The benefits of metacognitive reading strategy awareness instruction for young learners of English as a second language

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Abstract

This paper presents a small-scale study examining the effects of metacognitive reading strategy instruction on English language learners’ reading comprehension in a Hong Kong international school. Twenty-five primary school (Grade 5) students who learn English as a second language participated in this study. Metacognitive instruction was incorporated into 10 process-based reading lessons. Data were collected from notes learners took during reading, post-reading reflection reports, teacher-facilitated group discussions and two types of reading tests. Results revealed that the young learners could articulate several knowledge factors that influenced their reading. In addition, learners reported a better understanding of the nature and demands of reading, a deeper awareness of metacognitive knowledge in improving reading comprehension and increased confidence in handling reading exercises. The learners also showed enhanced reading performance compared to those in a control group without metacognitive intervention. This study highlights the potential of metacognitive instruction to enhance primary school English learners’ reading literacy.

Key words: metacognition, reading, young learners, reading comprehension, English language learners, literacy, second language learning

Introduction

Instruction on awareness of metacognitive strategies has been shown to foster reading comprehension among students learning English as a first language (L1) or a second language (L2). English language learners who come from non-English-speaking backgrounds can benefit from explicit instruction on comprehension strategies (Block & Pressley, 2002). Good readers are strategic and motivated in setting goals for reading; they also identify and remember information, monitor and evaluate as they read (Afflerbach & Cho, 2009; Duke & Pearson, 2002). The present study provided focused instruction to help learners develop reading comprehension skills, a particularly stressful process for young learners.

Literacy acquisition can be difficult for young learners (Hammer et al., 2014). The challenge is heightened when young learners must process sufficient information to make sense of various types of reading material. Reading, defined as “the ability to draw meaning from the printed page and interpret this information appropriately” (Grabe & Stoller, 2002, p. 9), is a cognitive process that requires myriad skills and strategies. Reading comprehension involves an array of factors such as background knowledge, vocabulary, fluency, active reading skills and critical thinking. Helping young learners to cultivate necessary reading skills is not easy; language teachers often encounter obstacles in guiding young learners to improve reading literacy, a skill involving unobservable processes.

Literacy research has begun to emphasise the benefits of metacognition in helping learners understand mental and emotional processes while reading. Studies have identified a clear correlation between metacognitive instruction and reading ability in secondary school students (e.g., Zhang et al., 2008). Scholars have suggested that learners can be guided towards cultivating their own metacognitive strategies for reading comprehension. These students generally apply a repertoire of strategies when reading: they activate prior knowledge, make connections with the text, notice the text structure, ask questions of the text, determine contextual importance and summarise as they read. These findings also offer ways teachers can assist students in discovering important aspects of the reading process. When learners become aware of the nature and demands of learning to read, they may be in a better position to self-regulate their own reading by choosing comprehension strategies that enhance their understanding of the text.

To date, no detailed studies have focused on the extent to which English language learners’ participation in metacognitive instruction – defined in the present study as a teaching process that explicitly elicits and develops students’ knowledge of the reading process – may develop young English learners’ reading skills. Some early studies on metacognition revolved around literacy, particularly in writing (Larkin, 2009), thereby highlighting the metacognitive elements of writing by analysing video observation data, teacher and researcher reflections and structured field notes. Results underscore the importance of turning students’
attention to reading processes, particularly in the conceptualisation of reading as a socially, historically and culturally situated activity (Larkin, 2010).

In addition, given relatively recent trends in moving reading classroom practice towards collaborative group work (Grabe & Stoller, 2002), it is necessary to investigate the self-regulatory features of English language young readers, who are often unable to process information quickly enough to make sense of what has been presented in a text. This problem may be attributable to young learners’ limited cognitive load. Literacy teachers or educators face the challenging task of helping young learners improve a skill that involves unobservable processes. It is therefore essential to assist English language learners, particularly young learners, in understanding the cognitive processes underlying reading to uncover features that may help students evaluate, manage and develop reading comprehension skills.

The first objective in the present study was to elicit and identify primary school students’ metacognitive knowledge about reading in English. Two types of metacognitive knowledge were examined: task knowledge and strategy knowledge. According to Paris and Winograd (1990), task knowledge is defined as the purpose, demands and nature of learning tasks, whereas strategy knowledge refers to the approaches and techniques likely to be effective in accomplishing a task or goal. To assess task knowledge, the researcher examined how learners thought about the purpose of reading and the motivational factors influencing their reading. In terms of strategy knowledge, the researcher explored learners’ perceptions of the effectiveness of metacognitive reading strategies. The second objective was to investigate the usefulness of metacognitive reading strategy instruction in enhancing learners’ reading performance. The research questions underpinning this study are as follows:

1. What factors influence reading as reported by learners?
2. What metacognitive strategies are adopted by learners while reading?
3. What impact does metacognitive instruction have on reading development?

**Metacognition**

According to Flavell (1979), metacognition refers to an awareness of one’s own cognitive processes and products along with the controlled regulation and orchestration of these mental activities and strategies. Metacognition is characterised by two key features: control (i.e., executive aspects) and knowledge about cognitive states and processes (Paris & Winograd, 1990). The former refers to the use of metacognitive strategies while the latter includes person knowledge (i.e., individual and universal traits that influence learning), task knowledge and strategy knowledge.

Schraw and Dennison (1994) posited that metacognition consists of two basic components: knowledge and regulation of metacognition. Knowledge of metacognition refers to an individual’s own cognition (or cognition in general) and encompasses three types of knowledge: (1) declarative knowledge (i.e., factual knowledge and information an individual knows); (2) procedural knowledge (i.e., knowing how to perform certain activities); and (3) conditional knowledge (i.e., knowing when and why to allocate resources when using declarative and procedural knowledge) (Brown, 1987). Metacognitive regulatory skills related to reading include the following: (1) planning (i.e., choosing appropriate strategies and effectively allocating resources to complete a task); (2) monitoring (i.e., observing task comprehension and identifying targets for optimal performance); and (3) evaluation (i.e., appraising the regulatory process and the efficiency with which a task is completed) (Jacobs & Paris, 1987).

Fogarty (1994) suggests that metacognition is a three-part process. To be successful thinkers, learners must develop a plan before reading, monitor their understanding of the text, use “fix-up” strategies when meaning breaks down and finally, evaluate their thinking after reading. This process implies the role of metacognitive instruction in teaching reading comprehension, as such instruction may help learners sift through a text to identify its main points and then extend that knowledge to critically evaluate what has been understood.

**Metacognition and reading**

Promoting high levels of literacy for learners is challenging; learners must apply a range of strategies when interpreting and evaluating what they read, drawing conclusions based on evidence and developing higher-order thinking skills (Raphael & Au, 2005). The benefits of metacognitive instruction in English learning, including listening (Goh & Taib, 2006), word learning (Teng, 2017) and writing (Teng, 2016; Teng & Huang, 2018), have been acknowledged in the literature. Metacognitive instruction can potentially sensitize students to the learning process and help them cultivate metacognitive knowledge.

Brown (1980) first introduced the concept of metacognition in the field of reading by describing the reading process as involving strategic knowledge and action. In conjunction with reading development, the development of metacognitive skills is perceived as the ability to observe, communicate, experience and gradually develop a deep understanding of one’s own learning and thought processes through active selection of metacognitive reading strategies (Varga, 2017). Metacognitive reading strategies refer to specific, deliberate, goal-directed mental processes or behaviour that control and modify the reader’s attempts to understand texts (Afflerbach et al., 2008). A lack of
metacognitive processing explains why many young learners are not successful readers. Efficient readers have often been described as strategic or “constructively responsive” in that they carefully orchestrate cognitive resources when reading (Pressley & Aflerbach, 1995). Nevertheless, some researchers have argued that young learners do not possess metacognitive knowledge or skills, thus rendering the provision of metacognitive instruction ineffective (Williams & Atkins, 2009). One explanation may be that young children have limited executive functioning, referring to the ability to coordinate various cognitive processes to accomplish a task.

However, empirical research has substantiated the effects of metacognitive instruction on young learners’ reading comprehension. In an early study (Brenna, 1995), data from observations and interviews revealed that five young L2 learners employed a variety of metacognitive strategies while reading. Her study demonstrated that young readers knew how to use metacognitive strategies of self-knowledge, task knowledge and text knowledge to repair comprehension. However, the five learners were ahead of their peers in reading ability, and reading was also valued in their home environment; these variables likely influenced their perceptions of reading.

Zhang et al. (2008) explored reading-related metacognitive strategies among 18 L2 learners from three primary schools in Singapore. Data were collected using think-aloud protocols. The findings indicated that these young learners were able to display metacognitive strategies in reading comprehension. However, strategy use varied according to language proficiency and grade level. High-proficiency learners outperformed lower-proficiency learners in terms of the number of strategies applied. Nevertheless, as only one high-proficiency learner and one low-proficiency learner in each grade at each school participated, inferential statistics in this study should be interpreted cautiously.

Varga (2017) focused on textual discussions of fiction in Grades 6 and 7. By analysing the correlation between linguistic strategies used by the teacher and the metacognitive perspectives developed by the students, results suggested that explicit teacher modelling could help learners adapt their use of metacognitive strategies for reading comprehension. In addition, the young learners were better able to observe and verbalise their text interpretation processes and emotional reactions while reading and recognise meaningful interactions between the text and the reader.

These empirical studies reveal considerable insights. First, young English language learners may possess and use metacognitive strategies during reading. Second, young English language learners with knowledge of metacognitive strategies may be able to regulate such methods to repair comprehension. Third, young English learners may become more proficient in reading by practicing and applying metacognitive strategies. For example, metacognitive instruction may help them discover how to use such strategies to develop a deeper understanding of the meaning of texts. Students may also apply metacognitive strategies to construct knowledge, monitor the use of these strategies during reading and then evaluate suitable methods to correct emerging problems (Teng, 2018). Finally, young English learners’ choices of metacognitive strategies depend on their language proficiency and the assessment methods used. To validate these conclusions, more sensitive assessment methods and studies involving learners with various levels of English proficiency are needed to evaluate the development of young learners’ metacognitive reading strategy awareness.

The present study

This study was conducted to explore the benefits of metacognitive instruction in reading for young English language learners. Much progress has been made in research with secondary school L2 learners (e.g., Dabarera et al., 2014); however, studies detailing how young learners deploy metacognitive strategies as part of their reading efforts are scarce. In light of limited scholarship, data gathered from young learners provided insufficient pedagogical information on how primary school young learners elicited and identified metacognitive knowledge about reading in English. In addition, the effects of metacognitive instruction on young learners’ English reading needed to be determined by designing a series of process-based reading lessons. Despite being a small-scale study with a group of primary school students, this work contributes to the growing body of research related to incorporating metacognitive instruction into young English learners’ reading.

Method

Participants

Students were recruited from one fifth-grade class in an international primary school in Hong Kong. The sample (N = 25) consisted of 12 boys and 13 girls, all of whom were 11 to 12 years old. According to the most recent end-of-semester reading examination and teacher’s assessment, 10 were considered to have advanced reading comprehension, 10 had average reading ability and 5 had poor reading ability. English was the medium of instruction at the school. Of the participants, 10 were from Britain, 5 were locals in Hong Kong, 4 were from India, 4 were from Australia and 2 were from mainland China. Reported by the participants, British and Australian students used English and Chinese at home, Indian students spoke Hindi at home and students from mainland
China and Hong Kong used Chinese (Putonghua or Cantonese) at home. Hence, the participants were learning English as a second language (L2). This study was approved by the primary school’s teaching department, and students’ parents each signed an informed consent form.

In terms of reading performance, the group of students who received metacognitive reading strategy instruction was defined as experimental group (EG) while the group without receiving metacognitive reading strategy instruction was defined as control group (CG). The CG was one class of 25 students, of similar background to the EG, who were receiving normal school reading instruction. All students in EG and CG read the same texts, received instruction from the same teacher and were tested on the school test at the same time. The only difference was that students in CG did not receive metacognitive instruction-embedded reading lessons but school reading instruction. Thus, the results from the EG and CG are directly comparable.

**Process-based reading lessons**

The notion of providing a classroom environment conducive to reading literacy has become popular in recent years (Teng, 2015). This project was based on 10 process-based lessons conducted in the classroom, during which the teacher monitored pupils’ progress on reading tasks and offered support or direct instruction to individuals and groups. Process-based reading lessons in the present study refer to lessons which require students to read for authentic purposes during an extended process that includes reading of a text followed up with the answering of questions, reflecting on the reading and finally, reporting on comprehension and discussing the use of reading strategies. The process is completed in a recursive manner rather than in discrete steps. A key element in monitoring, support and direct instruction was the applications of metacognitive strategies to facilitate individual reflection and group discussion. As learners were focused on monitoring reading comprehension, meaningful, well-prepared metacognitive prompts were essential to engaging learners in trying to understand text – a process that could be abstract and confusing for young readers. This multifaceted teaching technique involves a combination of strategies intended to gradually cultivate a degree of reading independence in primary school readers.

Participants were enrolled in a balanced literacy course intended to ensure that each child learns to read, write and spell successfully. The balanced literacy course, according to the school document, is an English literacy course that includes several components: the read aloud, guided reading, shared reading, interactive writing, shared writing, reading workshop, writing workshop and word study. Following UK and US pedagogical principles, teachers employed instructional strategies involving reading workshops (i.e., reading aloud, independent reading and shared reading), writing workshops (i.e., guided writing, shared writing and interactive writing) and word study (i.e., spelling and grammar). Metacognitive reading strategy awareness instruction was incorporated into the reading lessons for the EG in the present study. This study was conducted in the middle of the first semester to help students become familiar with the lessons and the teacher’s teaching style. Ten process-based reading lessons, drawn from Goh and Taib (2006), were provided. The lessons were modified after consulting with the teacher to make them more suitable for teaching reading. Each lesson was an hour long. Instruction, including practice for the reading examination as well as opportunities to develop reading comprehension, aligned with curricular teaching requirements. The lessons followed a three-stage sequence: read and answer, reflect, and report and discuss. Details of the three-stage sequence were listed as follows:

**Stage 1: read and answer**

This stage, which lasted approximately 20 minutes, included two parts: balanced literacy instruction and traditional reading pedagogy. The balanced literacy instruction mainly included instructional strategies involving reading and writing workshops, which were in line with the curricula requirement. In terms of traditional reading pedagogy, students first read a text and answered three to five multiple-choice comprehension questions. Pre-reading activities were not provided so as to replicate examination conditions. The chosen reading materials were parallel versions of the reading examination. Each text consisted of approximately 150 words and addressed topics related to family life, science, stories, society, announcements and letters. To answer the questions, the students first needed to comprehend the details of the text. Participants were also asked to respond to three to five short-answer questions. The type of questions included literal, inferential and evaluative questions, which would help students respond to factual recall, make inferences and give an opinion. Varying the types of required responses also helped the researcher discern whether metacognitive instruction influenced students’ perceptions of task demands and strategy use.

**Stage 2: reflect**

After Stage 1, students were asked to spend 20 minutes reflecting independently on how they had completed their reading exercises. Metacognitive prompts, which had not been previously introduced to the participants, were printed as a list and distributed to the students. Metacognitive prompts were organised following the Question Answer Relationship framework proposed by Raphael and Au (2005) and the questioning framework suggested by Wilson and Smatana (2011). These
models provided an outline for students to link strategies at appropriate points in the reading cycle. In addition, this structure guided question-asking practices before (e.g., eliciting relevant background knowledge), during (e.g., focusing on relevant reading strategies) and after (e.g., evaluating strategy use) reading. Table 1 presents the teaching procedure in Stage 2, which involved immediate retrospection following completion of the reading and allowed students to report their mental and cognitive processes before they were forgotten (Nunan & Bailey, 2009). During individual reflection, students were asked to take notes on their actual experiences during reading. Teachers guided students in reflecting during this stage, as students could possess different levels of metacognitive awareness.

Stage 3: report and discuss

Participants randomly formed five-member groups for the final stage of reporting and discussion. The teacher facilitated this stage, which also lasted for 20 minutes. In each group, students took turns reading their reflection notes aloud while the other students listened and took notes. Sometimes students asked questions or offered comments. This stage aligned with the structure of think alouds (Wilhelm, 2001), during which students engaged in discussions while the teacher and other students monitored and helped. This framework was chosen to create a record of the strategic decision-making process involved when consuming a text to help learners become aware of noticing, doing, asking and understanding as they read and then discussing reading strategies used within the content of the text.

Data collection

Four types of data were collected to evaluate the usefulness of process-based reading lessons supplemented with metacognitive instruction. First, each student was asked to write a short reflection during an additional lesson 1 week after the last reading lesson. The prompt “What I think about my reading ability after the reading lessons” was provided to students to guide their reflections. Second, prior to drafting their reflections, students were given time for group discussion; this was intended to help consolidate learners’ metacognitive knowledge about the reading

Table 1: Teaching procedure for Stage 2

<table>
<thead>
<tr>
<th>Metacognitive instruction</th>
</tr>
</thead>
<tbody>
<tr>
<td>Teacher’s role:</td>
</tr>
<tr>
<td>(1) The teacher informed students of the usefulness of metacognitive prompts and encouraged them to exert extra effort in it.</td>
</tr>
<tr>
<td>(2) The teacher used the list of metacognitive prompts (e.g., comprehension, connection, strategy and reflection) and helped individual learners when necessary.</td>
</tr>
<tr>
<td>Student’s role:</td>
</tr>
<tr>
<td>(1) Each student reflected individually on the metacognitive, self-addressed questions.</td>
</tr>
<tr>
<td>(2) Each student verified his/her cognitive and metacognitive skills based on feedback-corrective processes, including with enrichment and remedial help provided from the teacher as necessary.</td>
</tr>
<tr>
<td>Metacognitive prompts:</td>
</tr>
<tr>
<td>(1) Comprehension</td>
</tr>
<tr>
<td>Purpose: familiarise students with articulation of the main ideas in the text.</td>
</tr>
<tr>
<td>What was the text about?</td>
</tr>
<tr>
<td>What were the purposes of this text?</td>
</tr>
<tr>
<td>What specific points did I find important in this text?</td>
</tr>
<tr>
<td>(2) Connection</td>
</tr>
<tr>
<td>Purpose: guide students in contemplating the similarities and differences between an immediate text and previously read texts.</td>
</tr>
<tr>
<td>What were the similarities and differences between this and those I have read in the past?</td>
</tr>
<tr>
<td>(3) Strategy</td>
</tr>
<tr>
<td>Purpose: allow students to reflect on appropriate strategies for the exercise.</td>
</tr>
<tr>
<td>What strategies were appropriate for completing this text reading in time?</td>
</tr>
<tr>
<td>What strategies were useful for grasping the gist of this text?</td>
</tr>
<tr>
<td>What strategies were useful for inferring unknown words?</td>
</tr>
<tr>
<td>(4) Reflection</td>
</tr>
<tr>
<td>Purpose: guide students in evaluating their reading process during or at the end of the exercise.</td>
</tr>
<tr>
<td>Did my strategies for reading make sense?</td>
</tr>
<tr>
<td>Did I focus on all the details of the text?</td>
</tr>
<tr>
<td>Did I consider all relevant information while figuring out the purpose of this text?</td>
</tr>
<tr>
<td>What prevented me from achieving the correct answers?</td>
</tr>
<tr>
<td>What did I do to understand as much of the text as possible?</td>
</tr>
</tbody>
</table>
process, during which the teacher provided hints to facilitate students’ use of metacognitive prompts throughout the discussion. Group discussions were videotaped and then analysed to identify students’ metacognitive incidents, defined as observable shifts from focusing on the task or social interaction to focusing on an aspect of metacognition (i.e., regulation and control of thinking). Third, two sets of reading tests were administered to examine students’ reading performance: the teacher developed the first set, and the second comprised the required school examination. The first test was administered immediately before and after the lessons to compare learners’ reading scores before and after the intervention and assess the value of metacognitive strategy instruction. The second test was administered 1 month before and after the lessons to remain consistent with students in other classes; this test allowed for comparisons to learners outside the intervention reading program. The format of the tests was similar; each focused on comprehension of text content with a maximum score of 30 points. To answer the questions, the learners may need to connect information in different parts of the text. Finally, notes written by students during Stages 2 and 3 were collected to analyse participants’ metacognitive knowledge of reading.

Data analysis

The data analytic process was developed from Larkin (2009). Analysis involved three levels: the first level focused on repeated viewing of video data from students’ group discussions to identify learners’ metacognitive incidents; the second level aimed to triangulate video findings with students’ written reflections and notes from Stages 2 and 3 to compare and analyse metacognitive incidents; and the third level differentiated between and within metacognitive incidents to establish codes. The selected coding scheme was grounded in the data through a metacognitive theory lens. Two independent researchers, who were not otherwise involved in this study, were invited to conduct the coding analysis. Initial interrater reliability produced a Cohen’s kappa of 0.62, which is fair to good. The final analysis in the present study included only those agreed incidents. A Wilcoxon signed-rank test, a nonparametric test, was performed to compare group differences because the assumption of data normality has been violated (Dalgaard, 2008). Effect size was based on Cohen’s (1988) criteria of 0.1 = small effect, 0.3 = medium effect and 0.5 = large effect.

Table 2: Reported metacognitive knowledge factors that influenced reading

<table>
<thead>
<tr>
<th>Text</th>
<th>(a) Knowledge integration</th>
<th>It is difficult for me to make connections between my current knowledge of a topic, new information and my personal experience.</th>
</tr>
</thead>
<tbody>
<tr>
<td>(b) Vocabulary</td>
<td>I am not sure of the sentence when I am not able to decipher a keyword’s part of speech, meaning, useful context clues or how it functions in a sentence.</td>
<td></td>
</tr>
<tr>
<td>(c) Information</td>
<td>I read, but I often forget the supporting details, the sequence of events and the overall structure of the text.</td>
<td></td>
</tr>
<tr>
<td>(d) Text complexity</td>
<td>I am not sure of the meaning because some sentences in the text have multiple layers of meaning.</td>
<td></td>
</tr>
<tr>
<td>(e) Text genres</td>
<td>I think different genres have unique characteristics. I am more familiar with the story genre, so this kind of knowledge provides a scaffold for comprehension. But the situation is different when reading science.</td>
<td></td>
</tr>
<tr>
<td>Task</td>
<td>(a) Types of questions</td>
<td>Both types of questions require me to look back and find text information.</td>
</tr>
<tr>
<td>(b) Test format</td>
<td>I felt unsure about answering some questions. When selecting the best answer, I could rule out some choices and I did not really have to look back to the text. However, when it comes to free response, I have to check the text again to locate the details for the answer.</td>
<td></td>
</tr>
<tr>
<td>Environment</td>
<td>(a) Test conditions</td>
<td>I think this kind of reading is like taking a test. There was a lot of pressure to have tests every day.</td>
</tr>
<tr>
<td>Personal factors</td>
<td>(a) Motivation</td>
<td>Sometimes I lose motivation because it causes too much anxiety for me to read texts for examination rather than for pleasure.</td>
</tr>
<tr>
<td>Teacher instruction</td>
<td>(a) I get used to teachers’ direct instruction. I need some explanations about the text.</td>
<td></td>
</tr>
</tbody>
</table>
Results

Reported metacognitive knowledge factors that influenced reading

The data analysis revealed that students reported 20 metacognitive knowledge factors influencing their understanding of reading and comprehension questions. Ten features, which were reported by more than 15 students (60%), are presented in Table 2 along with selected student comments.

A few students reported other relevant factors while reading, including memory, fluency, predictions, creation of mental images and literary devices (e.g., failing to understand euphemisms).

Reported metacognitive awareness of strategies

Data from self-reflection reports, classroom notes and group discussions also exemplified learners’ reading descriptions and strategy descriptions. Reflections on reading constituted a considerable portion of the reports, shedding light on learners’ metacognitive awareness of their own strategies (i.e., declarative awareness), strategy application (i.e., procedural awareness) and why they worked on the specific reading task at hand (i.e., conditional awareness). These data also delineated how learners’ awareness translated into self-regulation through their behaviours, decisions, choices, skills and actions while reading. Results are presented in Table 3.

Table 3 reveals that students were able to describe challenges that occurred during reading exercises (63 instances). Most students demonstrated some amount of metacognitive awareness of declarative, procedural and conditional strategies when overcoming challenges while reading (62 instances). Learners also exhibited awareness of self-regulation, namely, how they planned actions for reading (52 instances), monitored their progress (58 instances), reflected on the skills and strategies learned (62 instances) and connected new information to information they already knew (56 instances). Students thus appeared to develop a certain level of declarative, procedural and conditional metacognitive awareness of strategies and gained a better sense of how and why they should self-regulate and take additional action when reading. These categories may be connected to students’ positive feelings about their newfound awareness (53 instances) and positive self-talk (59 instances). Interactions among categories are presented in Figure 1.

However, less successful students (n = 5) seemed to mention bottom-up processing more frequently (e.g., sounding out words, repeated reading of isolated unknown lexis). These reported behaviours suggest that the learners were unaware of the connection between

<table>
<thead>
<tr>
<th>Code</th>
<th>Examples</th>
<th>Students</th>
<th>Instances</th>
</tr>
</thead>
<tbody>
<tr>
<td>Planning actions for reading</td>
<td>e.g., I will scan the text and plan what parts I need to focus on to make a predictive map of the text’s contents.</td>
<td>15</td>
<td>52</td>
</tr>
<tr>
<td>Discerning declarative, procedural and conditional strategies used to overcome challenges while reading</td>
<td>e.g., Sometimes when difficult words appear, I know when and how to use the context to guess the meaning of the word so as not to be worried.</td>
<td>21</td>
<td>62</td>
</tr>
<tr>
<td>Expressing positive feelings about skills learned</td>
<td>e.g., I was happy when I thought I could answer that question correctly because I could use my predictive and contextualising skills to guess the main point for that question.</td>
<td>16</td>
<td>53</td>
</tr>
<tr>
<td>Monitoring progress</td>
<td>e.g., I would consider how I could monitor and repair misunderstanding through drawing out information in a visual form.</td>
<td>18</td>
<td>58</td>
</tr>
<tr>
<td>Reflecting on what has been learned (e.g., skills and strategies)</td>
<td>e.g., After reading, through making up my own questions, I quiz myself and reflect on what can be done for more robust learning and memory.</td>
<td>22</td>
<td>62</td>
</tr>
<tr>
<td>Describing challenges posed by the exercises</td>
<td>e.g., To comprehend the text, one difficult exercise was when as much information as possible was included for the topic, I needed to determine which ideas were the most prominent or important in the text.</td>
<td>22</td>
<td>63</td>
</tr>
<tr>
<td>Positive self-talk</td>
<td>e.g., When reading boring texts, I talked to and comforted myself to get rid of negative feelings.</td>
<td>19</td>
<td>59</td>
</tr>
<tr>
<td>Linking with what has been learned</td>
<td>e.g., To infer the meaning of some unknown words, I would think about what background knowledge or cultural background I knew that was related to this text.</td>
<td>19</td>
<td>56</td>
</tr>
</tbody>
</table>
the reading exercises at hand and meaning-making attempts. Some comments included the following:

“Skimming is a difficult skill for me. I am always afraid whether I can answer the questions accurately. When I skim a text, I think I miss some message. After skimming a text, I forget the answers. Then I have to read it again. If there is a long and complicated sentence, I will slow down and think of some words. I don’t know whether the words are important or not.”

“When I check the text again, I still cannot understand some words. I will stop my reading and just focus on some difficult words.”

Improved reading performance

Students’ reading performance was analysed by comparing average scores from Group A (10 students considered to have advanced reading ability), Group B (10 students considered to have average reading ability) and Group C (5 students considered to have poor reading ability). Results are presented in Table 4.

Although learners who earned low marks on the pre-test did not show drastic improvement, all learners demonstrated a certain level of progress. Learners with advanced reading ability increased their scores on the teacher-developed test from 25.12 to 29.96, scoring 27.12 on the end-of-semester school examination a month later. Learners with average reading ability increased their performance from 20.12 to 25.45 on the teacher test and scored 24.12 on the school examination. Learners with poor reading ability increased their performance from 16.14 to 20.12 on the teacher test and scored 19.15 on the school examination. These results suggest that all participants benefited from metacognitive instruction, and those with advanced reading ability demonstrated the best performance.

The mean scores of EG in the school test was compared with CG. With a maximum score of 30 points, EG achieved a mean score of 23.46 while CG achieved a mean score of 20.11. Results of Wilcoxon signed-rank tests did not show a significant difference between EG and CG for the school pre-test ($z = -7.13, P > 0.05$). However, the advantage of the EG over the CG was statistically reliable for the school post-test, $z = 4.18, P < 0.001$, with a large effect size (0.51). In addition, a Wilcoxon signed-rank test showed a statistically significant difference in comparing teacher-developed pre-test and post-test for the EG ($z = -3.93, P < 0.001$), with a medium effect size (0.44). On the basis of these findings, metacognitive reading strategy instruction adds value to the reading lessons and leads to better reading performance.

The final reflection reports also substantiated the positive effects derived from reading lessons. Students’ comments implied motivation from the teacher directing them to reflect on their learning, and assuming more responsibility for the reading process. Consider the following examples:

Table 4: Students’ reading performance

<table>
<thead>
<tr>
<th>Groups</th>
<th>Teacher-developed test</th>
<th>School test</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Pre-test</td>
<td>Post-test</td>
</tr>
<tr>
<td></td>
<td>M</td>
<td>SD</td>
</tr>
<tr>
<td>EG</td>
<td>Group A (n = 10)</td>
<td>25.12</td>
</tr>
<tr>
<td></td>
<td>Group B (n = 10)</td>
<td>20.12</td>
</tr>
<tr>
<td></td>
<td>Group C (n = 5)</td>
<td>16.14</td>
</tr>
<tr>
<td>EG</td>
<td>Total (n = 25)</td>
<td>20.46</td>
</tr>
<tr>
<td>CG</td>
<td>Total (n = 25)</td>
<td>—</td>
</tr>
</tbody>
</table>

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“I like the reading sessions. I think I know what I should focus on when reading. My reading skills have improved.”

“After the reading lessons, I have learnt how to cope with the reading test.”

“I am more motivated to read English texts after the lessons because I am more confident at grasping the gist.”

“I feel pretty confident and feel that I met the requirements. Even though I started out unsure of myself, I think I did pretty well.”

However, some learners expressed concerns about the traditional reading instruction, particularly as it relates to reading text. Some comments included the following:

“I feel pretty scared when I need to finish some exercises after reading.”

“I need to reflect on what I had read, but not through some tests like exercises.”

“Completing multiple choice type of comprehension questions is like asking me to guess through the clues contained in the questions. Within the limited time, I focused on some part of information but ignoring other parts because the questions only covered a partial part of the text.”

Discussion

Young learners who are learning a receptive skill, such as reading, can easily become passive and disengaged. They may encounter boredom and frustration. They may also be deprived of opportunities to take control of their reading development. In the present study, incorporating metacognitive reading strategies instruction to help students report, discuss and reflect on the cognitive processes in which they engaged during reading appeared to aid them in determining reading strategies. Previous studies have also suggested that metacognitive instruction improves L2 young learners’ awareness of ways and reasons to monitor their own understanding or progress and reading proficiency (e.g., Zhang et al., 2008). In the present study, readers progressed from an initial reliance on reading and exercise completion to awareness of a wider repertoire of factors that influenced their reading. While reading, young learners became aware of metacognitive strategies combining semantic, syntactic and phonological cues, self-knowledge and text knowledge.

In line with prior studies (e.g., Larkin, 2010; Myers & Paris, 1978), these findings provide evidence of young students’ metacognitive capabilities. Metacognitive awareness of declarative, procedural and conditional knowledge helped participants identify when, why and how to adapt strategic choices to plan, monitor and evaluate their reading processes. These actions might enhance students’ self-regulation, especially as the process was consistent with Zimmerman’s (2000) model of self-regulation development. He postulated that the highest level of self-regulatory competence – including the adaptation of skills and strategies to personal needs and contextual conditions – require learners to develop metacognitive awareness of what, how and why certain strategies apply. In turn, self-regulatory capacity feeds back into enhanced awareness of metacognitive strategies. Finally, metacognitive strategies (e.g., planning, monitoring and evaluating reading and self-regulation) were closely tied to how students felt about reading and their potential to successfully cope with reading exercises. Overall, cueing students to apply metacognition while reading appeared to encourage them to take more initiative when reading and to self-regulate their reading.

The findings also reveal that receiving explicit metacognitive instruction contributed to improved reading performance. The success of metacognitive reading strategies training in enhancing reading comprehension has also been documented by Dabarera et al. (2014), in which secondary school Year 1 students receiving metacognitive strategy instruction outperformed students who were not provided such instruction. Learners receiving this intervention could presumably build a repertoire of strategies upon which to draw while reading. As suggested by Varga (2017) and Teng (2018), improved metacognitive skills may lead to enhanced reading because the development of metacognitive strategies could sensitise learners to text-embedded contextual information and facilitate a self-questioning reading process.

Although young learners in the present study demonstrated some evidence of metacognitive processing, results also implied a complex interaction between reading and metacognitive experiences. Not all metacognitive experiences influenced reading development; some students, particularly those with low English proficiency, did not adopt multiple perspectives on the cognitive process while reading. Consistent with Zhang et al. (2008), learners with higher English proficiency displayed stronger linguistic knowledge of English, which might have prepared them to better discern the reading requirements and strategies influencing reading. They appeared more skilled in determining how to decode and encode textual conventions, construct meaning from the text and understand the purposes of different texts to use them in different ways. In contrast, learners with lower English proficiency could not decode properly, and their decoding was often unrelated to meaning making. Hence, high-proficiency young readers applied reading comprehension strategies more frequently than their lower-proficiency counterparts.
Conclusions

This study demonstrates that primary school pupils can benefit from metacognitive strategy instruction. They know how to articulate their strategy knowledge and task knowledge about reading; however, their knowledge is limited and should be developed. One method, as noted in this study, involves introspection and process-based discussions. In addition, young learners would benefit from explicit teaching of metacognitive strategies. As this study’s findings have shown, young learners might possess a limited repertoire of reading comprehension strategies but have the potential to adopt new ones.

Implications around teaching reading for young English learners in Hong Kong, as well as in similar contexts, can be deduced from these findings. First, understanding and controlling cognitive processes is one of the most essential skills teachers can teach; acquisition of this skill helps English young learners develop their independent learning. In this study, young learners’ abilities to articulate their strategy knowledge about reading appeared limited and should be developed. As young readers are growing cognitively, they may encounter challenges when adopting multiple perspectives on learning to read, including the use of specific strategies and how the application of such methods could change according to the demands of different reading exercises. Hence, one way of developing reading cognitively, as the present study demonstrates, is to integrate metacognitive prompts into process-based lessons.

Second, these results underscore the value of guiding young learners in discerning strategy, reading and task demands. As shown from learners’ reflection reports, students seemed somewhat discouraged by the traditional reading instruction. Multiple-choice test items presented at the start of reading lessons were intended to help learners focus on a desired amount of text; however, learners expressed frustration with the text-to-item ratio and focused instead on a small amount of text information and clues embedded in the test items to answer the questions. Learners were unable to understand the demands of such tasks, which required them to read many lines of text to answer comparatively few questions. In addition, instructing less proficient readers in understanding strategy demands appears challenging. These are all issues to be considered when teaching reading literacy. Apparently, young L2 learners need more guidance from teachers in mediating their perceptions of strategies and task demands. Young L2 learners are still developing cognitively and thus often find it difficult to adopt multiple perspectives, including strategy use and how to adjust the application of such strategies based on task demands. Teachers can help young L2 students realise that all strategies are related, and the effectiveness of these methods is easily influenced by various factors.

Third, explicit teaching and awareness raising are suggested approaches for teaching reading in the Hong Kong English Language syllabus. These objectives can be accomplished through explicit instruction of metacognitive reading strategies that will facilitate metacognitive awareness, which is linked to enhanced reading comprehension. As evidenced by the students in this study, young L2 learners may have a limited repertoire of reading comprehension strategies but can quickly adopt new ones through metacognitive reading strategy instruction.

Finally, for a comprehensive reading programme incorporating metacognitive instruction, I recommend using multiple methods including reflection, teacher modelling, reading and writing workshop approaches and integrated activity sequences (e.g., reporting and discussing thought processes) that focus alternately on text and process. Such a reading programme can help young L2 learners increase their awareness of key aspects of the reading process, develop a range of skills and strategies for reading and ensure that metacognitive instruction in reading remains fresh and innovative. This finding carries implications for teaching reading in the Hong Kong context. In line with Tse et al. (2015), to foster students’ deep understanding of reading materials, it is essential to nurture their higher-order reading skills by teaching strategies along with reading and writing workshops. Learners need to be able to evaluate the content of text and to form awareness of its value and quality. Moving on from the prevailing instructional approach of passing knowledge directly to learners in a ready-made, pre-digested format may be worthwhile. A combination of creative methods (e.g., reading and writing workshops, reflections, group discussions and metacognitive strategy instruction) should be explored to facilitate students’ independent exploration of content knowledge and their ability to cope with the inherent problems they discover while reading.

This study was not without limitations. First, due to administrative constraints, the intervention period of this study could not be strictly controlled to eliminate potentially confounding variables such as practice effects from other courses. Hence, the study only revealed the promise of metacognitive instruction in young learners’ reading improvement rather than obtaining exclusively concrete findings. Second, although the researcher attempted to ask students to write a reflective journal during the study process, the school administrator deemed it burdensome for students to maintain a journal during the intervention period. More sources of data should be incorporated into future studies exploring learners’ metacognitive strategy development. Finally, the absence of concrete examples of classroom discussion (or any analytic description thereof) suggests that the nature or range of comprehension evaluated using the intervention is uncertain. Future studies focusing on the nature and range of reading comprehension should be conducted.
Despite these drawbacks, this study presents possibilities for metacognitive instruction and creating opportunities for young readers to adapt their approaches to reading accordingly. This study is highly relevant to literacy educators and researchers interested in reading development as well as to teachers who instruct young learners in reading. Metacognitive instruction represents a worthwhile attempt to improve existing reading pedagogy to help young L2 learners employ strategies for self-regulated reading, including intentional and remedial actions by which young readers plan, integrate, monitor and control their own reading processes.

Conflict of Interest

The author declares that he has no conflict of interest.

References


