthermore, Jeff's use of goal-setting and planning was manifested in two situations: (a) skipping unknown words in reading and returning to guess the meaning of the words after having a better understanding of the context; and (b) checking how much time was left while performing writing tasks in order to make a decision about what and how much to write. Jeff reported the strategy of environmental structuring when he said that he would shut the window and study in his own room if other children were playing noisily outside.

Richard—A Third Grader

Richard was a bright student who entered the third grade when this study began. While he was accomplished in areas such as chess, his progress in learning English was comparatively slow. Unlike other children who usually stay in the ESL program for a year, he stayed in the program for a year and a half. His report cards showed that he needed improvement in spelling, grammar, reading, and writing. In addition, he has a strong accent when speaking English.

During five observations of Richard at play, four classroom observations, and four observations of Richard completing reading and writing tasks, we observed 62 behaviors that may provide evidence of his self-regulation. Although he reported only four out of the 11 categories of SRL strategies regrouped by Pape and Wang (2003), Richard was the strongest at environmental structuring. He was not easily distracted and could concentrate on his own work regardless of what other children were doing near him. When he had a choice, he always chose to read in his own room. When the teacher was available, Richard was able to ask the teacher for information or seek help from the teacher. Before an examination, Richard knew that he needed to review the textbook.

David—A Third Grader

David was a sweet boy who was never shy to speak. When he came to the United States in 2000, he could not speak English at all. Unlike most newcomers who often shy away from native-English speakers, he would actively seek them out to communicate with, even despite the language barriers. At the time of data collection, David entered the third grade.

From six observations of David at play, four classroom observations, and four other observations of David performing English reading and writing tasks, we observed a total of 67 behaviors that may provide evidence of his self-regulation. According to observations and field notes, the most common SRL strategy that David used was seeking social assistance. Whenever he met a difficulty in learning English, he asked either the teacher or his friends for help. Although he was not aware of using the strategy of self-evaluation in reading or writing activities, David corrected his own English language mistakes in his oral communications with peers. When asked about how he could improve his English, David replied that he would speak more English. Actively seeking opportunities to practice the target language in order to improve one's proficiency in that language is a cognitive strategy according to Oxford (1990) but does not match any one of the 11 categories of SRL strategies regrouped by Pape and Wang (2003). This is perhaps

a particular SRL strategy in the context of learning second/foreign language. His use of environmental structuring was to read in his own room and the classroom.

Cross Case Analysis

Kelvin, Jeff, Richard, and David provided insight into the SRL strategies ESL children employed in learning English across different learning tasks and across home-based and school-based contexts. Overall, these boys reported using nine out of the 11 classes of SRL strategies across home-based and classroom-based contexts. Specifically, these included self-evaluation, organizing and transforming, goal setting and planning, seeking information, keeping records and monitoring, environmental structuring, rehearsing and memorizing, seeking social assistance, and reviewing records. Self-consequences and attention control were not reported. The total number of SRL strategies, the total number of different SRL strategies, and all categories of strategies reported by each participant are included in Table 4.2. Three SRL strategies emerged as the most commonly observed or reported by all four of the participants. These strategies include seeking social as-

TABLE 4.2 Number of Behaviors Coded within Each Emerging Theme Related to SRL Strategies

Cases	Kelvin	Jeff	Richard	David
Number of Observations	16 (760 mins)	15 (790 mins)	13 (500 mins)	14 (525 mins)
Total number of behaviors recorded	65	73	62	67
Number of strategies reported	27	34	24	19
Number of different strategies reported	6	7	4	5
Common strategies reported	**Seeking social assistance, Seeking information, and Environmental structuring**			
Individual strategies reported	Organizing and transforming Keeping records and monitoring Rehearsing and memorizing	Self-evaluation Goal-setting and planning Reviewing records Rehearsing and memorizing	Reviewing records	Reviewing records Self-evaluation

sistance, seeking information, and environmental structuring. Reviewing records was a strategy that three of the four boys reported as an important to their learning of English. Specific examples are provided below.

Seeking social assistance. Seeking social assistance was the most commonly observed strategy and the most often reported one by the participants in this study. It refers to seeking peer assistance, seeking teacher assistance, and seeking adult assistance when difficulties were encountered (Zimmerman & Martinez-Pons, 1986). All participants in this study employed this strategy when they encountered difficulties while communicating with peers or performing reading or writing assignments.

While Kelvin sought assistance from all possible resources available, peers, teachers, and parents, Richard reported that he did not ask his friends for assistance. Richard would ask his parents when he had difficulties with his homework. He reported in the interview that he would raise his hands and ask the teacher to repeat what she said if he could not follow the teacher's words in class. David was very active in the classroom and always asked the teacher a lot of questions. When he was asked to tell the main idea of the passage he just read, David said:

David: I don't get this.
Teacher: Can you tell me what you are reading in one word?
David: Rocks.
Teacher: Yes. You got it.

Seeking information. Participants in this study employed a variety of strategies to seek information while learning. They used pictures from a book or TV to help them understand. The dictionary was another common source of information to assist participants in figuring out the meaning of an unknown word.

Kelvin used the pictures from a book or TV to help him understand what a character said. He also searched in his folder of poems and the blackboard for the spelling of some words. At a writing workshop in school, Kelvin's teacher introduced some strategies to write a narrative story and gave them a group of story starters such as *once upon a time, one day, in the fall, on a farm, etc.* When a girl asked the first author (who was doing participant observation in the classroom) how to spell the word *than,* Kelvin pulled out his folder with poems and showed the word to the girl. When he himself was stuck with the word *bare,* Kelvin remembered that the teacher had recently written this word on the blackboard and then copied this word on his paper. Kelvin did not have his own dictionary at home, but said that he sometimes used the dictionary in his class when he wanted to know how to spell a word. He sometimes asked his mother to use her dictionary when

he needed to find the meaning of a word. His mother would translate the word into Chinese for him.

Jeff was in the fourth grade at the time of this study and older than Kelvin, which may account for some of the varieties of strategies to seek information. When asked to choose a chapter to read during the reading task, Jeff looked at the table of contents to seek information about the book. In addition to this and using the dictionary, Jeff also guessed the meaning of the word by reading the sentences around it. The following is from our interview transcript:

Interviewer: What will you do if you do not understand a word while reading?
Jeff: Sometimes when I don't have time I look at the sentences and look, think, will it be able to look fit in it? Or sometimes when I have time, if I'm not in a hurry, I will go to, get a dictionary.

Both Richard and David claimed that they seldom used the dictionary to seek information because it took a lot of time. In one of Richard's reading and writing classes, students were asked to read an article, answer the reading comprehension questions following that article, and then write a summary of what they had read. When he was not sure about the teacher's expectations, Richard asked his teacher:

Richard: Do you have to write the words exactly the same?
Teacher: No. Write in your own words.

Environmental structuring. All participants in the study reported awareness of the importance of a quiet place to study. They said that their favorite place to study was their own rooms or the classroom. They all indicated that they could not concentrate if other kids were playing around them.

Kelvin said his classroom was also a good place to study. When asked about his living room, Kelvin said that he could not study there if the TV was on, if other children were playing in the same room, or if they were noisy. Jeff said that he could still concentrate on his studies even when he saw his friends playing outside. He said that when they were loud, he would shut the window and study in his own room. He explained that he knew sometimes when he was playing, other children were studying too.

Richard was very good at environmental control both at play and in the class. As long as the activity was interesting to him, Richard showed high persistence for it. He would not give up until he finished it. We found him reading alone at recess when all other children were playing. He said that

he wanted to finish reading before playing because he wanted to know the end of the story.

Reviewing records. Reviewing records includes reviewing tests, reviewing notes, and reviewing texts (Zimmerman & Martinez-Pons, 1986). Kelvin was the only child who did *not* report this strategy. As the youngest student in the study, Kelvin did not have the need or knowledge to apply this strategy. For a first grader, reading and reviewing textbooks before an exam is not applicable. Other participants reread texts to prepare for an exam or in the process of working with reading and writing activities.

Richard reported that he would reread the book before the exam. Although not successful, Richard reread a couple of sentences to answer the comprehension questions during the reading task. This is consistent with the findings from Pape and Wang's (2003) study for students solving mathematics problems. In that study, students' number of re-readings of the problem did not turn out to be significantly related to the problem solving success. Both these studies indicate that rereading alone does not help the students' comprehension of the reading materials.

Jeff also employed his strategy while writing. When he was asked to write a summary of an article about Helen Keller, Jeff had to re-read some sentences of the article before was able to add any details to his writing. When asked about how he would prepare for a test, Jeff said that he would take the book home and review the vocabulary. David also reported doing taking the book home and to re-read it in order to prepare for a test.

Individually Reported SRL strategies

Although we observed the participants use other SRL strategies in the learning of English, these were not used by all four participants. Specifically, self-evaluation, organizing and transforming, goal setting and planning, keeping records and monitoring, and rehearsing and memorizing were the SRL strategies that occurred less frequently and were used by only one or two of the participants.

Self-evaluation. Self-evaluation took different forms for each participant. Some self-checked their homework or writing assignments in class for errors, others corrected their own language mistakes while speaking. Jeff used this strategy in different situations. When he was writing, Jeff always reread the sentences he had written to check for errors and to see what he should write next. He also did not allow his parents to check his homework, claiming that it was his work and the teacher's scores would not reflect his real proficiency level if he asked his parents to check it.

David reported in the interview that he never checked his homework or asked his parents to check his homework. Nevertheless, we observed

him correcting his own mistakes while speaking English. For example, David changed "do you ever heard" to "have you ever heard" and "What's type..." to "What type is yours" while taking to his peers. Both Jeff and David used the strategy of self-evaluation to check their work, either written or oral, and corrected their language mistakes when they noticed them. Even though we observed Kelvin and Richard in the classroom and with the reading and writing tasks, neither of these students used this specific strategy during the study.

Organizing and transforming. This strategy was reported by Kelvin only. His use of this strategy was to use sketching or his native language in communication and to chunk the word when he was trying to figure out how to pronounce or understand a single word.

Goal-setting and planning. This strategy was reported by Jeff only. He applied this strategy to make sure that his writing was complete. In order to get a higher score in writing, Jeff often checked the remaining time with his teacher in order to make decisions. During the writing task, Jeff asked how much time he had in the middle of the writing. He said that he wanted to make sure that he had time to write the ending, because he believed he could get a higher score if his work was complete. The following is an excerpt from the interview:

> When the teacher only gives us a little bit of time, I'm kind of like in a hurry. I am afraid I won't finish it and I get a low score. I just rush through. At least I can get a little bit of more score than I am not finishing it.

Jeff also reported that he would use this strategy in reading. Jeff reported frequently skipping an unknown word while reading and then coming back to it after having a better understanding of the context of the reading task. He said that he could usually guess the meaning of the unknown word after he read more sentences around it. Therefore, he chose to skip the word for the moment and then guess the meaning of it after he read further.

Keeping records and monitoring. This strategy was reported the least by participants in this study with regard to frequency. None of the participants took notes in class. It is possible that these students never learned how to take notes. However, when Kelvin saw an unknown word while reading, he wrote it down on paper and then asked his mother to check the word in a dictionary for him. In this situation, he wrote the word on paper to keep a record of his questions.

Rehearsing and memorizing. Only Kelvin and Jeff reported this category of SRL strategy. While Kelvin used this strategy to memorize new words, Jeff used it as a rehearsal in order to avoid making mistakes in speaking English.

Kelvin reported in the interview that in order to memorize a new English word, he would repeat the word many times and "put the word in my

brain." He also mentioned that he would practice the list of words to be tested before the exam. He gave an example to show how he practiced, "Pretend I have to practice 'well' and 'very'. And then I say 'well', w-e-l-l. Correct? Then I say 'very', v-e-r-y. That's what I mean practice."

While there were strategies that all four participants used in their learning of English, three SRL strategies emerged to be the most commonly reported and most important to the participants. The data also showed that there was some variation in the use of the other SRL strategies, and that both individual-level and contextual differences may have contributed to these differences.

CONCLUSIONS AND IMPLICATIONS

A strategy is considered self-regulated only when the student has a particular self-set goal in his/her mind and the implementation of the strategy is to achieve the self-set goals. A self-regulated student also readjusts his/her goals and SRL strategies according to the feedback received in the execution of his/her plans. Overall, the participants in the current study reported more SRL strategies in reading tasks than in writing tasks and used more strategies with written materials than with oral English. ELLs' use of certain strategies sometimes depended upon the particular context or specific learning task.

Three research questions guided this study. The first question asked, what SRL strategies do ESL children employ in learning English across different learning tasks and across home-based and school-based contexts. These four case studies provided insight into the specific SRL strategies that some ESL children employed in learning English across different contexts. While two of the strategies (self-consequences and attention control) were not observed at all by the four boys, nine of the 11 were observed by at least one of the students. Interestingly, the most commonly reported strategies that all four boys used were seeking social assistance, seeking information, and environmental structuring. Seeking social assistance was the most important for these ELLs. All participants found it useful to seek peer assistance, teacher assistance, and other adults when they faced challenges or difficulties in learning or negotiating English. All four boys used this strategy frequently when they encountered difficulties across learning tasks and in social and academic contexts. As expected, participants in this study employed a variety of strategies to seek information while learning. They used pictures from books, dictionaries or other media sources to support their comprehension. In addition, they recognized the importance of having a quiet place to study as a factor that influenced their learning. The strategy that was used the least was keeping records and monitoring. Since this is an academically de-

manding task, it makes sense that it is one that students learning English as a second or third language would employ it less. For ELLs, notetaking is a skill that must be developed over time. Self-evaluation took different forms for each participant, and organizing/ transforming, goal-setting/planning, and reviewing records were strategies often observed by only one student. Rehearsing and memorizing was a strategy that was more commonly used than the others mentioned, but not all four boys used them. For some ELLs, it is often very useful to rehearse or practice English, especially those used at the earlier stages of learning English. While we did not observe all of the strategies all of the time or by all four of the boys, the strategies that were used by these participants have great implications for the classroom. The variation we observed in the use of the other SRL strategies can be attributed to many factors that were not directly examined. Specifically, the age of the participant and relevance of the strategy may have contributed to the variety of strategies employed by each individual.

The second research question asked, how do ESL children use SRL strategies across different learning tasks and across home-based and school-based contexts while learning English. The most commonly used SRL strategies (seeking social assistance, seeking information, and environmental structuring) employed by all of the participants were used by all the participants across different language-learning tasks. Participants reported the use of seeking social assistance in home-based context—playing games, working on homework assignments, and watching American TV programs. In school-based contexts, participants asked their teachers for help when they encountered difficulties performing assigned reading or writing tasks. Seeking information was used in listening, speaking, reading, and writing activities in both home-based and school-based contexts. All participants were aware of the importance of a quiet place to read books in English. As a result, they all chose to read in their own rooms or the classroom. In contrast, some strategies were more commonly used for particular language learning tasks. For example, goal-setting and planning was used only by the participants in performing reading and writing activities but not in performing listening or speaking activities. Participants used self-evaluation only in speaking and writing activities but not in reading or listening activities. Across learning tasks, participants reported more SRL strategies for performing reading tasks than writing tasks. Participants also tended to use particular strategies in certain situations. Rehearsing and memorizing and reviewing records were used more often before examinations than in other situations. It is possible that the participants understood the importance of using these strategies only in specific situations.

The third question asked, what are the differences in SRL strategies among ESL students across different learning tasks, and across home-based and school-based contexts, while learning English. Although we tried to distinguish the SRL strategies used in home-based contexts from those SRL

strategies used in school-based contexts, we found that the SRL strategies these participants used were dependent more upon the language learning contexts as we discussed above, than upon the home-based and school-based contexts. For example, we observed students using less goal-setting and planning in home-based contexts. A closer examination, however, revealed that these strategies were more often used in reading and writing contexts while most of the activities in home-based contexts were listening and speaking. Overall, students used the three most commonly reported strategies in both home-based and school-based contexts and across listening/speaking or reading/writing contexts. Thus, our data did not help us distinguish whether the SRL strategies differed because of the language learning contexts or because of the home-based or school-based contexts. It is possible that children used these strategies whenever they were engaged in any language-learning activity. We did find other strategies to be more context-specific. For example, goal-setting and planning was only used in academic reading and writing contexts but not during speaking and listening tasks by the participants. In addition, participants in this study reported the need to use more strategies while reading than in writing. It is important to note that the data showed that there was great variation in children's access to SRL strategies, which may have influenced their use of specific ones.

IMPLICATIONS FOR EDUCATORS

Studies of students' use of language-learning strategies (and our data) show that effective learners are more flexible with their repertoire of strategies and more successful at monitoring and adapting their strategies. Teaching students different cognitive and self-regulatory strategies may be more important for improving their actual performance on classroom academic tasks and training students in SRL strategies has proven to show significant improvements in academic performance (Butler, 1998; Neilans & Israel, 1981; O'Malley, 1987). Our findings also indicate that students trained with strategies learn to become more self-regulated.

The data show that it is important for teachers to incorporate SRL strategies in the teaching of English so that students construct their own strategies and have more choices when they meet difficulties in their English language-learning process. Based on the findings from this study, we encourage educators to:

- Embrace social interaction between ELLs and peers, teachers, and other educators to promote the seeking of social assistance.

- Teach cognitive and metacognitive skills such as goal-setting, planning, monitoring the progress, and self-evaluation.
- Teach specific SRL strategies to improve language learning such as seeking information, organizing and transforming, keeping records, seeking social assistance, environmental structuring and attentional control, rehearsing and memorizing, and reviewing records.
- Help students practice newly acquired strategies and make sure that strategy execution during practice is easy.

LIMITATIONS OF THIS STUDY

There were several limitations in this study that are important to note. These include small sample size, non-representation of girls, limited participation of classroom teachers, and limited observation of learner variables. The participants in this study were four Chinese boys who had at least one year of exposure to the English language-learning environment. Since there were no girls represented in this study, we were unable to observe or speak to any gender differences that may have impacted SRL use in the learning of English. The participation of classroom teachers would have brought in an important perspective and helped us better understand the children's behaviors in the classroom. We also acknowledge that learner variables (such as students' self-efficacy beliefs, beliefs in the usefulness of the task, motivation, gender, years of study, language proficiency, and second language learning experience prior to English learning) found in the literature to be important to SRL were not explored individually. This was a rich, descriptive study that can help educators understand the SRL strategies used by some ELLs during the learning of English. Given the complex diversity within the Asian and ELL populations, these findings are not intended to be generalized to students within the Chinese or other cultural communities. These descriptions can serve as a reference for researchers to investigate other students' use of SRL strategies.

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