Metacognition in reading has received much attention in recent decades. Baker and Brown (1984) defined metacognition as "the knowledge and control one has over his or her own thinking and learning activities, including reading." The researchers have claimed if a reader is aware of what reading process is involved, then it is possible to use that awareness to regulate what they are doing; on the other hand, if a reader is not aware of or has misconceptions about the complexity of the task, then the reader can hardly take effective steps to meet the demands of a reading situation. In other words, as Baker and Brown, pointed out, "knowing that" (declarative knowledge) precedes "knowing how" (procedural knowledge).

Since the reader's knowledge, or conceptualization, of the reading process is related to the first aspect of metacognition, it is not surprising to find that the most global strand of research in metacognition deals with student's concepts of the nature and functions of reading (Johns, 1986). The exploration of students' concepts of reading has provided further stimuli for subsequent investigations in readers' metacognitive awareness and their strategic uses. Dated back to 1960's, numerous studies in L1 have been devoted to discovering reading concepts acquired by young children aged from 3 years to first graders (Denny & Weintraub, 1966; Downing, 1970; 1971; Mason, 1967; Reid, 1966). These studies concluded that young pupils entered schools with the vaguest ideas about the process and activities involved in

reading.   Based on the findings, Dowing (1986) proposed the cognitive clarity theory to explain how metacognitive readiness affects children's progress in learning how to read.   He claimed that most young readers were confused about the nature of the reading task when entering school, and then gradually developed increasing cognitive clarity about the functions and features of language through schooling.   If they were not exposed to reasonably good reading instruction, they might fail to increase their cognitive clarity and their confusion may be one of the contributing factors to some of their reading difficulties.

Inspired by these studies, subsequent research in the following years started to inquire reading concepts held by students at different ages (Johns, 1974; Johns and Ellis, 1976; Tovey, 1976; Huffman, Edwards and Green, 1982; Norman and Malicky, 1987).   These investigations have included a wide range of subjects ranging from first graders, high school students, to college adults.   Their findings indicated that students' perceptions of reading involve a development process including qualitatively distinct phases.   Although there is no agreement among investigators as to how they distinguished stages, most have agreed that young children first tend to define reading as physical behaviors, such as "reading is looking at the books", school activities "do worksheet in class", and decoding activities, "sound out words".   As their metacognitive awareness progresses, they recognize that people read to learn

what the author meant.   Then, they develop to understand that readers assume a wide

variety of roles in interacting with the text using their own background of experience.

The findings of these studies have been further supported by investigations in

more recent years about notions of reading held by good and poor L1 comprehenders

(Foley, 1984; Garner and Kraus, 1981-1982; Lesensne, 1991; O'Sullivan, 1992) and

those by low-literate adults (Fangan, 1988; Malicky and Norman, 1989; Poissant,

1994).   These studies have identified that good readers often depicted reading as a

process involving thinking and understanding, a notion spotted at a relatively

advanced stage in the development of reading perceptions.   Conversely, poor readers

and low-literate adults usually possess a very vague and restricted view of literacy,

viewing reading manly as graphophonic decoding and memorizing words, showing

their developmental lagging in their metacognitive awareness.

Furthermore, research on the effects of different instructional settings and

reading experiences in school and home on students' perception of reading have

illustrated that certain learning experiences are related to particular reading concepts

(Fasinski and DeFord, 1988; Freppon, 1991, 1995; Reutzel and Sabey, 1996;

Shepston and Jensen, 1996).   These explorations have added significant pedagogical

values to the findings concerning the development of concepts toward reading.

Although reading perceptions develop in a hierarchical progression, appropriate

instructions seem to facilitate the transition from one stage to the next. The applications of reading development research to teaching are derived not only from the findings that older students know better about reading, but, more importantly, from the discovery about what students at each stage have already known (Chall, 1996). With the understanding can a teacher design the most optimal learning conditions for students and bring them a step forward along the developmental trend

As for ESL/EFL reader's concepts toward reading, some studies have discovered that meaning- and decoding-oriented concepts correlate with high and low reading proficiency levels (Carrell, 1989; Devine, 1984), findings consistent with L1 research. However, these studies have been limited to students' conceptualization of strategy use, and have not investigated other aspects of the reading process such as their notions of the purpose and function toward reading which often provide enlightening insights into students' reading acts. Kang (1999) further found that young L2 learners' reading conceptions were influenced by, in addition to language proficiency, home literacy environment and school instruction. Furthermore, readers' reading perceptions strongly influenced their criteria about readability; readers focusing on words rated the readabilities of three stories according to number of words on a page and difficulty of the vocabulary. Chia & Chia (1999; 2000) discovered that college level poor EFL readers, besides their analytical and decoding

approaches, often viewed reading as language practices in school, and such

perception usually traced at a relatively early stage of reading development in L1

might be responsible for their little interest in English reading and low reading

proficiency.   Findings of cyclical relationships between learners' perceptions toward,

or their beliefs about, ESL/EFL learning in general and their strategy uses offer

further supports.   Many researchers have suggested that misconceptions about

language learning lead to the deployment of less effective learning strategies

(Wenden, 1987; Cotterall, 1995; Yang, 1999).   Yang (1999), for example, found that

Taiwanese college students endorsing the importance of grammar, vocabulary and

translation were unlikely to seek or create opportunities to use or practice English

functionally by trying to write, read or speak in English.

Chia (2001) conducted a study which recruited 1,002 students from grades

seven to nine at 13 junior high schools to investigate their reading concepts and

capture any developmental trend.   Several interesting findings have been yielded.

First, the underlying classifications, or factors, constituting junior high students'

perceptions of English reading were identified, such as holistic perception, analytical

perception, and metacognitive strategies (e.g. taking notes and reviewing lessons) etc.;

that is, they tended to define, or perceive, English reading in terms of these factors.

Second, students of all grade levels showed no significant difference in their

preference to analytical approaches, indicating their local perceptions toward EFL reading remain constant throughout junior high school years. Another discovery was the "retrogressions" of eighth graders' holistic perceptions in comparison with those of seventh graders'. Furthermore, ninth graders were found to represent a milestone from which students' EFL reading concepts seemed to ascend onto the next step of the developmental ladder. The oldest group held not only stronger holistic perceptions of the reading process than younger readers but also more misconceptions, such as viewing EFL reading as language practice at school. School's method of reading instruction, increasing complexity of reading material and the EFL learning environments as a whole might have exerted certain effects on the retrogressions and misconceptions.

Inspired by these findings, the present study expanded the investigation by further exploring the developmental trend of senior high students' EFL reading concepts. This empirical study was undertaken to seek answers to the following research questions:

1. What are the concepts of EFL reading acquired by Taiwanese senior high students of different grade levels, that is, tenth, eleventh and twelfth graders respectively?

2. What are the underlying factors, or classifications, that construct senior high students' perceptions toward English reading?

3. Is there any difference among the concepts toward EFL reading held by tenth,

eleventh and twelfth graders?

4.   (a) If yes, what difference are they? (b) Do they indicate any developmental trend?

5.   Or if no, what are the possible causes and explanations for this?

The present study has been among the first attempt in Taiwan to investigate how students perceive English reading when they enter senior high school, and to capture developmental changes of students' perceptions toward EFL reading.   The findings will be beneficial for EFL reading teaching practice in Taiwan and theory of EFL reading development.   They can contribute to a better understanding of how reading is acquired and how instruction and school environment may be optimized for students at different stages.

METHOD

Instrument

A questionnaire (Appendix A) developed from Chia (2001) was adopted in which items were written in Chinese, and grouped under four categories, namely, perceived repair strategies, perceived effective strategies, perceived effective readers, and their general viewpoints toward EFL reading.   Items of repair strategies concerned what students perceived as being effective in solving reading difficulties, and those of effective strategies involved what they believed to be essential for successful reading.   Statements of effective readers inquired about students' perceived characteristics of efficient readers.   Finally, items of general viewpoints were about what they defined EFL reading as in a broader sense.   These four

categories functioned as contextual ground upon which items were constructed. Furthermore, a 1-5 Likert Scale (1= strongly disagree ; 5=strongly agree) was adopted for subjects to judge each statement.

Subjects

The questionnaire was administered to 870 students (331 male and 539 female) from grades ten to twelve at 9 high schools located at 3 different regions in Taiwan, the South, the Central and the North with the distribution of 3 schools at each region. Each of the schools at the given area represented a different "rank" according to their students' grades in the Senior High School Entrance Examination of the region; one stood for the top, another for the middle, and the other for the bottom. These schools were selected to allow for "maximum variation sampling" (Lincoln & Guba, 1985), that is, maximum variation in participants' learning settings (different regions) and their English proficiency levels corresponding to their grades of the Senior High School Entrance Examination, in addition to their age, sex, socioeconomic backgrounds and learning experiences. The survey was conducted during April to May of 2001 when the school year 2000-2001 approached its end and when students in ten, eleven and twelve grades had received English instructions four to five hours per week at school for almost one, two and three years respectively.

Data Analysis

Their responses were first analyzed by principal components factoring (PCF) using SAS, Version 6.11.   This factor analysis procedure identified underlying factors, or classifications, that constructed senior high students' perceptions of English reading.   Stevens (1986) suggested researchers focus on items whose loading is 0.40 and above when interpreting factor analysis so questionnaire items with factor loading of 0.40 and greater were considered statistically significant. Factor analysis on the questionnaire items identified the following factors.

1. <u>Holistic Approaches</u>   (i.e. those having to do with context orientation and text gist) in all categories.

2. <u>Analytical Approaches</u>   (i.e. statements related to sound-letter, word-meaning, text details and translation) in all categories.

3. <u>Metacognitive Strategies</u>, which "involve exercising executive control over ones' language learning through planning, monitoring, and evaluating" (Yang, 1999, p. 527) (i.e. taking notes and reviewing after class) in Category 2.

4. <u>Language Practices</u> in Category 4, perceiving EFL reading mainly as various language exercises.

5. <u>Non-strategic Features</u>   (i.e. interest in EFL reading, English grades and reading pace) in Category 3.

6. <u>Ignoring</u> in Category 1 including skipping and quitting.

7. <u>Motivation</u> in Category 4, including interest and expectancy, the latter

    referring to learners' perceptions about their ability to perform a task

    (Pintrich, 1989).

The mean scores of subjects' judgments on questionnaire items within the

four different categories of metacognition (Perceived Repair Strategies, Perceived

Effective Strategies, Perceived Model Readers and General Viewpoints) were

computed.   Analysis of ANOVA was performed in each of the four categories to

determine the significance of the difference of the three graders' metacognitive

awareness of each underlying factor.   In addition, since many previous studies have

discovered that the difference between analytic approaches and holistic approaches

often distinguishes younger/poor readers from older/good ones, paired t-test was

further conducted to examine the significance of the difference of these two factors in

the four categories for each grade level.

RESULTS

For Category 1, students' perceived repair strategies to tackle reading

difficulties, the results (see table 1) indicated students in grades ten, eleven and

twelve all least favored *ignoring* including skipping/quitting.   Furthermore, within

each grade level, the result of paired *t*-test showed that the difference between *holistic*

and *analytic approaches* was significant for all three graders, indicating that students

of each grade level tended to be more holistic in solving reading problems.   For

differences across the three groups in their perceptions of the three factors, results of

ANOVA revealed that there was a significant difference between eleventh graders'

preference to *holistic approach* and the others', indicating that students in grade

eleven were the least holistically oriented in their perceptions of reading than the

other graders.   However, there was no significant difference in the preference of all

three graders to the other two factors, *analytic approaches* and *ignoring*.

As to Category 2 exploring students' viewpoints about effective strategies, the

results (see Table 2) showed that tenth graders were more analytically driven than

holistically oriented for the paired *t*-test indicated that the differences in the mean

scores of these two approaches were significant.   Eleventh and twelfth graders,

however, showed no significant difference in their choice of both strategies.   For

differences among the three graders' preference to the three factored perceptions, the

ANOVA results illustrated that the three graders showed no significant difference

from each other.

With regard to the subjects' perceptions of the characteristics that their model

reader possessed, the results are illustrated in Table 3.   For comparison between

holistic and *analytic approaches* within each grade level, students in grade twelfth

tended to define a good reader in terms of holistic *approaches* rather than analytical

orientation as indicated by the paired *t*-test results. Students in grades tenth and

eleventh, in contrast, showed no significant difference in their selection of these two

approaches. Moreover, the ANOVA results indicated that twelfth graders were

significantly different from the tenth and eleventh in their preference to *holistic*

approaches. Finally, no significant difference was identified across the three grade

levels in their mean scores of *analytical approaches* and *non-strategy features*.

The last comes students' general viewpoints about EFL reading (see Table 4).

When defining EFL reading, students of all three groups mainly associated it with

language practices because the mean scores were the highest among all factors. As

for the holistic and analytic contrast within each grade level, the three groups yielded

higher mean score for holistic approaches than for analytic ones, and the difference

was significant. Furthermore, the ANOVA results displayed that there was no

significant difference in the mean score of the four factors among all groups.

To depict an overall picture of the metacognitive awareness of students of

three grade levels, mean scores for those factors which comprised items **across**

boundaries of metacognition categories (perceived repair strategies, perceived

effective strategies, perceived model readers and general viewpoints) were further

computed, such factors including ho*listic approaches* and *analytical approaches.*

Then, paired *t*-test was performed to determine the significance of difference between

holistic and analytical contrast within each grade level.   Furthermore, ANOVA was

run to discern significance of differences in students' mean scores of each of the two

factors among three graders.   The results illustrated in Table 5 indicated that all

three graders showed significant difference in their analytical and holistic awareness.

As for differences across grade levels, the ANOVA results displayed that twelfth

graders were significantly different from the tenth and eleventh in their higher mean

scores of *holistic approaches.*   However, no significant difference in *analytical*

approaches was found among three grade levels.

DISCUSSION AND IMPLICATIONS

This section contains a discussion of the findings, aiming to answer the research

questions of the study dealing with (1) the concepts of EFL reading acquired by

Taiwanese senior high students in grades tenth, eleventh and twelfth with respect to

the underlying factor that constitute their reading perceptions, (2) differences and

similarities in their reading perceptions, (3) developmental trend suggested by the

differences and commonalities and (4) possible causes and explanations for the

development.

To address these issues, Table 5 is further converted into a figure to illustrate growth and decay of each of students' perceptional construct, and demonstrate relative dominance of each factor over the others (see Figure 1[1]).   The discussion will be made in light of previous studies on reading concept development, especially the one conducted by Chia (2001) which investigated junior high students' EFL reading concept development, starting with the most prominent factor and proceeding mainly according to the hierarchy of factor predominance illustrated in Figure 1.

The viewpoint of reading as language practices has been identified as the most noticeable feature of EFL reading concepts acquired by Taiwanese senior high students in this study.   The subjects seemed to perceive EFL reading as various language practices to advance their English proficiency more than as any other. Furthermore, students of the oldest group held this perception more strongly than younger readers although the difference was not statistically significant.   This finding is consistent with Chia (2001), which discovered that Taiwanese junior high students identified EFL reading as language practices more than others and the tendency grew with grade levels.   In other words, after they graduated from junior school, this perception persisted even throughout the senior high years.

---

[1] The underlying factor "ignoring" listed in Table 5 is excluded from the figure because of its restricted nature. Unlike the other factors which refer to students' reading concepts with regard to more general aspects, such as general viewpoints or their perceptions of effective reading, *ignoring* concerns only a particular facet of students' reading concepts, that is, their perceived repair strategy to solve reading difficulties.   It seems absurd to present the factor in this broad context where the specific condition to which it applies is not mentioned.

This restricted view of English reading might stem from English instructions at school in EFL learning environments.   English is a foreign language in Taiwan, and high school students seldom need to read it outside of the classroom for communication.   English instructions which overemphasize linguistic components such as vocabulary and grammar and provide students few opportunities to apply their linguistic knowledge for communicative purposes may further strengthen this limited belief among students.   Unfortunately, instructions of this kind are prevalent in Taiwan as Arden-Close (1999) reported, "Reading lessons (at high schools in Taiwan) had been used as a means to an end—the end of being the learning of grammar or vocabulary, not learning how to read in a foreign language." (p. 343).

In a long run, this misconception of EFL reading may be detrimental to EFL reading acquisition as its connection with low reading proficiency has been discovered among Taiwanese college students by Chia & Chia (2000a, 2000b, 2001). The researchers claimed that this limited viewpoint might be, in part, responsible for strong analytical, decoding approaches of students of low reading proficiency in their investigations.   That is, it might strengthen readers' belief that when reading in English, they should concentrate on the linguistic features of passages, mainly words and sentence structures, rather than the messages that they convey.   Consequently, such decoding approaches further had negative impacts on students' reading

comprehension.

The finding suggests that the instructions would be desirable which not only stress linguistic aspects of a reading passage but also encourage learners to read English for non-academic purposes outsides of the class.   Although the necessity to read English for communicative purposes outside the classroom is rare in Taiwan and other EFL countries, the opportunities are numerous here as there are many English magazines, newspapers, signs/labels and instruction manuals which accompany imported goods.   Teachers can utilize these materials, which are highly related to students' daily life, for the information acquisition purposes.

Along the hierarchical ladder of factor prevalence comes *motivation*, considered as important attributes for effective readers.   According to Pintrich (1989), motivation consists of three components: expectancy, value, and affect.   Two of them have been explored in this study, that is, expectancy and value.   The former includes learners' beliefs about the importance and interest of the task, and the latter refers to learners' perceived ability about themselves to execute a task.   It was discovered that expectancy and value, such as interest, were positively connected to readers' use of strategies, including metacognitive strategies and effort management (Pintrich, 1989).   In other words, learners who are more interested and confident in reading are more likely to be cognitively engaged in the task, and this results in

increased comprehension.   The successful reading, in turn, creates confidence and

reading interests.   This cyclic relationship of motivation and reading

comprehension is what Nuttal (1996) calls "the virtuous circle of reading", which has

been confirmed by other researchers (Briggs, 1987; Readence & Baldwin, 1987).

With respect to this "achievement-related variable", *motivation*, it is glad to discover

that senior high students were quite motivated.   Compared to junior high students

investigated by Chia (2001), senior high learners perceived English reading more

frequently from this affective perspective.

Next comes the "non-strategic features", which indicated that EFL reading was

viewed as a process involving more complex components in addition to strategies.

Unfortunately, some of the perceived ingredients seemed to be invalid.   While

effective reading requires reasonable speed, it would be misleading for students to

scarify reading comprehension at the expanse of fast reading.   Similarly, good

readers may usually get higher English grades at school where students' English

proficiencies are assessed particularly in terms of their reading abilities in Taiwan.

However, English grades themselves do not contribute to effective reading in any

means.   This perception certainly is a tag of educational value that students attached

to EFL reading through schooling.   The viewpoint of English grades as an attribute

for effective reading might be linked to the perception of EFL reading as various

language practices at school because results of language practices were usually assessed in terms of grades at a school setting in Taiwan.

The contrast of analytic and holistic viewpoints come subsequently, the most salient features distinguishing younger/poor readers from older/effective comprehenders reported by reading literature.   The present study showed that EFL Taiwanese senior high students demonstrated awareness of both analytical and holistic approaches toward English reading with heavier reliance on holistic approaches in general, a finding consistent with that of Chia (2001), which indicated that students in grade nine had developed a more holistic orientations.

Since the EFL readers in the present study had quite a lot experiences in reading for meaning in their mother language, and the positive experiences might have helped them acquire the awareness of meaning-getting features of EFL reading. Furthermore, because they are older than L1 beginning readers, they have considerably more factual knowledge about the world, and their background knowledge could assist them to approach a reading task in a more global fashion (Brabe 1991).   So, what do these benefits characterizing EFL learners imply for reading material and instructions? So, what des this positive characteristic of EFL learners imply for reading material and instructions?   It would be facilitative to offer EFL students with familiar reading text — familiar because the subjects are

familiar, the stories are familiar or the structures are familiar. Students' existing knowledge is available to make use of the familiarity to guess meaning, and, thus, reduces their burdens in confronting new vocabulary and syntax of the target language.

More interesting results were yielded by comparisons among the three graders' viewpoints of EFL reading in their perceptions of these two approaches. For students' perceived holistic approaches, twelfth graders were significantly different from the younger groups in their stronger preference to them. This indicates that the holistic reading perceptions acquired by EFL learners in the present study developed throughout the school years, a trend similar to L1 readers' reading concepts. However, the subjects' global reading concepts did not develop with grade levels in a linear progression because no significant difference was identified between the tenth graders' and eleventh'. This finding is in line with Chia (2001), which discovered a similar developmental pattern among junior high students. That is, significant growth of holistic approaches of oldest group was identified but no difference between the younger groups. The finding of these two studies together suggests that it might take EFL readers a certain amount of learning time, two years as both studies showed, for their reading concepts to develop holistically one step further.

The last comes the perceptional construct *metacognitive strategies*, which refer

to exerting control over ones' language learning through planning, monitoring, and evaluating (Yang, 1999).   These metacognitive strategies appear to reflect a personal orientation to study which is not specific to language learning but relevant to all subject matter study in school.   The relationship between these perceived strategies and effective reading is not clear yet because a reader may appreciate that ESL/EFL reading is different from other kinds of study, she or he may nevertheless adopt the same general approaches to both.   Although literature on language learning strategies has identified certain metacognitive strategies seem to characterize successful language learners (Green & Oxford, 1995; Gu & Johnson, 1996), its effects on reading comprehension remain unexplored.   It is possible that the perception of EFL reading as language practices further strengthened this viewpoint in a school setting.   Whether there is any causal relation between these two perceptions warrants further investigation.

In addition, there are two other perceptions which project some interesting insights and represented remaining clues to puzzle out the mystery of subjects' EFL reading concepts.   The first concerns one of students' perceived repair strategies, namely, *ignoring*, including two components, skipping and quitting.   Taiwanese high school students of three grade levels all showed their persistency in solving reading difficulties as students' mean scores on this factor was quite low, ranging

from 2.65 to 2.78.   The result is inspiring because persistency is connected with

successful learners (Stipek, 1993) and effective readers (Carrell, 1989).

REFERENCES

Baker, L., & Brown, A. L. (1984). Metacognitive Skills and Reading.   In D. Pearson
(Ed.) (pp. 353-394). *Handbook of Reading Research*, New York, NY:
Longman.

Briggs, L. D. (1987). A poor attitude: A deterrent to reading improvement.   *Reading
Horizons, 27,* 202-208.

Canney, G., & Winograd, P. (1979). Schemata for reading and reading
comprehension performance (Technical Report No. 120). Champaign, IL:
Center for the Study of Reading.

Carrell, P. L. (1989). Metacognitive awareness and second language reading. *The
Modern Language Journal,* 73, 121-134

Chall, J.S. (1996) *Stages of Reading Development.* Fort Worth, TX: Harcourt Brace
College Publishers.

Chia, H.L. & Chia, H.U. (1999) Chinese Students' Concepts toward EFL Reading
and Their Reading Achievements. Paper presented in International Language
in Education Conference 1999, Hong Kong.

Chia, H. L. & Chia, H. U. (2000). Concepts of EFL reading among Taiwanese college
students of low reading proficiency.   *JALT Journal*, 22, 296-314.

Chia, H.L. (2001). *Concepts of English reading held by Taiwanese junior high
students.*   Taipei: Bookman Books.

Cotterall, S. (1995). Readiness for autonomy: investigating learner beliefs. *System* 23, 195-205.

Denny, T. & Weintraub, S. (1966). First-Graders' Responses to Three Questions About Reading. *Elementary School Journal*, 66, 441-448.

Devine, J. (1984) ESL readers' internalized models of the reading process. In J. Handscombe, R. Orem, & B. Taylor (Eds.), (pp. 95-108). *On TESL '83*, Washington, DC: TESOL.

Downing, J. (1970) Children's concepts of language in learning to read. *Educational Research*, 12, 106-112.

Downing, J. (1971) Children's developing concepts of spoken and written language. *Journal of Reading Behavior*, 4, 1-19.

Downing, J. (1979) Cognitive clarity: A unifying cross-cultural theory for language awareness phenomena in reading. In D. Yaden & S. Templeton (Eds.) (pp.13-30). *Metalinguistic Awareness and Beginning Literacy*, Portsmough, NH: Heinemann.

Fagan, W.T. (1988). Concepts of reading and writing among low literate adults. *Reading Research and Instruction*, 27, 47-60.

Fasinski, T. V. & DeFord, D. E. (1988). First Graders' Conceptions of Literacy: A Matter of Schooling. *Theory into Practice*, 27, 53-61.

Foley, J.M. (1984). A study of student viewpoints and reading achievement. Unpublished master's thesis, University of Buffalo, New York.

Freppon, P. A. (1991). Children's Concepts of the Nature and Purpose of Reading in Different Instructional Settings. *Journal of Reading Behavior*, 23 (2), 139-163.

Freppon, P. A. (1995). Low-income children's literacy interpretations in a skill-based

and a whole language classroom. *Journal of Reading Behavior, 27,* 505-533.

Garner, R., & Kraus, C. (1981-1982). Good and poor comprehenders' differences in

knowing and regulating reading behaviors. *Educational Research Quarterly*, 6,

5-12.

Huffman, G., Edwards, B., & Green, M. (1982) Developmental stages of

metalinguistic awareness related to reading. *Reading World*, 18, 193-200.

Johns, J.L. (1974). Concepts of reading among good and poor readers. *Education*, 95,

58-60.

Johns, J. L. (1986) Students' perceptions of reading: thirty years of inquiry. In D.

Yaden & S. Templeton (Eds.) (pp.31-40). *Metalinguistic Awareness and*

Beginning Literacy, Portsmough, NH: Heinemann.

Johns, J. L. & Ellis, D. W. (1976). Reading: Children Tell It Like It Is. *Reading*

World, 12, 115-128.

Kang, D. H. (1999). L2 children's reading conceptions and its relationships with

intertextuality.   Eric No. ED 430210

Lesesne, R.S. (1991). A survey of the reading concepts and attitudes of middle school

students. Unpublished doctoral dissertation, University of Houston.

Malicky, G., & Norman, C. A., (1989). The reading concepts and strategies of adult

nonreaders. Journal of Reading, 33, 198-202.

Malicky, G., & Norman, C. A., (1989). The reading concepts and strategies of adult

nonreaders. Journal of Reading, 33, 198-202.

Mason, G. (1967) Preschoolers' concepts of reading. *Reading Teacher*, 21, 130-132.

Norman, C. A., & Malicky, G. (1987) Stages in the reading development of adults.

Journal of reading, 30, 302-307.

Nuttall, C. (1996). *Teaching reading in a foreign language.* Oxford: Heinemann.

O'Sullivan, J. T. (1992) Reading beliefs and reading achievement: A developmental

study of students from low income families.   Unpublished report No. 6,

summary reports of paths to literacy and illiteracy in Newfoundland and

Labrador.   Eric No. ED 354505

Pintrich, P. (1989). The dynamic interplay of student motivation and cognition in the

college classroom.   In Ames, C. & Maehr, M. L. (Eds.), *Advances in*

motivation and achievement: Motivation-enhancing environments. Vol. 6, (pp.

117-160). Greenwich, CT: JAI Press.

Poissant, H. (1994) Assessing and understanding the cognitive and metacognitive

perspectives of adults who are poor readers.   Eric No. ED 367958

Readence, J., & Baldwin, R. S. (1987). *Research in Literacy: Merging perspectives.*

New York: National Reading Conference.

Reid, J. (1966) Learning to think about reading. *Educational Research*, 9, 56-62.

Reutzel, D. R. & Sabey, B. (1996). Teacher beliefs and children's concepts about

reading: are they related?   Reading Research and Instruction, 35 (4), 323-342.

Shepston, T. K., & Jensen, R. A. (1996) Home and school as learning environments

that impact the development of primary students' print concepts and reading

attitudes.   Eric document # ED 397049.

Stipek, D. J. (1993) *Motivation to learn, from theory to practice.*   Needham Heights,

MA: Ally and Bacon.

Wenden, A. L. (1987). Metacognition: an expanded view on the cognitive abilities

of L2 learners. Language Learning, 37, 573-598.

Yang, N. D. (1999) The relationship between EFL learners' beliefs and learning

strategy use. *System* 27, 515-535.

Table 1

Judgments on Perceived Repair Strategies

Grade levels	N	Holistic approaches	Analytical approaches	Ignoring
				(Mean±SD)
10th	251	3.64±0.73a	2.94±0.87a	2.72±0.68a
		(t= -9.95 ***)		
11th	344	3.44±0.88b	2.92±0.87a	2.78±0.76a
		(t= -8.39***)		
12th	276	3.66±0.84a	2.89±0.91a	2.65±0.72a
		(t= -10.51***)		

Note. Judgments were made on 5-point scales (1= strongly disagreement, 5=strongly agreement).   Means in the same column that do not share subscripts differed at p <.05 by Duncan's multiple range test.   ***, p<0.001 by paired t-test.

Table 2

Judgments of Perceived Effective Strategies

Grade levels	N	Holistic approaches	Analytical approaches	Metacognitive strategies
			(Mean±SD)	
10th	251	3.05±0.63a	3.15±0.61a	3.16±0.72a
		(t= -1.98 *)		
11th	344	3.04±0.73a	3.03±0.73a	3.09±0.78a
		(t=- 0.06)		
12th	276	3.15±0.72a	3.07±0.72a	3.13±0.80a
		(t= -1.41)		

Note. Judgments were made on 5-point scales (1= strongly disagreement, 5=strongly agreement). Means in the same column that do not share subscripts differed at p <.05 by Duncan's multiple range test. *, p< 0.05 by paired t-test.

Table 3

Judgments on Perceived Characteristics of Model Readers

Grade levels	N	Holistic approaches	Analytical approaches	Non-strategic features
			(Mean±SD)	
10th	251	3.82±0.60a	3.80±0.66a	3.61±0.62a
			(t=-0.31)	
11th	344	3.89±0.58a	3.88±0.66a	3.54±0.68a
			(t= -0.30)	
12th	276	4.00±0.54b	3.86±0.62a	3.61±0.68a
			(t= -3.35***)	

Note. Judgments were made on 5-point scales (1= strongly disagreement, 5=strongly agreement). Means in the same column that do not share subscripts differed at $p < .05$ by Duncan's multiple range test. ***, $p < 0.001$ by paired t-test.

Table 4

Judgments on General Viewpoints toward EFL Reading

Grade levels	N (range)	Holistic approaches	Analytical approaches	Language practices	Motivation
			(Mean±SD)		
10th	251	3.80±0.66a	3.51±0.61a (t= -5.71***)	4.19±0.59a	3.62±0.94a
11th	344	3.76±0.65a	3.58±0.62a (t= -4.43***)	4.16±0.60a	3.59±0.95a
12th	276	3.85±0.62a	3.53±0.65a (t= -6.63* **)	4.25±0.56a	3.69±0.98a

Note. Judgments were made on 5-point scales (1= strongly disagreement, 5=strongly agreement). Means in the same column that do not share subscripts differed at $p < .05$ by Duncan's multiple range test. ***, $p < 0.001$ by paired t-test.

Table 5

Judgments on the Underlying Factors across Categories of Metacognition

Grade levels	N	Holistirc approaches	Analytical approaches
		(Mean±SD)	
7th	332	3.50±0.48a	3.38±0.47a
		(t= -3.26**)	
8th	355	3.48±0.53a	3.38±0.51a
		(t= -3.02**)	
9th	315	3.60±0.49b	3.37±0.51a
		(t= 6.11***)	

Note. Judgments were made on 5-point scales (1= strongly disagreement, 5=strongly agreement). Means in the same column that do not share subscripts differed at $p < .05$ by Duncan's multiple range test. **, $p < 0.01$, ***, $p < 0.001$ by paired t-test.