1. Introduction

Data have demonstrated that American K-12 students' reading and writing fluency has been increasing through the reinforcement of the reading curriculum (Abedi & Dietel, 2004). According to Ness (2016), teaching specific strategies increases students' comprehension (Ness, 2016). Students benefit from being taught to construct graphic organizers and create mental images representing the ideas implied in their text. Teaching students to elicit questions when they read also positively affects their comprehension. Moreover, students are more likely to recall main ideas in the text if they are instructed to summarize as they read (Pressley & Fingeret, 2005). Reading awareness and comprehension are some of the most important aspects in academic achievement.

In contrast to the reinforcement in America's reading curriculum, "reading has rarely been given sufficient attention" in the Taiwanese educational system (Zhang, 2001, p. 268). This specifically influences English as a Foreign Language (henceforth EFL) learners' metacognitive knowledge of how they consciously process their comprehension skills when engaged in discerning text meaning (Zhang, 2001). Consequently, these students are predominantly poorer in reading their own language and in reading EFL materials as well. As stated by the cooperative study conducted through the International Association for the Evaluation of Education Achievement (IEA) in the U.S. and the National Central University in Taiwan, Taiwanese students' reading comprehension is low. The average number of days of the school year they read was 24%, which was lower than the worldwide average of 40%. The average passage length they read was 500 words, which was also lower than the average length of 1000 to 1200 words that other countries' students read (NCU News Network). The reason for this disparity was that students are deficient in comprehending the passage's meaning from context and in using strategies to determine unfamiliar context while they are reading. Additionally, Taiwanese students spend more time on expository content reading in order to achieve higher academic scores, rather than spending time on extracurricular reading to expand their knowledge and worldview. This made them inferior in reading literacy and reading awareness.

Reading is an essential skill, and probably the most important skill, for second language [and EFL] learners to master in academic contexts (Grabe, 1991). Reading comprehension is

also the basic goal for ESL and EFL students to gain an understanding of the world and of themselves (Tierney & Readence, 2005). Since reading comprehension has been distinctively important both in first and second (foreign) language, reading strategies are of great interest in the field of reading research. In recent years, reading research has shed light on metacognitive awareness of reading strategies, perception of strategies, and strategy use in reading comprehension. As Puri (2018) stated, learners' reading ability and proficiency levels seemly work together with their metacognitive awareness of strategy use for meaning construction, the vital thing is to keep balance of their reading proficiency, awareness and strategies use.

The Sheltered Instruction Observation Protocol (henceforth SIOP) model was designed and developed by Echevarria, Vogt and Short (2009) to help English language learners access the core curriculum as well as academic English (Echevarria et al., 2009). It offered teachers a model for lesson planning, language and content integrating, and materials development to improve learners' comprehension, especially in the English content areas, content literacy for English learners and teacher change. It has a well-outlined instructional lesson plan that includes useful categories like preparation, building background, comprehensible input, interaction, practice and application, review and assessment, etc. (Echevarria et al., 2009). The author therefore utilized the SIOP framework incorporated with metacognitive strategies to create the lesson plans to see if this cooperation could help activate EFL learners' understanding of reading passages and reading awareness as well.

The aim of this study was to explore how metacognitive strategies through SIOP lesson plans can be implemented most effectively in Taiwanese universities, how metacognitive strategies can improve EFL reading comprehension of readers at different levels, and whether there is any relationship between the groups of the first factor (metacognitive strategy group and control group) and the groups of the second factor (good readers and poor readers). The author aimed to employ metacognitive strategies to investigate university students' reading awareness and probe how metacognitive strategies can enhance their EFL reading comprehension. The research questions addressed in this study were as follows:

1. Are there differences in the reading scores between the group that receives metacognitive strategy (think aloud, text structure, and summarization) training and the group that receives no metacognitive strategy training?
2. Are there differences in the reading scores between good readers and poor readers?

3. Are the differences in the reading scores among groups of the first factor (metacognitive and control) the same across groups of the second factor (good readers and poor readers)?
4. Are there correlations between the pretest and posttest, partialling out the effect of the Metacognitive Awareness of Reading Strategy Inventory (MARSI)?

2. Review of Literature

The concept of metacognition in the context of reading has received a great deal of attention in recent decades. Despite many researchers addressing this issue, metacognition remains inadequately understood in relation to English as a Second Language (henceforth ESL)/EFL reading awareness and comprehension. As a consequence, metacognitive strategies are neglected within the context of ESL/EFL reading, more specifically in EFL reading. Thus, in this literature review section, the theoretical framework about metacognition, metacognitive strategies, SIOP lesson plans and evidential research were delineated.

Theoretical Framework

Metacognition essentially is thinking about thinking (Ormrod, 1990). It refers to a person's awareness of cognitive processes and states, such as memory, attention, knowledge, guessing and illusion (Zhang, 2001). Brown (1980) defined metacognition as "knowing when you know, knowing what you know, […] and knowing the need to change your state of knowledge (as cited in Chipman & Segal, 1985, p. 7)." Take an example below: when students study their textbooks, they are not just recognizing the words and sentences in the passages; they are also trying to "store information they read in long-term memory so they can retrieve it later on. They are [actually] reading for learning (Ormrod, 1990, p. 352)."

Vygotsky (1934/1982, as cited in Diaz-Rico, 2004) was the first person who investigated the idea of metamemory, which serves as a theoretical basis of the concept of metacognition. Vygotsky (1978) believed that children's learning development was dependent on social interaction and that social learning leads to cognitive development. As children's learning is through social interaction, curriculum and instructional techniques should, to some extent, also be designed to emphasize interaction between learners and learning tasks. In this way, the EFL learners' metacognitive awareness and strategies could be acquired through interacting with either their teachers or more competent peers. Once these processes have been practiced and

internalized, learners are able to implement individual metacognitive skills. Flavell's (1979, as cited in Osman & Hannafin, 1992) model of cognitive monitoring is also recognized as a basic theory of metacognitive knowledge and experiences. He indicated that increasing attention to learning can improve metacognitive knowledge and ability in the domain of comprehension and communication (Brown & Smiley, 1978; Flavell, 1976, 1978, 1981; Markman, 1977, 1979, 1981, as cited in Osman & Hannafin, 1992).

Metacognitive Strategies and the SIOP Model

Metacognitive strategies in a reading context play a vital role in profound learning. Individual learners with a high level of metacognitive knowledge and skills will be aware of their own strengths and weaknesses, and they can ensure their academic attainment (Pressley, 2002).

According to Chamot and O'Malley (1994, as cited in Diaz-Rico, 2004), metacognitive strategies can be divided into three areas: planning, monitoring, and evaluating. Planning strategies help students learn how to organize themselves for a learning task. For example, if students know that an essay is due in one week, they might plan to collect information for the first three days, draft their composition over the next two days, and finally proofread their latest draft. Students learn to make an outline of the content, main ideas, and specific information that need to be included in the learning task. Monitoring strategies help students check their awareness and comprehension in reading and writing. In addition, monitoring strategies can help students pause and ask questions of themselves to see if they can comprehend and communicate the main ideas with others while they are reading. Evaluating strategies teach students how to assess their own performance on a task, using checklists or other reflective tools to keep track of their progress. Students can self-evaluate outcomes to assess how much they have learned.

The SIOP model is based on student-centered design to create a framework for teachers to present both content and language objectives for learners' comprehension and awareness of the lesson or curriculum (Echevarria et al., 2009). It can motivate students to overcome the barrier of content fields and also improve their Englsih language learning. Since it provides English language learners an access to be familiar with the core content curriculum, it also helps improve learners' reading awareness and comprehension as well. It can additionally incorporate many practical methodologies and activities like hands-on activities, realia, demonstration, multimedia, and graphic organizers to increase students' understanding of the instructions

(Echevarria et al., 2009).

Another perspective from Baker and Brown (1984) indicated that learners' inefficiencies in reading comprehension could be caused by a lack of knowledge and strategy use. These deficiencies could be compensated for and improved through proper metacognitive strategy instruction. Thus, through metacognitive strategy with SIOP lesson plan instruction, learners' prior knowledge and creative thinking can be activated and organized. Metacognitive strategies can also help learners with predicting, skimming, asking questions, problem-solving, and monitoring their self-regulation. Metacognitive strategies primarily aim to foster and promote learners' long-term positive learning.

There are several comprehension strategies in metacognition. In this study, the author introduced three strategies: think-alouds, text structure, and summarization, which Taiwanese students do not often use in their instructional background. The author also explored whether the three strategies can enhance students' improvement in reading awareness and comprehension. If students are adept in metacognitive strategies, they can respond to and participate in instruction constructively, rather than just sitting there, not fully understanding the activities provided in the classroom setting (Osman & Hannafin, 1992).

Many significant research studies of effectual learning have been conducted. Carrell (1985) used the text structure to explore if a particular pedagogical practice can yield a positive outcome on expository text reading comprehension. The training style she employed was to be highly motivating and engaging for the students and it involved students' interaction with the materials and individual corrective feedback. The results showed that strategy training on the top-level rhetorical organization of expository texts significantly increased the amount of information that the participants could recall. Salataci and Akyel (2002) used think-aloud protocols, observation, a background questionnaire, and an interview to evaluate Turkish students' EFL reading instruction. The results indicated that, as far as the metacognitive strategies were concerned, the students expressed awareness of their behavior, monitored their comprehension, and verbalized their success in comprehension when reading both in Turkish and English. Baumann (1984) investigated the effectiveness of a direct-instruction model for teaching students to identify main ideas, stated both explicitly and implicitly. The strategy group's content consisted of hierarchical main-idea skills to enable students to find explicit (topic sentences) and implicit (no topic sentences, but a dominant relationship can be inferred from subordinate topics) main ideas in paragraphs and in short passages. The results indicated

that the treatment effect favored the strategy group over both the basal and control groups.

Although many effective metacognitive studies have been conducted, there is "a paucity of research" in relation to the SIOP model to support the use of the significant methodologies to help EFL learners improve academic achievement (McGowan, n.d.). Thus, there was a need for the author to execute a study to see whether the metacognitive strategies with the SIOP model can affect EFL learners' achievement in English reading awareness and comprehension.

3. Methods

Participants

A total of 166 students enrolled at one northern science and technology university was recruited as subjects in the study. While administrating the measurement, some students took only either the pretest or posttest, some students marked no variances on the answer sheet, and some students omitted many items on the answer sheet. These ineffective data were eventually excluded from the study. The final number of subjects was 150 students (N = 150).

The subjects were randomly assigned into two groups - one experimental group and one control group. The experimental group of 78 (N = 78) students was instructed to learn the reading materials with SIOP modes (see Appendices A, B, C). The control group containing 72 students (N = 72) was instructed via the traditional curriculum. Both groups met once a week for 100 minutes of instruction, and the treatment lasted for seven weeks.

In addition, the author defined good and poor reader groups according to the z-scores of the pretest. The subjects who received z-scores above 1 standard deviation from the mean were identified as the good readers, and the subjects who received a z-score below 1 standard deviation from the mean were identified as the poor readers. This resulted in 27 good readers (N = 27) and 123 poor readers (N = 123). Both the experimental and control groups included good readers and poor readers.

The Instruments and Instructional Materials

Both the pretest and posttest were adapted and modified from the reading section of *Test of English for International Communication* (henceforth TOEIC) tests, *Barron's TOEIC Test 4/e* (Lougheed, 2006) to measure students' ability to extract context meaning and main ideas. They were different versions with 30 multiple-choice questions with total scores of 100 presented in each version. The equivalence between the pretest and posttest was evaluated through a pilot

study (Fan, 2009). In order to ensure the reliability and correlation between the pretest and posttest, and to determine if both tests could be employed independently of each other and considered equivalent measures, a Coefficient Alpha reliability analysis was utilized to compute the two test forms. The result of Coefficient Alpha (Cronbach's Alpha), .96, indicated both tests have satisfactory reliability (Fan, 2009).

The textbook, *Reading Pass 2* (Bennett, 2008) was employed in the study. The topics in the text cover a wide range of fields, including business, technology, health, entertainment, and the environment, of which students can gain thorough knowledge so as to create innovative ideas and convey insightful communication competence. In the intervention training session, the students were given six units corresponding to these instructions for the think aloud, text structure, and summarization strategy training courses through SIOP lesson plans.

Metacognitive Strategy Training

There are three metacognitive strategy-training procedures. The author employed the theoretical models of think aloud, text structure, and summarization procedures on the practical SIOP lesson plans (See Appendix A for think alouds, B for text structure, and C for summarization) in the authentic classroom training.

Data Collection & Analysis

The two groups of students completed the demographic survey to understand their background knowledge about English learning at the very beginning of the training program. The pretest followed the demographic survey. The training period consisted of seven weeks of class sessions. The Metacognitive Awareness of Reading Strategies Inventory (henceforth MARSI) adapted from Mokhtari & Reichard (2002) was administered during the training period (the fourth week) and before the posttest. The posttest was administered after the training program.

The statistical techniques including descriptive statistics, two-way Analysis of Covariance (henceforth ANCOVA), and a partial correlation were utilized via the SPSS statistics software to compute all needed measurement in the study. A 2 by 2 (2 groups of the metacognitive strategies and the control with 2 groups of good and poor readers, holding constant gender) analysis of covariance was employed to assess whether there was a main effect either for metacognitive strategies or learners' level of reading ability and whether there was an interaction effect between them. The aim of using gender as a covariate variable was to effectively reduce the amount of random variability, and then increase the significance of the

effects in the study (Keppel & Wickens, 2004).

The marginal means were measured to reflect main effects and interaction effects between the two independent variables. The interaction effect was also tested to see if there was any relationship between the groups of the first factor (metacognitive strategy group and control group) and the groups of the second factor (good readers and poor readers).

There were a total of 150 subjects in this study, 86 males and 64 females. The proportional rate of males (57%) to females (43%) was 1.33. Due to this unbalanced gender distribution of the population, the researcher added gender as a covariate, assuming no prior differences among groups in the formal data analysis.

Additionally, in order to make a correct decision for statistical inferences from a sample to the population, a level of significance $\alpha = .05$ ($p < .05$) was set for the statistical analysis to limit Type I error (Shavelson, 1981).

4. Results & Discussion

The measurement consisted of two independent variables (two factors), one dependent variable, and one covariate. The first independent variable was metacognitive strategies (including a metacognitive strategy group and a control group); the second independent variable was learners' levels (including the proficiency level of the readers: good readers and poor readers). The dependent variable was the reading posttest scores. Gender, as stated previously, was used as a covariate variable on the dependent variable assuming no prior differences among groups in the data analysis.

Research Question 1

The first research question was as follows: Are there differences in the reading scores between the group that receives metacognitive strategy training (think aloud, text structure, and summarization) and the group that receives no metacognitive strategy training? The results indicated that there were significant differences between the experimental group and the control group on the posttest scores. The means and standard deviations for posttest as a function of the two groups are presented in Tables 1. The group main effect indicated that the experimental group $M = 70.07$, $SD = 10.67$ had greater improvements on the posttest than the control group $M = 58.85$, $SD = 18.90$. The F (1, 145) = 9.84, p = .002 < .05, partial η^2 (Partial Eta Squared) = .064 also indicated that there were significant differences between the experimental group

and the control group. The partial η^2 = .064 indicated the strength relationship between the treatment and the dependent variable related to the metacognitive strategy groups was moderate in effect sizes. According to Green & Salkind (2005), partial η^2 ranges in value from 0 to 1. The conventional rule is likely .01, .06 and .14 for small, medium, and large effect sizes respectively (p. 187).

Table 1.*The Descriptive Statistics of Mean Scores and Two-Way ANCOVA Tables for the First Factor*

Groups	*M*	*SD*	*N*
Experiment	70.07	10.67	78
Control	58.85	18.90	72

Source of Variation	SS	*df*	MS	*F*	Sig.	Partial η^2
Group	1938.95	1	1938.95	9.84	.002	.064
Error	28587.37	145	197.15			
Total	30526.32	146				

The marginal means between the metacognitive strategy group and the control group were different from each other (see Table 2). Thus, there was a main effect for the metacognitive strategies. The main effect of the metacognitive strategies means that the metacognitive strategy group was more effective than the control group. In brief, the metacognitive strategy-training group outperformed the control group on the reading posttest scores.

Table 2 *Marginal Means Estimates for Groups*

Groups	Mean	Std. Error
Experimental	61.87[a]	2.07
Control	52.48 [a]	2.16

Note. a. Covariates appearing in the model are evaluated at the following values: Gender = 1.43.

Research Question 2

The second research question was as follows: Are there differences in the reading scores

between good readers and poor readers? The results indicated that there were significant differences between the good readers and the poor readers on the posttest scores. The means and standard deviations are presented in Tables 3. The learners' levels main effect indicated that good readers $M = 63.78$, $SD = 2.72$ have greater improvements than the poor readers $M = 50.58$, $SD = 1.27$ on the posttest. The F (1, 145) = 19.24, $p = .000 < .05$ also indicated that the testing had significant differences between good readers and poor readers. The partial $\eta^2 = .117$ indicated a strong relationship between the treatment and the dependent variable related to the learners' levels.

Table 3 *The Descriptive Statistics of Mean Scores and Two-Way ANCOVA Tables for the Second Factor*

Groups	*M*	*SD*	*N*
Good readers	63.78	2.72	26
Poor readers	50.58	1.27	123

Source of Variation	SS	*df*	MS	*F*	Sig.	Partial η^2
Learners' Levels	3793.73	1	3793.73	19.24	.000	.117
Error	28587.37	145	197.15			
Total	32381.10	146				

The marginal means between the good readers and poor readers were different from each other (see Table 4). Thus, there was a main effect for the learner levels. The main effect of the learner levels indicated that the good readers outperformed the poor readers on the posttest measurement. The good readers benefitted the most from the metacognitive strategy-training program.

Table 4 *Marginal Means Estimates for Learner Levels*

Groups	Mean	Std. Error
Good readers	63.78 [a]	2.72
Poor readers	50.58 [a]	1.27

Note. a. Covariates appearing in the model are evaluated at the following values: Gender = 1.43.

Research Question 3

The third research question was as follows: Are the differences in the reading scores

among groups of the first factor (metacognitive and control) the same across groups of the second factor (good readers and poor readers)? The results indicated that there were not significant differences between metacognitive strategy factor and learners' level factor. The *F* test and *p* value are presented in Table 5. The F (1, 145) = .67, p = .42 > .05 indicated that the interaction effect was constant across all groups. Thus, there was no interaction among groups of the first factor and groups of the second factor. The partial η^2 = .005 indicated the strength relationship between the treatment and the dependent variable related to the two factors presented was moderate in effect sizes.

Table 5 *Analysis of Variance for Groups*Learners' Levels*

Source of Variation	SS	*df*	MS	*F*	Sig.	Partial η^2
Groups*Learners' Levels	131.04	1	131.04	.67	.42	.005
Error	28587.37	145	197.15			
Total	28718.41	146				

The size of the effect for each independent variable is constant across all groups. No interaction effect is presented. This indicated that the two factors did not affect each other on the reading posttest scores. The interpretation of these results should be focused on the main effects, rather than the relationship between the two factors.

Research Question 4

The fourth research question was as follows: Are there correlations between the pretest and posttest, partialling out the effect of the metacognitive awareness of reading strategy inventory (MARSI)? Another aspect for conducting this research question was to exercise the control of the variance in the present experimental manipulation (Pedhazur, 1997). The results of the partial correlation are presented in Table 6. When the correlation between pretest and posttest was presented, partialling out the effects of the MARSI, the partial correlation coefficient was .41 (r = .41). When the correlation between pretest and posttest was presented, including the effects of the MARSI, the partial correlation coefficient was .39 (r = .39). The analysis indicated that there were correlations between the pretest and posttest, partialling out the effect of the MARSI. The relation between the pretest and posttest was moderately large in magnitude (r = .41 vs. r = .39) even if the MARSI had little effect (with a difference of .02)

between the pretest and posttest. The correlations between pretest and the MARSI r = .17 and the correlations between posttest and the MARSI r = .15 also showed that the MARSI's effect on the relationship between pretest and posttest was very small in magnitude.

Table 6 *Bivariate Correlations*

Control Variables		Pretest	Posttest	MARSI
None[a]	Pretest	1		
	Posttest	.41	1	
	MARSI	.17	.15	1
Partial Correlations Controlling for MARSI				
MARSI	Pretest	1		
	Posttest	.39	1	

Note. a. Cells contain zero-order (Pearson) correlations.

In terms of the role of MARSI, although the MARSI consists of many questionnaires that were related to a good reader's awareness of metacognitive concepts, the result indicated that MARSI played an insignificant role in the relationship between the pretest and posttest. This result may be due to the fact that the subjects were provided the MARSI in the middle of the experiment. The subjects might not be acquainted with metacognitive strategies at that moment and a glimpse of the MARSI questionnaires was not able to contribute a significant effect to their strategy concepts. Thus, the effect of the MARSI was very small in magnitude in the current study.

Educational Implications

Metacognition is a perceptive mode of instruction that focuses on "the interactive nature of reading (as cited in Dole, Duffy & Pearson, 1991; Rumelhart & Ortony, 1977, p. 241)," rather than a passive way of receiving information from the text through word identification and task analytic learning. It contains a number of components that help students construct their learning styles from a dependent to an independent way with planning, monitoring, motivation, organization and self-regulation. Students profit from this effective, meaningful and self-regulated learning. According to Ormrod (1990), if students have self-regulated concepts, they will know what they want to accomplish when they read. They will bind their goals with a specific learning to advance their longer-term goals. They will show self-discipline, put work before pleasure, and diligently complete assigned homework in class or at home. They will use a variety of strategies to keep themselves on task. Students will give themselves a self-efficacy spirit - boosting talk, visualizing their ultimate success. The self-regulated learners will also try to focus their attention on the subject matter and continually monitor their progress. They will seek assistance when they need particular help to move them forward to extraordinary learning and assess their final outcome to see whether their learning is sufficient for the goals they set for themselves.

Given that metacognitive strategies can help students to be consciously aware of what they have learned, students can also recognize situations in which they would be useful (Pressley, Snyder, & Cariglia-Bull, 1987). These strategies allow students to make predictions through the use of the title or subheadings in the text, create mental images of given information, and link new information to prior knowledge (think alouds). They also help students "interpret topic sentences," skim for main ideas, and scan for specific information (summarization). In addition, metacognitive strategies help students "outline logical organization of a text," distinguish a relationship between cause and effect, understand the problem and solution, and make comparisons (text structure) (Hughes, 1989, p. 139). Like this, students can become aware of and develop good reading processes to improve their comprehension. If EFL students' reading awareness and comprehension can be improved by putting metacognitive strategies into practice in the context of reading, they will mostly benefit from meaningful learning and be propelled into multidimensional application in any realm of the educational field.

Limitation and Future Research

There were some limitations to this study even if it yielded statistically significant results. For example, the pretest and posttest were adapted from the TOEIC textbook, so were not originally from official reading tests by the Educational Testing Service (ETS). Since standardized reading tests (such as TOEIC, TOEFL, and so forth) are very difficult to acquire, cooperation with an international educational assessment or a respected measurement organization like ETS is recommended to achieve a higher reliability and validly of testing. Second, the sample population of second factor presented unequal distribution between the good reader group (N = 27) and the poor reader group (N = 123), which caused some threats to external validity. Hence, the author recommends further research using the lower standard deviation instead of 1 standard deviation from the mean to compute z-score or using the grand mean to identify good and poor readers to limit threat (predictable variability) which is needed to internal and external validity from the error term. Finally, metacognitive strategy intervention is a "cognitively oriented" process, which requires a long-term experiment to measure its effectiveness (Kucan & Beck, 1997, p. 274). For this reason, longer training sessions of six months to twelve months would be needed to reveal the real effect of the study. Accordingly, in view of activating students' learning inspiration as well as reading awareness and comprehension, the author also recommends future research focuses on more specific investigation in metacognitive strategies such as graphic organizer, semantic mapping, questions and questioning, and visual image strategies so that students can benefit from the complex instructional process.

5. Conclusion

The present study generated an encouraging result for the instructional training of the metacognitive strategies on the SIOP model to facilitate EFL university students' reading. The metacognitive strategies that were employed to activate EFL learners' reading awareness and comprehension revealed a strong effect on the reading performance. In fact, academic studies require much better than a basic understanding of literary meaning and sentence structures; they also require an individual learner to be competent enough to fulfill academic expectations. With a "command of [academic] language," students will be able to express their ideas concisely and thoughtfully and have fully functioning skills in communication and reading comprehension

(Hughes 1989). Students will elevate their language proficiency levels and establish much higher reading achievement only if teachers in EFL settings modify learning strategies to fit students' special needs and adapt these reading strategies to advance their academic achievement.

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Appendix A.

SIOP Lesson Plan for "Think Alouds_有聲思維法" Strategy

Background

English Proficiency Level: Intermediate Level in EFL classes
Grade: the first year of undergraduate study
Standard: TESOL ESL Standards for K-12

Preparation

Content Objective: to evaluate how well intermediate-level students can understand and comprehend what they learn within the context of their content area reading.
Language Objective: to improve students' reading comprehension. Specifically, they can determine main ideas, understand sequences of events, determine the meaning of contextual words, and draw conclusions.
Materials: *Reading Pass 2* (Bennett, 2008): Unit 2 Green Profits
Vocabulary: hybrid cars, segment, solar, real estate, shareholder.

Motivation

The teacher guides students' strategy use through a three-stage process: teacher modeling, the teacher elicits students' participating in the think aloud strategic activities, and students internalize the strategies as they read on their own (Kucan & Beck, 1997).

Presentation

There are four important stages for think aloud reading instruction (Davey, 1983).
(1) Teacher modeling. The teacher demonstrates the following 5 steps:

(a) Making predictions (借由標題，副標題去預測整篇文章內容)

Ask students to make predictions by using the title or subheadings in the text. For example, "From the title, 'Green Profits,' I predict that this section will talk

about how to protect our environment, how to utilize green energy…;"

(b) Developing visual images (想像文章內容)

1. Students create mental images of the information from the text. For example, "The hybrid cars might save a lot of gas and become very popular."
2. "If big companies like GE develop energy saving products, this will lower people's electric bills."

(c) Sharing analogies (用"類似", "好像"引導學生用他們已知的知識去了解未知的知識)

1. Students use analogies to link new information to prior knowledge.
2. For example, "The clean technologies are like riding a bicycle to school or powering air conditioning with solar technology."

(d) Monitoring understanding (expressing confusion) (觀察檢測自己不了解的地方)

1. Students think about their confusion over difficult information in the text.
2. For example, "This is not what I expected;" "I am not sure how this fits in;" "This seems to be confusing."

(e) Regulating comprehension (re-reading) (進而針對困難部份一讀再讀以達深入了解)

1. Students re-read a difficult section and see if the confusing information will be clarified.
2. For example, "I need to check this out. I'll re-read this difficult part;" or, "Perhaps I'd better change the ideas of how global warming could affect people's lives."

Practice

(2) Student partnerships for practice

1. Teachers have two students in a pair and ask them to work together with partners to practice Think-Aloud.
2. Each student takes a turn reading and thinking aloud with short passages.
3. The partner listens and offers his or her thoughts.

(3) Independent student practice using checklists

After working with partners, students should practice independently with the use of checklists to ensure students use each of the strategies and verify the use of procedures.

(4) Integrated use with other materials

1. After the above practice with modeling, teachers will give further practice with school text materials and integrate the use of think aloud with other content reading.
2. In addition, the teacher can illustrate her thinking prior to reading a content book.
3. For example, "Before I read this passage, let me think about what this story is like and try to get a feel for what the story will be about, and look over the headings as well."

Assessment

Students were given a comprehension quiz adopted from the questions in the book following the reading passage.

Appendix B.

SIOP Lesson Plan for "Text Structure_文本結構教學法" Strategy

Background

English Proficiency Level: Intermediate Level in EFL classes
Grade: the first year of undergraduate study
Standard: TESOL ESL Standards for K-12

Preparation

Content Objective: to evaluate how well intermediate-level students can understand and comprehend what they learn within the context of their content area reading.
Language Objective: to improve students' reading comprehension. Specifically, they can determine main ideas, understand sequences of events, determine the meaning of contextual words, and draw conclusions.
Materials: *Reading Pass 2* (Bennett, 2008): Unit 8 Running a SOHO
Vocabulary: SOHO (Small Office, Home Office), clients, earn a living, do the trick

Motivation

The teacher guides students through the strategy of text structure to help students understand the organization of causation, problem/solution, and comparison so as to comprehend the text better.

Presentation

1. The teacher explains concepts related to text structure to students, including the patterns of causation, problem/solution, and comparison (Tierney, 2005):

   (a) A causative text structure (因果關係)is a relationship specified between reasons (cause) and results (effect) in a time sequence. For example, in the fifth paragraph of the reading passage, the teacher guides students to discover that being a good SOHO can lead to more business (clients will come back to you again and again).
   (b) A problem/solution structure (問題解決) is similar to a causative structure except that solution is added to the structure. For example, in the first paragraph, if you feel bored as a 9-5 office employee (problem), you may want to be a SOHO on your own to earn a living (solution).

   (c) A comparative structure(比較相同及不同處) organizes elements on the basis of the similarities and differences and implies no causality or time sequence. For example, in the first paragraph, the teacher asks students to compare being a SOHO to other jobs.

2. Readence, Bean, and Baldwin (2004) recommended the structure:

   (a) Before modeling: the teacher demonstrates the thought processes for students when using text structure. The teacher uses passages that students will encounter in

their reading for relevant information, and think aloud for students. (示範之前: 老師利用學生的閱讀段落, 引導學生相關重要的資訊, 並請學生用心思考文章邏輯性)

(b) During modeling: it is essential to show students a particular text structure and point out *why* it is a certain type and *how* that structure type is organized. (示範期間: 老師找出某一特殊句型, 並指出為什麼 *why* 這個句型會這樣, 這個句型是如何 *how* 組織架構的)

(c) The teacher guides students to check the headings and subheadings to develop a hierarchical schematic structure. For example, in the reading passage, the teacher asks students to find out "the first step," "next," and "finally." (老師引導學生注意主標題, 副標題並建構文章之層次架構)

(d) It is also necessary to point out any signal words, or cue for the text structure. Signal words like *however*, *because*, and *therefore* assist students in becoming aware of text structure and improving their recall (Meyer, Brandt, and Bluth, 1980). 對於一些信號字及提示如 *however*, *because* and *therefore* 要請同學注意其句型先後架構

3. (a) Once students have ideas about perceiving text structure, they need to produce a text structure on their own. Alvermann (1981) has suggested that using a Graphic Organizer or some other form of skeletal outline based upon a text passage to recognize more useful relationships, and depict a well-organized text structure. (可利用 Graphic Organizer 圖型, 圖案建構文章大綱)

(b) Writing is another way to reinforce students' knowledge of text structure. Harrison (1982) has had students in a high school rewrite their text material and had a great deal of success.

Practice

1. The teacher divides the class into five groups.
2. The teacher asks students to practice textual organization by using their background knowledge and experience.
3. The teacher helps students to structure the main ideas with supporting details from the text.
4. The teacher guides students using a text-mapping or flow-charting strategy to help them understand and remember text information.
5. The teacher guides students to identify the general goal of a text, subtopics, main ideas, and the relationship of main ideas linking to subtopics for reading comprehension.

Assessment

Students were given a comprehension quiz adopted from the questions in the book following the reading passage.

Appendix C.

SIOP Lesson Plan for "Summarization_摘要重點法" Strategy

Background

English Proficiency Level: Intermediate Level in EFL classes
Grade: the first year of undergraduate study

Standard: TESOL ESL Standards for K-12

Preparation
Content Objective: to evaluate how well intermediate-level students can understand and comprehend what they learn within the context of their content area reading.

Language Objective: to improve students' reading comprehension. Specifically, they can determine main ideas, understand sequences of events, determine the meaning of contextual words, and draw conclusions.

Materials: *Reading Pass 2* (Bennett, 2008): Unit 7 The Gossip Media
Vocabulary: celebrity, athlete, politician, paparazzi, invasion, insider, editor, appetite, at the end of the day

Motivation
The teacher guides students through the strategy of summarization using pre-reading, while-reading, and post-reading to help students use deletion and superordination to construct a succinct summary from the text (Gajria and Salvia, 1992).

Presentation (老師在閱讀之前，閱讀之中，閱讀之後運用摘要重點法引導學生藉由刪除文章中不重要內容，高階層次觀念-主要重點 main ideas，次要重點 supporting ideas-來建構簡潔的文章摘要重點.)

Pre-reading
The teacher explains concepts related to summarization to students, including skimming (瀏覽，略讀), scanning (掃瞄), main ideas, supporting details, topic sentences, and main components for summarizing information.

a. Skimming (瀏覽，略讀): a general idea of the text themes and the organization and development of ideas. (searching for main ideas 搜尋主題)
b. Scanning (掃瞄): highlighting key vocabulary as well as names, dates, places, and other important facts. (searching for important information in the text. For example, specific names, dates, places, and other important facts. 搜尋重要資訊)
c. Every paragraph has a key concept or main idea(每一段文章都有主題). The sentence in which the main idea is stated is **the topic sentence** of that paragraph (描述主題的句子就叫做 topic sentence).
d. The main components for summarizing information are the abilities to 摘要重點法主要構成要素: (1) sift through a large amount of text, 從大量文字中篩選重點內容 (2) distinguish important ideas from unimportant ideas,辨別重要與不重要資訊觀念 (3) synthesize those ideas and create a new coherent text that stands for the original ideas (綜合這些觀念並創造出新的連貫觀念).

While-reading
1. The teacher introduces the rule-governed approaches to students:

(1) Delete unnecessary material (刪減不重要資訊).

For example, in the first paragraph, “If so, you’re not alone;” “Although it’s sometimes called ‘junk food news’…”

(2) Delete redundant material (刪減冗句).
For example, in the second paragraph, “Movie stars, athletes, singers, and politicians…”

(3) Compose a word to replace a list of items (用一個字 or 一句話解釋一堆話).
For example, in the third paragraph, “Whenever stars eat, shop, or travel…” to replace the previous sentence.

(4) Select a topic sentence (找出主題句).
The teacher asks students what the topic sentence is in this passage. The teacher gives them a clue to look at in the first paragraph or the last paragraph.

(5) Make up a topic sentence if there is not one in the passage (如無主題句，就建構一個主題句).

2. The teacher may also need to use text headings, subheadings, and paragraphs to develop an outline of the text (Taylor and her associate Beach, 1984) (老師根據學生閱讀理解程度，利用標題，副標題，段落教導學生製作大綱).
   (1) Students can be taught to generate main idea statements for each paragraph or subsection of the text.
   (2) Students can develop topic headings to connect whole sections of the text.
   (3) Students can be instructed to generate a key idea to summarize the entire passage (Pressley, Johnson et al. 1989).

Post-reading

1. In order to ensure that students understand the content area of the text, the teacher needs to ask students to “look back,” “rethink,” “check,” and “double check” to complete the final summary terms (Carrell, Pharis et al. 1989 December) (閱讀後叫學生要再回頭重讀，檢討，並再想一想文章大意，最後作一個總結).
2. The teacher asks students to repeat the steps of the rule-governed approaches to enhance their strategy use (叫學生重複上述步驟).

Practice

1. The teacher divides the class into five groups.
2. The teacher asks students to use their background knowledge to help them predict the meaning of the text from the title.
3. The teacher asks students to individually skim the article headline, subheadings, captions, introduction, and conclusion for 5 minutes.
4. After 5 minutes, the teacher asks students to discuss the points they remember from the text.

Assessment

Students were given a comprehension quiz adopted from the questions in the book following the reading passage.