Chapter Five

Conclusions

This chapter mainly summarizes the findings of the study and draws a conclusion for the whole research. In addition, pedagogical implications for the EFL reading instructions at the vocational high schools are discussed. Finally, limitations of the study and suggestions for future research are provided for those who are interested in this subject as well as for those who intend to carry out follow-up studies.

Major Findings

The current experimental study mainly investigates the influence of logical conjunctions on EFL students' English reading comprehension as well as the comprehensibility of the four types of logical relations: additive, temporal, adversative, and causal.

The first research question is to explore whether logical conjunctions have any effects on Taiwanese EFL students' comprehension in reading expository texts. The results of the experiments reveal a positive answer to the question, indicating that logical conjunctions play a facilitating role in EFL students' reading comprehension. To be more specific, they are more helpful to higher achievers in the overall comprehension of the texts while they are more beneficial to lower achievers in the understanding of detailed information. This finding suggests a hierarchy of comprehension stages concerning the students of different proficiency levels. During

the process of reading, the students of high proficiency mainly adopt a top-down process to integrate and understand the texts, regarding logical conjunctions as an aid but not a necessity in the overall comprehension. By contrast, the students of low proficiency adopt a bottom-up process, putting equal emphasis on every single word with an attempt to fully understand each sentence and every detail of the texts, but end up missing the focus of the messages to be conveyed. To conclude, the differences between higher achievers and lower achievers lie in comprehension processes and the ability of integration, which affect logical conjunctions to facilitate reading comprehension of expository texts at different levels.

The second research question is to probe into the sequence of comprehension difficulty among the four types of logical conjunctions. Conjunctions of additive and temporal relations are comparably easier for simpler linguistic structures and lower load of cognitive process (Ozono & Ito, 2003). The reason why additive conjunctions are especially easy lies in higher frequency of occurrence (Steffani & Nippold, 1997). Then, conjunctions of adversative is relatively challenging because of the backward search of words, i.e. perception, and the forward progress of reasoning (Ozno & Ito, 2003; Vonk, W., & Noordman, L. G. M., 1990). The most difficult type is conjunctions of causal relations. The researcher put forth the different concepts of *because* and *so* as well as the prediction of structural complexity. Namely, subordinate clauses are more complicated than coordinate and modifying clauses. Even though the difficulty sequence makes no difference in the students' levels of proficiency, the findings still reveal that the gap between the higher achievers and lower achievers in their performance of the four types of logical conjunctions

respectively is becoming narrower when the difficulty level of the logical

conjunctions is increasing. For example, no significant difference is indicated between

the two groups in conjunctions of causal relations. In addition, the results of the error

analysis in the preference of conjunction selections also manifest that the students of

higher proficiency are more confident and capable of choosing the appropriate

conjunctions whereas the students of lower proficiency tend to substitute additive

conjunctions for the other three types when they are not sure of what to choose from.

Pedagogical Implications

Some of the findings can be generalized and applied to English teaching and

learning. The following are the pedagogical implications drawn from the present

study.

First, the results that the nearly all subjects performed much better in questions

for detailed information than questions for main ideas suggest that students are good

at linguistic elements, such as vocabulary, grammatical cues, or isolated sentences,

but poor at overall comprehension of the text. In other words, they are accustomed to

bottom-up process, but quite unfamiliar with top-down process. This finding reflects a

serious problem of current English education in Taiwan. For years, vocabulary,

grammars, and sentence translation have gained all the focus in English teaching.

English teachers in Taiwan have kept emphasizing the importance of memorizing

words, phrases, grammars, sentence patterns, etc. The students have been instilled in a

false conception that the more words and grammars they obtain, the better grades they

will get, or the better their English becomes. In order to correct students'

misconception and improve students' true reading ability, some suggestions are

provided. First, reading should combine both top-down and bottom-up processing, or so-called interactive reading. Nuttall (1996) stated that "In practice, a reader continually shifts from one focus to another, now adopting a top-down approach to predict probable meaning, then moving to the bottom-up approach to check whether that is really what the writer says." (p17) In other words, even though the bottom-up approach is necessary, the top-down approach is indispensable as well. Second, students must be prepared with the ability and courage to guess. As Goodman (1976) claimed, "reading is a psycholinguistic guessing game" (p.497). All reading involves a risk for readers to infer meanings, decide what to retain and not to retain, and move on. Therefore, students must be encouraged to guess the meaning of a word from the context instead of checking it up immediately in a dictionary. Third, some adjustments must be made to the teaching procedure. Most English teachers in Taiwan teach a lesson by starting with new words, and then grammars or sentence pattern, and finally the reading passage. To strike a balance between students' top-down and bottom-up processing ability, the current teaching procedure must be reverse and more top-down exercises must be implemented. Fourth, reading strategies for students to get to know the main idea of the text quickly must be taught and put into practice. For instance, teachers can introduce the basic structures of English composition, and help students find out the purpose of an article by identifying its topic sentence and concluding sentence.

Second, since logical conjunctions play a facilitating role in the reading of expository texts, teachers can strengthen students' reading comprehension ability by teaching logical relations explicitly. Teachers can begin with instructing the students

with the four types of logical relations respectively in sentence pairs to help students get familiar with the logic. Next, they can give students guidance to interpret the functions and usages of each type logical conjunctions. Last but not the least, teachers must help students learn conjunctions in contexts. By highlighting the logical conjunctions in written texts, students are able to not only remind themselves of the logical relations between sentences but also develop the concepts of textual cohesion and coherence.

Third, the findings suggest that adversative and casual conjunctions are the more difficult among the four types of logical conjunctions, especially causal conjunctions. Therefore, how to improve students' comprehension in the more challenging logical relations surely becomes a lesson. First, based on Steffani and Nippold's study (1997), competence with conjunctions is related to the amount of experience an EFL speaker had with the English language. Teachers can help students get more exposure to the challenging logical relations. Second, with respect to the casual conjunctions, teachers can assist students in the reasoning of causality as well as providing more reading and practices on subordinate clauses since they are structurally more complex and require more cognitive processing load. Hopefully, with more exposure and practices, students will become proficient in all of them.

Limitations of the Study

Though, the present study revealed conjunctions have a positive impact on reading comprehension and discovered the difficulty sequence of the four types of logical conjunctions, several limitations must be mentioned.

First of all, the participants in the study were from the same vocational high

school in Taipei. Half of them majored in mechanical engineering and the other half major in commercial management. These students' English proficiency were generally lower than most of other vocational high school students in the same year. Therefore, the results of this study can only be applied to the students with a similar background. Moreover, among 75 subjects participating in this study, only 21 in the high group and 20 in the low group were further observed. With such a limited number of participants, it is inappropriate to generalize the findings of the study to all EFL vocational high school students.

Second, expository texts, though, better reflecting the influence of text characteristics to guide the construction of a meaning representation, do not represent the influence of other texts. For example, narrative texts are often constructed with causality or time sequence. That is, logical conjunctions play a part. If the problem of narrative texts, whose structures are quite regular with the places of certain conjunctions appear, could be overcome, expository and narrative texts together as experimental materials will obtain more precise results concerning EFL vocational high school students' reading comprehension.

Third, each type of logical relation covers several expressions in conjunctions. Take *"and"* for example, it has several counterparts semantically, like *"besides"*, *"in addition", "furthermore"*, etc. The syntactic properties of the conjunctions in the cloze test were controlled; however, various alternatives for the same type of logical relations semantically were unavoidable for the authenticity of the texts. This posed a problem. Students' wrong responses might be resulted from their unfamiliarity with the meaning of the conjunctions rather than their unawareness of the logical relations,

which was probably the case for the low group. Therefore, the more restrictions to the conjunctions are suggested.

Fourth, the means of measurement applied in the study can make a difference to the results, even though every measurement has its advantages and disadvantages. Multiple-choice tests, through which the present study measured the subjects' reading comprehension, have one drawback. The subjects could have the chance to guess the answers and be lucky enough to guess them right. If the experiment could include short-answer questions and the method of free-recall, the probability of guessing would be eliminated and the more reliable results would be derived.

Suggestions for Future Research

On the basis of the findings and limitations of the study, some suggestions and recommendations are provided for those who are interested this topic as future research.

To begin with, only 75 vocational high school students, coming from the same school, participated in this study. Due to the small number of sample students, the results might neither appropriately account for the performance of other EFL students' reading comprehension nor adequately be generalized to other vocational high school students in Taiwan. For a more thorough study, larger groups of subjects with randomly sampled are recommended for the relevant research.

Second, as mentioned in the discussion in Chapter Four, causal conjunctions are the most difficult among the four types of logical relations. The searcher proposed the explanation that causal relations involve two contradictory concepts: "*because*" and "*so*", claiming that they are different in structures as well as directions of cognitive

process. However, still more scientific studies in this area are needed so as to have a more clear understanding of causal relations and causal conjunctions.

Finally, based on the limitations of text types and means of measurements, some suggestions in the experimental design are provided. First, follow-up studies can combine expository, narrative and other texts to have a more overall exploration of EFL students' reading comprehension. Second, future researchers can adopt other kinds of test formats, such as short-answer questions, open-ended questions, free-recall, etc., either presented orally or in written language, as another variance in their studies.