Teaching the Function of English Connectives for Expository Text Comprehension
Teaching the Function of English Connectives
for Expository Text Comprehension

A Thesis
Presented to
The Faculty of the Graduate Course at
Hyogo University of Teacher Education

In Partial Fulfillment
of the Requirements for the Degree of
Master in School Education

by
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December, 1996
ACKNOWLEDGEMENTS

The author would like to express to many people his sincere gratitude for having been blessed with their great efforts and assistance toward the completion of this thesis.

First and foremost, the author expresses his deepest gratitude to his seminar supervisor, Professor Masamichi Tanaka, whose invaluable and insightful advice has been a reliable and guiding compass in the course of the present research. Without this compass and his warm-hearted encouragement, this thesis would never have come into existence. Thanks to Professor Masamichi Tanaka, the author could also learn the integral morals of the researcher: sincerity, autonomy, and the continuation of research.

Next, the author wishes to acknowledge valuable suggestions and critical comments by other teaching staff members of the Department of English Language at Hyogo University of Teacher Education.

Special thanks are also due to Instructor Satoshi Hiramoto at Takamatsu University and Instructor Tatsuhiro Yoshida at Matsuyama University for providing the author with ideas on how to begin this study and further research respectively.

The author is also indebted to the Osaka Prefectural Board of Education for providing him with the precious opportunity to study at the graduate level, and to a number of competent teachers who gave him willing assistance for the implementation of the survey contained within. Among them are Ms. Junko Ishigaki, Mr. Kozo Dake, Ms. Natsuko Uekawa, Mr. Juichi Suzuki, Mr. Takeo Mori, and Mr. Tatsuya Sakaguchi.
Furthermore, the author wishes to express his heartfelt thanks to Mr. Robert J. Garrity for reading the entire text and offering a number of helpful comments on an earlier draft of this thesis. Needless to say, however, the author is solely responsible for the text with any surviving errors.

Lastly, but not least, the author wishes to thank his family members, especially his wife for her generous support, constant inspiration, and the two-year sacrifice she has made for this work.

But for the assistance and inspiration of all these people, this thesis would never have seen the light of vernal day.

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Yashiro, Hyogo
December, 1996
ABSTRACT

When a reader reads a coherent expository text and is to comprehend it, s/he is no doubt required to make an effort to capture various relations between clauses, sentences, or larger portions of discourse in the text. These relations are called coherence relations among researchers.

This paper, as a starting point for the research on coherence relations, deals with English connectives as one class of linguistic cues that play a significant role in realizing coherence relations both concretely and precisely. The purpose of this paper is three-fold: (1) to discuss the significance of connectives in expository text comprehension, (2) to analyze the status quo from the viewpoints of both students' understanding of connectives at the text level and the frequency of connectives in their main learning materials, and (3) to explore instruction by which students can acquire a working understanding of how to utilize connectives appropriately for expository text comprehension.

In order to realize these purposes, Chapter 1 begins with a definition, the function, and the categories of connectives and discusses the significance of connectives in expository text comprehension by reviewing prior research.

Chapters 2 and 3 deal with the analysis of the present state of students' knowledge and learning materials with regard to connectives at the text level. Chapter 2 describes a survey conducted in order to test Japanese senior high school students' understanding of connectives at the text level. The findings suggest an overall deficiency with regard to these connectives. Chapter 3 looks at learning materials; analyzing the frequency of connectives in
popular reading textbooks. As a result, it can be concluded that little attention has been paid to certain connectives because of their very low frequency.

Following the discussions and findings in the previous chapters, Chapter 4 explores instruction in terms of providing tasks by which students can begin to understand the crucial function of connectives and learn how to utilize them appropriately at the text level.

The last chapter states in conclusion the implications for further research on the comprehension of unmarked coherence relations.

Although the significance of connectives in expository text comprehension has been widely discussed among researchers, little attention has been given to the teaching of connectives not at the sentence but rather at the text level. Therefore, it is no exaggeration to argue that the pedagogical value of this paper, if any, consists in attempting to explore the instruction of connectives at the text level and furnish systematically graded tasks which are based on a principled framework.
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INTRODUCTION

Text comprehension can be regarded as a complex cognitive process in the sense that it can involve at least the following five basic processes: microprocesses (understanding and selective recall of individual propositions within individual sentences), integrative processes (understanding and inferring the relationships between individual clauses and sentences), macroprocesses (synthesizing and organizing individual idea units into a summary or organized series of related general ideas), elaborative processes (making inferences not necessarily intended by the author), and metacognitive processes (selecting, evaluating, or regulating readers' strategies to control comprehension) (Irwin 1991: 1-128). These five types of processes occur simultaneously and work together during text comprehension.

Among these five processes, this paper targets one subprocess of integrative processes, namely, understanding “coherence relations that link clauses, sentences, or larger portions of discourse to each other” (Hobbs 1979: 68). As a reasonable starting point for the research on coherence relations, this paper seeks to highlight the function of English connectives at the text level for the purpose of expository text comprehension. The significant role of connectives as an important class of linguistic cues in realizing coherence relations both concretely and precisely cannot be understressed (Sanders and van Wijk 1996: 91). Readers are required to respond appropriately to these important textual indicators when they are explicitly stated in the text. Therefore, both research and pedagogical
solutions to the comprehension of connectives at the text level seem indicated.

The purpose of this paper is then to not only reexamine the significance of connectives in expository text comprehension but also explore instruction for the purpose of students' mastery of connectives at the text level. In order to accomplish the former purpose, the author will discuss a definition, the function, and the categories of connectives and demonstrate the significance of them in expository text comprehension by reviewing prior research. As regards the latter which has a top priority in this paper, the author will first analyze the status quo: students' understanding of connectives at the text level and the frequency of connectives in their textbooks. And next, pedagogically motivated, the author will advance a series of task-oriented lessons for the instruction of connectives at the text level. Consequently, this paper is comprised of five areas in which the following issues will be discussed.

1. The definition, function, categories, and the significance of connectives in expository text comprehension (in Chapter 1)
2. Japanese senior high school students' understanding of connectives at the text level (in Chapter 2)
3. The frequency of connectives in Japanese senior high school students' reading textbooks (in Chapter 3)
4. Task-based instruction for the learning of connectives at the text level (in Chapter 4)
5. Conclusion and implications for further research (in Chapter 5)
CHAPTER 1

The Significance of Connectives in Expository Text Comprehension

1.1 Definition, Function, and Categories of Connectives

The term *connectives* can be defined as a form of text device which explicitly specifies relationships between successive clauses or sentences. They include conjunctions, adverbs, adverbial phrases, and prepositional phrases. Their primary function is to organize the content of discourse (Grimes 1975: 207), or more precisely, to connect adjacent text propositions systematically (Halliday and Hasan 1976: 227) and serve semantic integration both prospectively and retrospectively (Carpenter and Just 1977: 234-35, Hirsch 1977: 128-29, Irwin 1991: 42-5).


With regard to the categories of connectives, Halliday and Hasan (1976: 238-71) provide a comprehensive taxonomy from the functional viewpoint, that is, a scheme of four categories: additive, adversative, causal, and temporal. Those four connective categories differ with respect to the meaning relationships they signal. Additive connectives signal that some
information is added to previous content (e.g. and, for example, furthermore, in addition). Adversative connectives signal contrastive or comparative elaborations (e.g. but, however, on the other hand, in contrast). Causal connectives (e.g. therefore, as a result, consequently) clarify that there is the logical development such as cause-effect or antecedent-consequent relationship. Temporal connectives are used to signal the sequential or temporal order (e.g. then, soon, later), to enumerate a list of things (e.g. first, second, finally), or to highlight a sentence that concludes or summarizes a text (e.g. in conclusion, in summary, in short).

1.2 Prior Research on Connectives and Expository Text Comprehension in First Language Research

In this section, the author reviews prior research done on connectives and expository text comprehension in first language studies and their fundamental implications for second or foreign language research (See Barnett 1989: 9-12, Grabe 1993: 208).

Prior research presents a complicated picture of the role of connectives on expository text comprehension. Britton, Glynn, Meyer, and Penland (1982) and Loman and Mayer (1983) found no significant differences between readers of differing reading ability levels in how they responded to connectives. Millis, Graesser, and Haberlandt (1993) found that connectives did not always facilitate text comprehension and memory.

In contrast to those inconclusive previous studies, there is considerable evidence to prove that the presence of explicit connectives facilitates text comprehension. Beck, McKeown, Sinatra, and Loxterman (1991), Irwin
Spyridakis and Standal (1987) reported that explicit connectives enhanced comprehension. Goldsmith (1982), Lorch and Lorch (1986), Marshall and Glock (1978), Meyer, Brandt, and Bluth (1980) found that less skilled readers improved their comprehension more with the benefit of connectives than skilled readers. On the other hand, Johnston and Pearson (1982) and Zinar (1990) found that skilled readers' comprehension improved more than less skilled readers' with the addition of connectives in unmarked text. Furthermore, Geva and Ryan (1985) reported that both skilled and less skilled readers benefited from the highlighting of explicit connectives.

Thus, skilled and less skilled readers seem to be differently affected by the presence of explicit connectives. To account for these discrepant results from the previous studies, the most likely theoretical explanation is a developmental hypothesis proposed by Johnston and Pearson (1982: 35). Their developmental hypothesis claims that readers progress through three developmental stages in terms of their sensitivity to and use of connectives: "from unawareness of explicit connectives, to awareness of explicit connectives and dependence upon them, to an active reading style in which relationships are inferred and explicit connectives are unnecessary" (Zinar 1990: 182). In more detail, Goldman and Murray (1992) provide the following persuasive explanation:

Their developmental hypothesis states that very young or very poor readers do not benefit from connectors because (a) connectors make sentences longer and more complex and (b) these readers probably read in smaller text "units" so that the presence of a signal connecting larger units of text is not useful. Moderately proficient readers do benefit from connectors when they are present but do not spontaneously use them to integrate larger text units. Highly proficient readers do not benefit from the connectors when they are present because they are so skilled in integrating text units that they do not need the relational information the
explicit connectors provide. In fact, when highly skilled readers recall text, they tend to integrate text units by spontaneously including connectors not explicitly mentioned in the text, suggesting that they did infer these relationships. (505)

What is immediately apparent from the above mentioned prior research and Johnston and Pearson's developmental hypothesis is that a mastery of connectives is essential to understand expository text. In written communication, connectives may be the only clue available for a reader to follow the logical relationships among ideas in the text. As a considerable number of studies have pointed out over the past few decades, the acquisition of connectives requires quite a long period of time—indeed, from kindergarten to the college years—but it is a crucial aspect of the child's developing linguistic competence (Bart 1974, Evans and Ballance 1980, Flores d'Arcais 1978, Katz and Brent 1968, Klein 1975, Lintermann-Rygh 1985, Marcus 1974, McClure and Geva 1983, Neimark and Slotnick 1970, Paris and Upton 1976, Robertson 1968, Stoodt 1972, Suppes and Feldman 1971).

1.3 Prior Research on Connectives and Expository Text Comprehension in Second or Foreign Language Research

Following the previous section, we turn our attention to prior research on connectives and expository text comprehension in the second or foreign language context. Classic studies done by Cohen, Glasman, Rosenbaum-Cohen, Ferrara, and Fine (1979) and Cooper (1984) found that one of the problems which hamper text comprehension is an inadequate mastery of connectives. Cohen, Glasman, Rosenbaum-Cohen, Ferrara, and Fine (1979:
reported that English-as-a-foreign-language university students did not assign proper meanings to the connectives signaling cohesion, not even to the more basic ones like however and thus, which caused misinterpretation of the cross-paragraph structure. Cooper (1984: 131-33) investigated the linguistic features of texts that might cause problems among English-as-a-foreign-language university students and found that less skilled readers could not understand the relationships between sentences resulting from being uncertain of the meanings of common connectives such as despite, nevertheless, and consequently. He distinguished skilled readers from less skilled readers as follows:

We concluded that practised readers are distinguished from unpractised readers by a far greater ability to understand meaning relationships above the sentence level, and that this ability includes an understanding of sentence connectors, as well as other cohesive relationships that we have previously examined. (emphasis added, 132)

In Japan, Yoshioka (1984) conducted a Test of Higher Cognitive Processes which was in high correlation with reading comprehension and found that one category called Sequential Synthesis was the most difficult task for Japanese junior college and university students. This task requires students to arrange five illogically ordered statements into a coherent text by utilizing cohesive devices as signaling clues. She pointed out that one of the erroneous strategies abstracted from the task was a lack of the ability to judge how connectives connect propositions in order to obtain the most logical sequence (Yoshioka 1984: 95-6).

Finally, we should not overlook two prominent studies conducted by Goldman and Murray (1992) and Geva (1992). Goldman and Murray (1992)
investigated native-English and English-as-a-second-language university students' understanding of the functions of four types of connectives by a multiple-choice, rational cloze test. Their significant findings were the following three points. The first point was that patterns of difficulty for the four connective types were generally consistent across linguistic groups: students were more likely to be accurate at additive and causal cloze slots than adversative and temporal ones. The second, and more importantly, was that inaccurate responses showed a tendency to overattribute causal relations: readers heavily selected causal connectives. And finally, perhaps the most significant finding was that the least proficient students had little understanding of intersentential additive, adversative, and causal relationships. Goldman and Murray (1992: 518) argued that mastering appropriate use of connectives during reading is extremely difficult for English-as-a-second-language students and that much more instruction focusing on connectives in natural text context is indispensable to these students. On the other hand, Geva (1992) tested the relationship between levels of proficiency in English and connective comprehension among English-as-a-second-language university students. She did find high correlation between the two: with increased proficiency in English, those students improved their ability to grasp logical relationships signaled by connectives at three levels, intrasentential, intersentential, and discourse level. Her research indicated that the ability to realize the nature of logical relationships is one of the parameters of the second language learner's growing proficiency and she also argued that second language learners need much more work on linguistic markers such as connectives in reading
connected discourse.

1.4 Summary

So far we have reviewed prior research done in both first and second/foreign language studies. What is extracted as an important educational implication is evident: the significance of connectives in expository text comprehension cannot be emphasized too strongly; therefore, teaching the function of various connectives as a cohesive device is not a sufficient but a necessary component for expository text comprehension. Classroom teachers should bear in mind that the instruction of bottom-up decoding skills should include automatic identification of connectives as text signals (Carrell 1988: 241) and that ignoring this fundamental skill will forestall the development of any higher-level reading strategies (Eskey 1986: 19).

Lastly, the author closes this chapter with the following suggestion. Teachers should explicitly teach their students the meanings and functions of connectives in reading expository texts and lead students' attention to connectives in order to enhance their comprehension and foster active readers.

In the next chapter, the results of a survey on Japanese senior high school students' understanding of connectives at the text level will be discussed.
CHAPTER 2

A Survey on Japanese Senior High School Students' Understanding of Connectives at the Text Level

2.1 Purpose of the Survey

The purpose of the present survey was to investigate how well Japanese senior high school students could understand logical relationships and utilize appropriate intersentential or inter-paragraph connectives during reading expository texts. The reason for the exclusion of intrasentential connectives was that understanding intrasentential connectives primarily requires syntactic or grammatical knowledge.

The primary concern of the author was not to examine the students' knowledge of intrasentential cohesion, nor general relationship between their reading ability and their understanding of connectives, but to investigate how well they could identify intersentential or inter-paragraph logical relationships and understand the functions of four different kinds of connectives. In this regard, much of prior research is open to criticism due to its unsystematic or inconsistent selection of connectives. The selection of connectives is perhaps the most significant issue to stress within this area of research. Therefore, it is the author's wish to emphasize both the systematic and the consistent selection of connectives.

What is also crucial in the present survey is the students' ability to respond to intersentential or inter-paragraph connectives. If they do not respond appropriately to the important indicators of relations among propositions,
namely these connectives, their text representations will collapse or at least not be coherent (Goldman and Murray 1992: 505, Lorch and O’Brien 1995: 2).

2.2 Subjects

The subjects were 730 first-year students at four Osaka prefectural senior high schools ranging 15 through 16 years of age. The present survey was implemented during the final term at each school, meaning that the subjects had been studying English as a foreign language for four years.

2.3 Reading Materials

Two expository texts extracted from current English Course 1 textbooks authorized by the Japanese Ministry of Education were used for reading materials. All the subjects had no prior exposure to these textbooks before.

One text (henceforth TEXT 1) had a length of 499 words and a content which seemed to be familiar to the subjects: the importance of English as an international language. The other (henceforth TEXT 2) counted 190 words, much shorter than TEXT 1, but its content seemed to be unfamiliar to the subjects: the difference between Japanese and Western front doors--while Japanese front doors open outward, Western front doors open inward.

Over the two texts, four different kinds of connectives were deleted respectively. The deleted connectives were For example (additive), Actually (adversative), Thus (causal), and Finally (temporal) from TEXT 1; and Besides (additive), On the other hand (adversative), Because of this slope (causal), and Secondly (temporal) from TEXT 2. Intersentential connectives which require the understanding of local coherence were For example,
Actually, Thus, Besides, and Because of this slope. Inter-paragraph connectives which require the understanding of global coherence were Finally, On the other hand, and Secondly (see APPENDIX A).

2.4 Procedure

The procedure was equivalent to a multiple-choice, rational cloze test. The high validity of the cloze task for measuring intersentential semantic integration had been demonstrated by Bridge and Winograd (1982), MacLean and d'Anglejan (1986), and McKenna and Layton (1990).

The subjects were required to read two expository texts, TEXT 1 and TEXT 2, in which four different types of connectives had been replaced by blanks respectively. For each blank, there were a set of four multiple-choice alternatives which consisted of one representative of each of the four types of connectives. The subjects had to select the most appropriate connective from among the alternatives. This set of four multiple-choice alternatives is represented as table 1 below.

<table>
<thead>
<tr>
<th>Table 1</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>A Set of Four Multiple-choice Alternatives</strong></td>
</tr>
<tr>
<td>Text</td>
</tr>
<tr>
<td>TEXT 1</td>
</tr>
<tr>
<td>Besides</td>
</tr>
<tr>
<td>By the way</td>
</tr>
<tr>
<td>In particular</td>
</tr>
<tr>
<td>TEXT 2</td>
</tr>
<tr>
<td>Besides</td>
</tr>
<tr>
<td>In other words</td>
</tr>
</tbody>
</table>

Note: Underlined connectives are correct ones. Others are distractors.
Furthermore, they were required to give written justification for their selection in their native language, Japanese. A limit of 50 minutes was allotted to each subject for task completion (see APPENDIX A).

2.5 Results

In this section, the author presents the results of the present survey in the following sequence: the overall results, correct answers, and erroneous answers.

First of all, table 2 represents the overall results of correct, erroneous, and no answers in percentage terms.

Table 2

Correct, Erroneous, No Answers Percentage

<table>
<thead>
<tr>
<th>Text</th>
<th>Correct Connective</th>
<th>(category)</th>
<th>Correct Answer</th>
<th>Erroneous Answer</th>
<th>No Answer</th>
</tr>
</thead>
<tbody>
<tr>
<td>TEXT 1</td>
<td>For example</td>
<td>(additive)</td>
<td>73.4</td>
<td>20.8</td>
<td>5.8</td>
</tr>
<tr>
<td></td>
<td>Actually</td>
<td>(adversative)</td>
<td>47.8</td>
<td>43.8</td>
<td>8.4</td>
</tr>
<tr>
<td></td>
<td>Thus</td>
<td>(causal)</td>
<td>31.6</td>
<td>61.4</td>
<td>7.0</td>
</tr>
<tr>
<td></td>
<td>Finally</td>
<td>(temporal)</td>
<td>71.5</td>
<td>24.1</td>
<td>4.4</td>
</tr>
<tr>
<td>TEXT 2</td>
<td>Besides</td>
<td>(additive)</td>
<td>10.6</td>
<td>82.3</td>
<td>7.1</td>
</tr>
<tr>
<td></td>
<td>On the other hand</td>
<td>(adversative)</td>
<td>36.2</td>
<td>52.4</td>
<td>11.4</td>
</tr>
<tr>
<td></td>
<td>Because of</td>
<td>(causal)</td>
<td>47.3</td>
<td>37.8</td>
<td>14.9</td>
</tr>
<tr>
<td></td>
<td>Secondly</td>
<td>(temporal)</td>
<td>58.3</td>
<td>33.6</td>
<td>8.1</td>
</tr>
</tbody>
</table>

Table 2 shows that the degrees of difficulty of understanding of connectives are different between the two texts as follows.

low ← The Degree of Difficulty → high

TEXT 1 additive temporal adversative causal
TEXT 2 temporal causal adversative additive

In TEXT 1, the degree of difficulty increases from low to high, For example (additive), Finally (temporal), Actually (adversative), Thus
(causal). In TEXT 2, it increases from low to high, Secondly (temporal), Because of (causal), On the other hand (adversative), Besides (additive). Perhaps it is right to say at the outset that there may be no general tendency of the degree of difficulty among the four different categories of connectives in the present survey. To argue this matter further would take us too far away from the purpose of the present survey and beyond the scope of this paper.

As a prominent feature, the two connectives in the same additive category obtained extremely different results: while For example from TEXT 1 received the highest percentage of correct answer, Besides from TEXT 2 received the lowest.

Secondly, we look more closely at the validity of sources of correct answers. In other words, what made the subjects select each correct connective? Were their written justifications for the selection of each correct connective reasonable? If not, what were the causes of unreasonable justifications? In order to reply to these important inquiries, the author presents table 3 entitled justifications among correct answers.

Table 3

<table>
<thead>
<tr>
<th>Text</th>
<th>Correct Connective</th>
<th>Reasonable Justification</th>
<th>Unreasonable Justification</th>
<th>No Justification</th>
</tr>
</thead>
<tbody>
<tr>
<td>TEXT 1</td>
<td>For example</td>
<td>58.2</td>
<td>0.0</td>
<td>15.2</td>
</tr>
<tr>
<td></td>
<td>Actually</td>
<td>19.6</td>
<td>0.3</td>
<td>27.9</td>
</tr>
<tr>
<td></td>
<td>Thus</td>
<td>12.6</td>
<td>0.0</td>
<td>19.0</td>
</tr>
<tr>
<td></td>
<td>Finally</td>
<td>62.9</td>
<td>0.0</td>
<td>8.6</td>
</tr>
<tr>
<td>TEXT 2</td>
<td>Besides</td>
<td>3.8</td>
<td>0.3</td>
<td>6.5</td>
</tr>
<tr>
<td></td>
<td>On the other hand</td>
<td>27.4</td>
<td>0.0</td>
<td>8.8</td>
</tr>
<tr>
<td></td>
<td>Because of</td>
<td>12.3</td>
<td>11.6</td>
<td>23.4</td>
</tr>
<tr>
<td></td>
<td>Secondly</td>
<td>49.4</td>
<td>0.0</td>
<td>8.9</td>
</tr>
</tbody>
</table>
Reasonable justifications required for each correct connective are summarized as follows.

<table>
<thead>
<tr>
<th>Correct Connective</th>
<th>Reasonable Justification</th>
</tr>
</thead>
<tbody>
<tr>
<td><em>For example</em> (additive)</td>
<td>Because the postcedent sentence is one example of the antecedent content: a non-English-speaking tourist may use English outside of his or her own country.</td>
</tr>
<tr>
<td><em>Actually</em> (adversative)</td>
<td>Because English is not the mother tongue of two or three countries, <em>on the contrary</em>, English is the mother tongue of people in Britain, the United States, Canada, Australia, New Zealand, Jamaica, Trinidad and many, many other countries.</td>
</tr>
<tr>
<td><em>Thus</em> (causal)</td>
<td>There are companies that have offices all over the world. English is used for international communication and it is the language of business in many of those companies. <em>As a result</em>, a Spanish worker in the Madrid office of a large company may write a business letter in English to an Egyptian worker in the Cairo office of that same company.</td>
</tr>
<tr>
<td><em>Finally</em> (temporal)</td>
<td>Because the postcedent paragraph is about the final, third question: who else uses English?</td>
</tr>
<tr>
<td><em>Besides</em> (additive)</td>
<td>Because the postcedent two sentences are the additive reason why Japanese front doors open outward.</td>
</tr>
<tr>
<td><em>On the other hand</em> (adversative)</td>
<td>Because the postcedent paragraph is <em>contrastive</em> to the antecedent paragraph.</td>
</tr>
<tr>
<td><em>Because of</em> (causal)</td>
<td>Because there is a <em>cause and effect</em> relationship between the antecedent and postcedent content: the slope will prevent the door from opening inward.</td>
</tr>
<tr>
<td><em>Secondly</em> (temporal)</td>
<td>Because the postcedent content is the <em>second</em> reason why Japanese front doors open outward.</td>
</tr>
</tbody>
</table>

The column of reasonable justification in table 3 represents the percentages of the subjects who truly identified intersentential or inter-paragraph logical relationships above summarized and understood the functions of four different categories of connectives in the sense that those subjects obtained both correct answers and reasonable justifications. These
percentages, however, are rather low across the table except for those of *For example* and *Finally*. This point deserves explicit emphasis. The percentages of *Actually*, *Thus*, *On the other hand*, and *Because of* are lower than 30%. Especially, *Besides* falls to a mere 3.8%. Out of 730 subjects, only 28 subjects obtained the true understanding of *Besides*.

Furthermore, table 3 indicates that there is one further point we must not ignore. The columns of unreasonable and no justification show that it was difficult for the subjects to give written justification even in their native language. For example, regarding the unreasonable justification for *Because of*, 11.6% of the subjects gave the wrong justifications, though they did select the correct connective *Because of*. As exemplified below, the primary feature of their wrong justifications was a failure to capture the correct cause and effect relationship.

Because the sentence *the door won't open all the way if it opens inward* is the reason why Japanese front doors open outward.

Because the postcedent sentence is the reason for the antecedent content.

Because the postcedent sentence is the cause of the antecedent sentence.

Thirdly, it is more instructive to examine the nature of the erroneous answers committed by the subjects. Table 4 represents the justifications among erroneous answers.

**Table 4**

<table>
<thead>
<tr>
<th>Text</th>
<th>Correct Connective</th>
<th>Reasonable Justification</th>
<th>Unreasonable Justification</th>
<th>No Justification</th>
</tr>
</thead>
<tbody>
<tr>
<td>TEXT 1</td>
<td>For example</td>
<td>1.2</td>
<td>2.0</td>
<td>17.6</td>
</tr>
<tr>
<td></td>
<td>Actually</td>
<td>0.7</td>
<td>9.9</td>
<td>33.2</td>
</tr>
<tr>
<td></td>
<td>Thus</td>
<td>0.1</td>
<td>28.0</td>
<td>33.3</td>
</tr>
</tbody>
</table>
Besides
Because of
Secondly

Finally

<table>
<thead>
<tr>
<th>Correct Connective</th>
<th>Erroneous Selection</th>
<th>Unreasonable Justification</th>
</tr>
</thead>
</table>
| **Thus**          | By the way 
                   (26.9%) | Because the postcedent theme is different. |
|                   | However 
                   (16.0%) | Because the postcedent sentence is contrary to the antecedent content. |
|                   | Secondly 
                   (18.5%) | Because the postcedent sentence is the second example of the third question. |
| **Besides**       | Instead 
                   (10.4%) | Because the postcedent sentence is opposite to the antecedent content. |
|                   | For this reason 
                   (62.6%) | Because the postcedent sentence is the reason for the question. |
|                   | Before this 
                   (9.3%) | Because there is a cause and effect relationship. |

The column of reasonable justification in table 4 represents the percentages of the subjects who truly identified intersentential or inter-paragraph logical relationships, but surprisingly, selected wrong connectives. This phenomenon might be due to those subjects' inaccurate knowledge of the target connectives. The percentages, however, are quite low across the table.

Next, we have to inquire, to some extent, into the column of unreasonable justification. We shall concentrate on the three prominent cells in that column: unreasonable justifications for Thus, Besides, and On the other hand, which are exemplified as follows.
On the other hand  

For example (16.7%)  

Because the postcedent paragraph is about the example of Western front doors.

As a result (13.0%)  

Just then (22.7%)  

Because *then* is appropriate.

Those unreasonable justifications for selecting correct connectives *Thus* and *Besides* indicate that those subjects failed to understand the local coherence of cause and effect relationship and additional relationship respectively. With regard to those for *On the other hand*, those subjects seemed to have understood the global coherence of the switch to another theme but not identified the appropriate connective *On the other hand*.

2.6 Discussion and Suggestions for Teaching

We can summarize the present survey as table 5 below.

**Table 5**

<table>
<thead>
<tr>
<th>Correct Connective</th>
<th>True Understanding(%)</th>
<th>Logical Relationship</th>
<th>Local / Global Coherence</th>
</tr>
</thead>
<tbody>
<tr>
<td>Besides</td>
<td>3.8</td>
<td>addition</td>
<td>local</td>
</tr>
<tr>
<td>Because of</td>
<td>12.3</td>
<td>cause and effect</td>
<td>local</td>
</tr>
<tr>
<td>Thus</td>
<td>12.6</td>
<td>cause and effect</td>
<td>local</td>
</tr>
<tr>
<td>Actually</td>
<td>19.6</td>
<td>contrast</td>
<td>local</td>
</tr>
<tr>
<td>On the other hand</td>
<td>27.4</td>
<td>contrast</td>
<td>global</td>
</tr>
<tr>
<td>Secondly</td>
<td>49.4</td>
<td>the second in sequence</td>
<td>global</td>
</tr>
<tr>
<td>For example</td>
<td>58.2</td>
<td>exemplification</td>
<td>local</td>
</tr>
<tr>
<td>Finally</td>
<td>62.9</td>
<td>the final in sequence</td>
<td>global</td>
</tr>
</tbody>
</table>

Table 5 represents the subjects' true understanding of the connectives, logical relationships, and coherence in the present survey in difficult order. More than approximate half the number of subjects obtained true
understanding of Secondly, For example, and Finally, which seemed to be familiar to them. It is clear, however, that the other connectives could not be understood appropriately. Especially, the cause and effect relationships embodied in Because of, Thus and the additional relationship in Besides were quite difficult for the subjects to identify.

Furthermore, there might be one crucial factor in hampering their true understanding: their inaccurate knowledge of the connectives in the present survey. Although all the correct connectives and distractors were carefully selected from English Course I textbooks authorized by the Japanese Ministry of Education and supplementary textbooks used by the subjects, some subjects misunderstood or did not know the proper meanings of some connectives. In point of fact, some mistook Besides for Beside, Because of for Because, Just then for Then, By the way for In this way. These mistakes are serious ones which can result in a complete failure to comprehend the texts.

So far we have seen the results of the present survey and discussed them, ultimately, what are suggestions for teaching implied by this survey? The author proposes two fundamental suggestions: students should learn the appropriate meanings of all connectives, and through the active instruction at the text level they should be able to identify intersentential or inter-paragraph logical relationships by utilizing appropriate connectives as important textual indicators. It is noteworthy that, as regards these suggestions, Goldman and Murray (1992) similarly conclude the following:

Once ESL students have grasped the basic meaning and functions of instances of specific connectors, additional drills on isolated use of connectors are not likely to lead to improved performance on connectors
in natural text contexts or to generally improved comprehension. Rather, improving ESL proficiency at this level seems to require instruction that fosters understanding of intersentential meaning, relationships between sentences, and how to use connectors to help construct these relationships so that accurate, coherent, and rich mental models can be produced. (emphases added, 518)

Before discussing this kind of instruction focusing on connectives at the text level, it is important for the researcher to know what is available in terms of content in the students' present learning materials, that is, how frequently do they encounter connectives in their reading texts? This frequency will be shown and discussed in Chapter 3.
CHAPTER 3
Frequency of Connectives in Textbooks

3.1 Purpose of Textbook Analysis

The purpose of textbook analysis was to examine how frequently Japanese senior high school students encounter connectives in their textbooks. If we concede that reading in a second or foreign language is an interactive process between a reader and a text, it would be unfair to disregard this important aspect of the text. Whereas the previous chapter focused on the reader's understanding of connectives, the present chapter focuses on the frequency of connectives in the students' reading materials.

The author considered the primary material, the primary source of input for Japanese students as being the textbooks authorized by the Japanese Ministry of Education, and scrutinized the frequency of connectives in the textbooks based on Halliday and Hasan's (1976) comprehensive taxonomy.

3.2 Selection of Textbooks and Procedure

One subject Reading was selected out of seven subjects in the general curriculum of Japanese senior high schools because the Reading textbooks comprise various classes of English genres and are written in order to develop various reading skills.

Next, selected were five top Reading textbooks in terms of market share. These were UNICORN ENGLISH READING (henceforth UN), MILESTONE English Reading (henceforth MI), The CROWN English Reading (henceforth
CR), Genius ENGLISH READINGS (henceforth GE), and SPECTRUM ENGLISH READING (henceforth SP).

The procedure of textbook analysis was to select all the intersentential and inter-paragraph connectives from all the expository texts, and then, to classify those connectives into four categories according to their functional meaning: additive, adversative, causal, and temporal category.

3.3 Results and Analysis

3.3.1 General Results

The analysis of all the intersentential and inter-paragraph connectives in the expository texts yielded the following general results in table 6.

Table 6

Frequency of Connectives in Textbooks

<table>
<thead>
<tr>
<th>Connective</th>
<th>Total</th>
<th>IS</th>
<th>IP</th>
<th>UN</th>
<th>MI</th>
<th>CR</th>
<th>GE</th>
<th>SP</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>[4]</td>
<td>[9]</td>
<td>[8]</td>
<td>[10]</td>
<td>[12]</td>
</tr>
<tr>
<td><strong>ADDITIVE</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>and</td>
<td>29</td>
<td>28</td>
<td>1</td>
<td>3</td>
<td>4</td>
<td>4</td>
<td>12</td>
<td>6(1)</td>
</tr>
<tr>
<td>for example</td>
<td>20</td>
<td>18</td>
<td>2</td>
<td>3</td>
<td>1</td>
<td>12(2)</td>
<td>4</td>
<td></td>
</tr>
<tr>
<td>or</td>
<td>10</td>
<td>8</td>
<td>2</td>
<td>4</td>
<td>4(2)</td>
<td>2</td>
<td></td>
<td></td>
</tr>
<tr>
<td>in other words</td>
<td>5</td>
<td>5</td>
<td>0</td>
<td>4</td>
<td></td>
<td>1</td>
<td></td>
<td></td>
</tr>
<tr>
<td>in fact</td>
<td>4</td>
<td>4</td>
<td>0</td>
<td>1</td>
<td></td>
<td>3</td>
<td></td>
<td></td>
</tr>
<tr>
<td>also</td>
<td>4</td>
<td>4</td>
<td>0</td>
<td>1</td>
<td></td>
<td>3</td>
<td></td>
<td></td>
</tr>
<tr>
<td>in the same way</td>
<td>3</td>
<td>1</td>
<td>2</td>
<td>1(1)</td>
<td></td>
<td>1(1)</td>
<td>1</td>
<td></td>
</tr>
<tr>
<td>besides</td>
<td>3</td>
<td>3</td>
<td>0</td>
<td>2</td>
<td>1</td>
<td></td>
<td>1</td>
<td></td>
</tr>
<tr>
<td>for instance</td>
<td>3</td>
<td>3</td>
<td>0</td>
<td>1</td>
<td>2</td>
<td></td>
<td>1</td>
<td></td>
</tr>
<tr>
<td>furthermore</td>
<td>2</td>
<td>2</td>
<td>0</td>
<td></td>
<td>1</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>then</td>
<td>2</td>
<td>2</td>
<td>0</td>
<td>1</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>additionally</td>
<td>1</td>
<td>1</td>
<td>0</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>what's more</td>
<td>1</td>
<td>1</td>
<td>0</td>
<td></td>
<td>1</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>in addition to</td>
<td>1</td>
<td>1</td>
<td>0</td>
<td></td>
<td>1</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>in particular</td>
<td>1</td>
<td>1</td>
<td>0</td>
<td></td>
<td>1</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>by the way</td>
<td>1</td>
<td>0</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>moreover</td>
<td>1</td>
<td>0</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>by contrast</td>
<td>1</td>
<td>1</td>
<td>0</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

(To be continued)
<table>
<thead>
<tr>
<th>ADVERSATIVE</th>
<th>CAUSAL</th>
<th>TEMPORAL</th>
</tr>
</thead>
<tbody>
<tr>
<td>and even worse</td>
<td>1 0 1</td>
<td>1 0 1 0 1</td>
</tr>
<tr>
<td>indeed</td>
<td>1 0 1</td>
<td>1 0 1 0 1</td>
</tr>
<tr>
<td>to put it concisely</td>
<td>1 0 1</td>
<td>1 0 1 0 1</td>
</tr>
<tr>
<td>but</td>
<td>93 74 19</td>
<td>14(3) 21(1) 16(3) 20(5) 22(7)</td>
</tr>
<tr>
<td>however</td>
<td>42 39 3</td>
<td>4 6(1) 4(1) 21(1) 7</td>
</tr>
<tr>
<td>yet</td>
<td>13 11 2</td>
<td>1 3 6(2) 3</td>
</tr>
<tr>
<td>on the other hand</td>
<td>5 4 1</td>
<td>1 1 2(1) 1</td>
</tr>
<tr>
<td>instead</td>
<td>4 4 0</td>
<td>3 1 1</td>
</tr>
<tr>
<td>though</td>
<td>3 3 0</td>
<td>1 1</td>
</tr>
<tr>
<td>actually</td>
<td>3 2 1</td>
<td>1 1</td>
</tr>
<tr>
<td>nevertheless</td>
<td>3 0 3</td>
<td>2(2) 1(1)</td>
</tr>
<tr>
<td>in contrast to</td>
<td>3 1 2</td>
<td>1 2(2)</td>
</tr>
<tr>
<td>on the contrary</td>
<td>2 2 0</td>
<td>2</td>
</tr>
<tr>
<td>still</td>
<td>1 1 0</td>
<td>1</td>
</tr>
<tr>
<td>by contrast</td>
<td>1 1 0</td>
<td>1</td>
</tr>
<tr>
<td>in fact</td>
<td>1 1 0</td>
<td>1</td>
</tr>
<tr>
<td>so</td>
<td>14 8 6</td>
<td>5(3) 3(1) 4(1) 2(1)</td>
</tr>
<tr>
<td>as a result</td>
<td>5 4 1</td>
<td>2(1) 1 2</td>
</tr>
<tr>
<td>then</td>
<td>5 4 1</td>
<td>1(1) 4</td>
</tr>
<tr>
<td>therefore</td>
<td>4 3 1</td>
<td>1 1 2(1)</td>
</tr>
<tr>
<td>thus</td>
<td>4 2 2</td>
<td>2(2) 2</td>
</tr>
<tr>
<td>in this way</td>
<td>3 2 1</td>
<td>2(1) 1</td>
</tr>
<tr>
<td>otherwise</td>
<td>2 2 0</td>
<td>1</td>
</tr>
<tr>
<td>for that reason</td>
<td>2 2 0</td>
<td>1 1</td>
</tr>
<tr>
<td>because</td>
<td>2 2 0</td>
<td>1 1</td>
</tr>
<tr>
<td>or</td>
<td>1 1 0</td>
<td>1 1</td>
</tr>
<tr>
<td>owing to</td>
<td>1 1 0</td>
<td>1</td>
</tr>
<tr>
<td>consequently</td>
<td>1 1 0</td>
<td>1</td>
</tr>
<tr>
<td>from this</td>
<td>1 1 0</td>
<td>1</td>
</tr>
<tr>
<td>in such case</td>
<td>1 1 0</td>
<td>1</td>
</tr>
<tr>
<td>then</td>
<td>10 6 4</td>
<td>2(1) 3 5(3)</td>
</tr>
<tr>
<td>at first</td>
<td>5 1 4</td>
<td>1(1) 3(3) 1</td>
</tr>
<tr>
<td>finally</td>
<td>4 2 2</td>
<td>1 3(2)</td>
</tr>
<tr>
<td>before</td>
<td>2 2 0</td>
<td>1</td>
</tr>
<tr>
<td>first, second</td>
<td>2 2 0</td>
<td>1</td>
</tr>
<tr>
<td>and then</td>
<td>2 2 0</td>
<td>1</td>
</tr>
<tr>
<td>in the end</td>
<td>2 1 1</td>
<td>2(1)</td>
</tr>
<tr>
<td>later</td>
<td>2 2 0</td>
<td>2</td>
</tr>
<tr>
<td>after that</td>
<td>2 2 0</td>
<td>1</td>
</tr>
<tr>
<td>at last</td>
<td>2 2 0</td>
<td>2</td>
</tr>
</tbody>
</table>

(To be continued)
only then | 1 | 1 | 0 | 1
at the beginning | 1 | 1 | 0 | 1
now | 1 | 0 | 1 | 1(1)
before long | 1 | 1 | 0 | 1
next | 1 | 1 | 0 | 1
in short | 1 | 0 | 1 | 1(1)
just then | 1 | 1 | 0 | 1
at the same time | 1 | 1 | 0 | 1

Notes: IS = intersentential connective. 
IP = inter-paragraph connective. 
UN, MI, CR, GE, SP are the abbreviated forms for the analyzed textbooks. 
The number in square brackets below the analyzed textbook represents the number of expository texts in the textbook. 
The number in parentheses across the table represents the number of inter-paragraph connectives included in the left total number.

Table 6 represents the frequency of all the intersentential and inter-paragraph connectives in the analyzed textbooks, in which the expository texts counted 43 pieces in total.

With only a cursory look, we can see that the coverage of connectives differs with the textbooks across the table, from wide to narrow coverage, GE (36 different connectives), MI (31 different connectives), SP (26 different connectives), CR (23 different connectives), UN (11 different connectives). From this viewpoint, we may say that the wider coverage textbook provides, the more instructive the textbook is for the students and the easier they can follow a stream of ideas in the text. Next, we move to the analysis of the frequency in detail.

3.3.2 Analysis

The connectives with the high frequency are the following: and (29), for example (20), or (10), but (93), however (42), yet (13), so (14), and then (10). All of these basic connectives are taught in junior high school.
In contrast to these high frequency connectives, the frequency of the following fundamental connectives which explicitly represent logical relationships between antecedent and postcedent propositions is quite low: besides (3), furthermore (2), instead (4), nevertheless (3), therefore (4), thus (4), otherwise (2), consequently (1), and first...second... (2). Although these are just one-word connectives, their individual roles for text comprehension are crucial and inaccurate mastery of them can definitely mislead students to incoherent text representations. Considering the total number of expository texts, 43 pieces in the analyzed textbooks, it seems evident that there is a low level of coverage of these connectives in the reading textbooks.

In addition to the infrequency of these primary connectives, the same phenomenon persists for the following phrasal connectives: in fact (4), for instance (3), in addition to (1), in particular (1), by the way (1), in contrast to (3), on the contrary (2), by contrast (1), for that reason (2), owing to (1), in the end (2), and in short (1). Although the importance of these text indicators together with the above mentioned one-word connectives is unquestionable, their appearance in the assessed textbooks are alarmingly infrequent.

Furthermore, there are many other connectives not listed in table 6, but nevertheless critical to text comprehension. Examples may include: alternatively, to illustrate, namely, likewise, similarly (additive), despite, in spite of, nonetheless (adversative), in consequence, due to, hence, for this purpose, with this in mind (causal), eventually, subsequently, to start with, lastly, in conclusion, to sum up, in summary (temporal)(Halliday and Hasan 1976: 242-43, Frodesen and Eyring 1993: 207-46).
Finally, we should give some mention of the difference of frequency between the intersentential and inter-paragraph connectives, though this is a rather stylistic analysis. In table 6, the total of the former (291 connectives) is more than four times as frequent as that of the latter (65 connectives). This tendency to avoid inter-paragraph connectives is consistent with Sato's (1990) survey. However, prominent is the excessive use of the inter-paragraph connective but (19).

3.4 Discussion and Educational Implications

To summarize this textbook analysis, we can say that the frequency of intersentential and inter-paragraph connectives is quite low except for and, for example, or, but, however, yet, so, and then. What this result directly affects is that not only students have little opportunity to encounter and learn explicit connectives but also they must infer the intended logical relationships among ideas in a text by themselves in cases where connectives do not appear in the text. It is needless to say that inference between sentences or paragraphs is certainly one of the essential reading skills, but nevertheless, the significance of connectives is not to be underestimated nor denied because they are definitely helpful to readers and particularly so for less skilled readers. We can conclude that the infrequency of connectives in the reading textbooks is a grave issue for the students in the field of foreign language reading.

Consequently, the author proposes important educational implications for both textbook writers and classroom teachers.
First for textbook writers, they should become more aware of the significance of connectives and include more explicit connectives in order to facilitate comprehension for students. The following are two examples of adequate attention to connectives applied in the rewriting of an original text.

<table>
<thead>
<tr>
<th>An original text</th>
<th>Adapted textbook version</th>
</tr>
</thead>
<tbody>
<tr>
<td>As a result, people look to their children to provide them with security in their old age. Having a large family can be a form of insurance. And even while they are still quite young, children can do a lot of useful jobs on a small farm.</td>
<td>As a result, people expect their children to provide them with security in their old age. And even while children are still quite young, they can do a lot of useful jobs. In other words, having a large family can be a form of insurance. (quoted from MI p.29)</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>An original text</th>
<th>Adapted textbook version</th>
</tr>
</thead>
<tbody>
<tr>
<td>Many blacks are beginning to trace their roots right back to the African tribes from which their ancestors were torn in the days of slavery and some of them are identifying themselves more and more with Africa. Some black leaders disapprove, reminding them that their culture and their language are not African. They are American.</td>
<td>Many blacks are beginning to trace their roots right back to the African tribes. Some of them are identifying themselves more and more with Africa. Africa is the land from which their ancestors were torn in the days of slavery. Some black leaders, however, disapprove and remind them that their culture and their language are not African. They are American. (quoted from MI p.51)</td>
</tr>
</tbody>
</table>

These two examples show an effective adaptation of an original text by rewriting and inserting a connective. In the former, inserting *in other words* contributes to summarization of the antecedent content and makes the original text tighter. In the latter, *however* explicitly contrasts disapproval of some black leaders with approval of many blacks and it simply makes the original text clearer.

Although textbook writers should refrain from the excessive use of connectives because of leading to prose that sounds artificial, mechanical,
and semantically redundant (Zamel 1984: 116), they are no doubt required to present explicit connectives effectively in the textbooks while being aware of and taking care of less skilled readers (Dubin and Olshtain 1980: 361-62, Hague and Scott 1994: 351, Irwin 1980: 486-87, 1986: 37, Meyer 1982: 45, Sloan 1984: 175). In this regard, the following conclusion written by Carrell (1987a) plainly supports this suggestion:

... if the writer uses one distinct text structure and is aiming for an audience of skilled, well-informed readers, signalling may be dispensed with. Such readers will have no difficulty identifying the proper text structure and using it to organize their comprehension and recall. However, to reach larger audiences of average readers, and in particular audiences of other ESL readers, an ESL writer probably ought to learn to include appropriate uses of signalling expressions to aid readers in organizing their comprehension of the text. (54)

The second educational implication is for classroom teachers. They should be aware of the infrequency of explicit connectives in the reading textbooks, but all the more they are required to make the best use of this infrequency. In other words, when their students encounter an infrequently used connective, they should be explicitly taught its meaning and function in the text and how to use it appropriately. And moreover, if classroom teachers intend their students to learn and master various connectives more thoroughly, they need to use supplementary reading materials with an abundance of connectives (Nattinger and DeCarrico 1992: 78-80) and explore instruction for the purpose of learning connectives and ultimately contributing to text comprehension. We will discuss and explore this instruction in the following chapter.
CHAPTER 4
Task-based Instruction for the Learning of Connectives at the Text Level

4.1 The Necessity of Task-based Instruction for the Learning of Connectives

So far in the previous chapters, we have discussed the significance of connectives in expository text comprehension (Chapter 1), Japanese senior high school students' inaccurate mastery of connectives at the text level (Chapter 2), and moreover, the low frequency of connectives in their reading textbooks (Chapter 3). Following those discussions, in the present chapter the author discusses and explores task-based instruction as a way in which students can understand the function of connectives and how to use them appropriately for expository text comprehension.

With regard to this learning goal, Reading textbooks provide us with few tasks. Out of all the current Reading textbooks, only one textbook was found to assign only one kind of tasks to each lesson as exercises. An example of this task is presented below.

Insert the most appropriate linking word or phrase into the round brackets.

What's worse, the teachers do not make any exception for me simply because I'm an exchange student from Japan and can't speak English well. ( ) I'm treated exactly as the other American students are.

A. However, B. In other words, C. On the other hand, D. Otherwise

Some join clubs, such as the basketball club, the football club or the painting club. ( ) others leave school as soon as classes are over....

A. Because B. But C. So, D. Then, (quoted from GE p.15)
Although this textbook adopts the same format as above from the first lesson to the last, we can say that only this kind of task is not sufficient. As suggested in the previous chapter, for a thorough mastery of connectives classroom teachers should explore instruction using supplementary reading materials which contain an abundance of connectives. Task-based instruction will substantially serve this goal if a variety of tasks are created on a set of clearly defined principles and ordered to form a task-continuum according to these principles.

In the related literature, although a large number of researchers have pointed out the mastery of connectives for text comprehension (Alexander 1980: 118, Geva 1983: 385-86, Geva and Ryan 1993: 9, Mei-yun 1991: 9, 1993: 13, Nattinger and DeCarrico 1992: 162-63, Pierce 1975: 266-67, Sim and Bensoussan 1979: 40, Swaffar 1985: 24, Tanaka 1994: 250), there are fewer well-designed tasks than one would expect that are based on a reasonably well-defined set of principles. In what little literature can be found on the task-based instruction targeting connectives at the text level, Irwin (1991: 42-7), Mackay (1979: 88-90), Nuttall (1982: 95-100), Pulver (1986: 69-82), Williams (1983: 46-9), and Yoshida (1994: 81-2) provide practical and viable tasks in the sense that they can be implemented in the actual classroom. Individually appealing as they are, they do not manifest the following two issues for the implementation of the task-based instruction. One is the relationship between text structure and connectives, the other is the grading of tasks.

These two issues directly concern the fundamental principles on which this task-based instruction should be based. As for the former, if there are
some distinct types of text structure among expository texts, what connectives are the representatives of each text structure? The latter concerns the fundamental question: how can we construct a task-continuum? How can we grade and place each task in the continuum? If there is a criterion for the grading, what is it? In the next section, the author must reply to these questions and employ the above stated two issues as underlying principles.

4.2 Fundamental Principles and a Framework for the Task-based Instruction of Connectives

4.2.1 Relationship between Text Structure and Connectives

First of all, we should know that teaching text structure facilitates students' reading comprehension in reading English as a second or foreign language context (Carrell 1984a, 1984b, 1985, 1987b). Being sensitive to rhetorical forms is one of the significant factors in text comprehension and skilled readers are more aware of rhetorical patterns than less skilled readers (Carrell 1987b: 476).

With regard to the relationship between text structure and connectives, Mei-yun (1989) provides the following persuasive and instructive comments:

The logical structure of a passage is often signaled by textual connectors, which are expressions connecting ideas. The most common organizational patterns in textbooks, for example, are cause-effect, definition, sequence of events, spatial geographic, thesis-example, description, generalization, and hypothesis-evidence, each of which has its characteristic textual connectors. These textual connectors are the best indicators of ideas, hence most important for reading comprehension. The best way to teach this is to have students read different passages with different organizational patterns and identify their textual connectors. (emphases added, 15-6)
Her suggestion is insightful in the sense that there must be some distinct types of text structure among expository texts which include their characteristic connectives and students should acquaint themselves with the distinct type of connectives peculiar to each type of text structure. Related research has also shown that “different text categories are systematically associated either with different connection modes or with different distributions of the same marks” (Fayol 1991: 67, Pellegrini, Galda, and Rubin 1984, Richgels, McGee, Lomax, and Sheard 1987, Smith and Frawley 1983).

Then, how many rhetorical patterns can we identify among expository texts? Among the horde of literature on the subject, we can refer to the prominent research done by Meyer. Meyer and her colleagues have shown that five basic rhetorical patterns in organization of discourse have significant effects on reading comprehension in English as a first language (Meyer 1975, 1977, 1982, 1985, Meyer and Freedle 1984, Meyer and Rice 1984). These five types she calls antecedent/consequent (causation), response, comparison, collection, and description. According to Meyer and Rice (1984), these five basic types of rhetorical relations can be explained respectively as follows:

An antecedent/consequent or covariance rhetorical relationship shows a causal relationship between topics.

A response rhetorical relationship includes the remark and reply, question and answer, and problem and solution formats.

A comparison relationship points out differences and similarities between two or more topics.

A collection relationship shows how ideas or events are related together into a group on the basis of some commonality.
A description relationship gives more information about a topic by presenting attributes, specifics, explanations, or settings. (326-27)

Meyer’s typology is not intended to be exhaustive or definitive (Meyer 1982: 38), but her research is of great importance due to its demonstration of significantly distinct types of English expository texts.

Next, we must take Mei-yun’s (1989: 15-6) remark into consideration: each distinct text structure has its characteristic connectives. Although Meyer’s typology is appealing, the author adopts the Mikulecky and Jeffries’ framework due to its potential application to the task-based instruction. Mikulecky and Jeffries (1986: 101-28, 1996: 99-131) list the relationships between distinct types of expository texts and their own characteristic connectives. They classify expository texts into the four types with careful consideration to the characteristic connectives of each type, namely, listing, sequence, cause-effect, and comparison/contrast type. These types and particular connectives are summarized as follows (Mikulecky and Jeffries 1986: 103-26, 1996: 100-25).

<table>
<thead>
<tr>
<th>Text Type</th>
<th>Connectives</th>
<th>Mode</th>
</tr>
</thead>
<tbody>
<tr>
<td>Listing</td>
<td>besides, in addition, for example, first, secondly, thirdly, lasty</td>
<td>The writer’s main idea is stated in the form of a generalization. This is followed by a list of supporting details.</td>
</tr>
<tr>
<td>Sequence</td>
<td>next, later, before, after, while, at the same time, soon, then</td>
<td>The writer’s main idea includes a series — events or steps that follow one after another.</td>
</tr>
<tr>
<td>Cause-Effect</td>
<td>as a result, because, so, thus, therefore, consequently, since</td>
<td>When the main idea is that one event or action causes another, authors use the cause-effect pattern.</td>
</tr>
<tr>
<td>Comparison/Contrast</td>
<td>however, in contrast,</td>
<td>The writer’s main idea explains</td>
</tr>
</tbody>
</table>
instead, but, yet, similarities and/or differences.
rather, conversely, on the other hand, similarly, in common, in the same way (some connectives added)

Supported by Carrell’s research, Mei-yun’s suggestion, and Mikulecky and Jeffries’ typology, we can establish the first fundamental principle for the implementation of the task-based instruction. At the first stage of the instruction, students should read different passages with different organizational patterns and learn the four distinct types, and can then learn the characteristic connectives for each text type. It is in this stage of reading different text structures that students should identify characteristic connectives and understand their different functions as the starting point of the task-based instruction.

4.2.2 A Criterion for the Grading of Tasks

The most important and fundamental criterion for the grading of tasks is that, though easily understood with our own intuition and experience, implicit connectives are more difficult to comprehend than explicit ones. In order to understand this we need to look at inference as a critical skill in text comprehension. Graesser and Clark (1985) summarize the relationship between cohesion and inference as follows:

The inference nodes with high cohesion have many arcs directly radiating from them in either the forward or backward direction. The inference nodes with low cohesion include ‘deadend’ nodes, connected to only one other node. The inference nodes with high cohesion tend to be generated during comprehension because they set up interpretation conditions for other passage statements and inferences. From another perspective, the inference nodes with high cohesion tend to have a higher likelihood of being activated by other passage statements and
Connectives as a cohesive device are no exception. In short, explicit connectives should make the integrative process shorter in duration and impose little inference on readers, while identifying implicit connectives requires bridging inference to them by utilizing the given-new strategy of comprehension (Clark 1977, Haviland and Clark 1974, Singer, Revlin, and Halldorson 1990: 36). In point of fact, Irwin (1980: 486) and Irwin and Pulver (1984: 405) have found that third, fifth, eighth grade and college level students are more likely to comprehend explicitly stated causal relationships rather than implicitly stated ones.

Considering the fact that text comprehension involves the critical role of the integrative process (Just and Carpenter 1980: 343-45, Kintsch and van Dijk 1978: 367-70, 390-91) and this process often involves inferring implicit or missing connectives (Crothers 1978: 54, 67-9, Kintsch 1990: 167), devising tasks focusing on implicit connectives should be included.

To sum up, the second fundamental principle for the implementation of the task-based instruction states that a set of tasks should be first divided into the two subsets. One subset consists of various tasks in which connectives are explicitly stated, the other is the more difficult one in which connectives are deleted and students must infer the implicit or missing connectives. Needless to say, in these two subsets, various tasks should be manipulated and settled in easy to difficult order.

4.2.3 A Framework for Task-based Instruction
Armed with the two fundamental principles mentioned above, the author proposes a framework for the implementation of the task-based instruction.

Table 7
A Framework for the Task-based Instruction for the Learning of Connectives

<table>
<thead>
<tr>
<th>Stage</th>
<th>STAGE 1</th>
<th>STAGE 2</th>
<th>STAGE 3</th>
</tr>
</thead>
<tbody>
<tr>
<td>Text Type</td>
<td>Listing Sequence Cause-Effect Comparison/Contrast</td>
<td>Miscellaneous</td>
<td>Miscellaneous</td>
</tr>
<tr>
<td>State of Connectives</td>
<td>Explicit</td>
<td>Explicit/Implicit</td>
<td>Implicit</td>
</tr>
<tr>
<td>Level of Tasks</td>
<td>Easy ← Task-continuum → Difficult</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Table 7 represents this framework which consists of three global stages from easy to difficult, stage one, stage two, and stage three. Stage one as the outset of the instruction targets the tasks in which students are required to identify four rhetorical patterns of text and to learn the functions of explicitly stated connectives peculiar to each text type. In stage two, students take their understanding of the four rhetorical patterns and characteristic connectives and they read natural texts in which connectives are stated either explicitly or implicitly. In other words, the two subsets of tasks mentioned earlier overlap in this stage; therefore, stage two can be conceptualized as the stage of transition to a more difficult stage. Finally, the last stage imposes inference of relationships between successive sentences or paragraphs on
students because target connectives are deleted from a text. This continuum from stage one to stage three can be equivalent to the task-continuum in which a task falls within any stage by the degree of its difficulty.

4.3 Practical and Viable Tasks for the Learning of Connectives at the Text Level

In this section, the author offers various practical and viable tasks at the text level in order for students to better understand the relationships between successive sentences or paragraphs and to utilize connectives appropriately. The framework of the task-based instruction assists systematic classification of tasks into the three stages, and within each stage various tasks are settled in easy to difficult order. This classification and degree of difficulty are encoded by both the number of each stage and the alphabetically ordered capital letter. For example, Task 1-A designates that the task is the easiest one in stage one. Task 2-C, in the same way, corresponds to the third difficult one in stage two.

In passing, this task-based instruction presupposes that students have already mastered the accurate meaning of each connective and targets those who need the appropriate knowledge of how to use connectives at the text level.

4.3.1 Tasks in Stage One

The goal of the tasks in stage one is that students learn to identify four different organizational patterns in expository texts and understand the functions of their characteristic connectives when they are explicitly stated.
The following task, 1-A, can be a good starting point for our instruction.

Task 1-A

Instructions: classify the following passages into the four patterns — listing, sequence, cause-effect, and comparison / contrast. Note that the underlined connectives are signals which tell you about the author's pattern of organization.

Passage 1
Diamonds are very expensive for several reasons. First, they are difficult to find. They are only found in a few places in the world. Second, they are useful. People use diamonds to cut other stones. Third, diamonds do not change. They stay the same for millions of years. And finally, they are very beautiful (Mikulecky and Jeffries 1986: 103).

Passage 2
In 1992 Hurricane Iniki hit the Hawaiian Island of Kauai. As a result, all telephone lines were out of order, the airport was closed, and thousands of homes were damaged. Hotels were washed away, and tourists' holidays were ruined. Many Kauaians lost their jobs (Mikulecky and Jeffries 1996: 121, adapted by the author).

Passage 3
Making orange juice concentrate from fresh oranges is done entirely by machines. First, oranges are dumped onto a moving belt. They travel into a machine which washes them with detergent. Next they are rolled into juicing machines, where seven hundred oranges per minute are split and squeezed. Then the rinds (the skin of the oranges) are thrown out the end of a long tube. At the same time, the juice goes through small holes in the bottom of the tube. Next, the juice goes into another machine called the finisher. There, the seeds and other tiny objects are removed. Last, the juice goes into large tanks, where most of the water is removed (Mikulecky and Jeffries 1996: 107).

Passage 4
In some ways English breakfasts are very similar to American breakfasts. In both countries people usually eat large breakfasts. English and American breakfasts both include several dishes. They may include some fruit juice, cereal, and then eggs and toast. In both places, there may also be some meat with the breakfast. However, there are also some differences between American and English breakfasts. In England, people usually drink tea in the morning. On the other hand, most Americans prefer coffee. The English usually do not eat sweet things for breakfast, but many Americans like sweet bread or coffee cake (Mikulecky and Jeffries 1986: 125, adapted by the author).
After presenting the correct answers, teachers can give their students the following additional work for comprehension.

**Comprehension Check in Task 1-A**

Instructions: answer the following question about each passage. Pay attention to the underlined connectives.

1. **Listing passage**
   There are several reasons why diamonds are expensive. Write the reasons.

2. **Sequential passage**
   Follow the process of making orange juice and summarize each stage in the process.

3. **Cause-effect passage**
   Write the cause and the effect(s) in the hurricane passage.

4. **Comparison / Contrast passage**
   Compare English and American breakfasts and write the likenesses and differences.

---

**Task 1-B**

Instructions: classify the following passages into the four patterns — listing, sequence, cause-effect, and comparison / contrast. Next, underline the signaling connectives.

**Passage 1**
When Mark was a freshman in high school, he decided to become the best tennis player in the school before he graduated. Because practice is the basis of progress, Mark practiced one hour every day after school — more on weekends and during vacations. Consequently, he made the school tennis team when he was a sophomore. Since he also took up running and lifting weights to strengthen his body, he could soon outrun and outlast any opponent. Therefore, no one was surprised when Mark won the tennis tournament in both his junior and senior years (Jimbo and Murto 1990: 44).

**Passage 2**
Communicating by e-mail (electronic mail) is becoming increasingly popular for many reasons. First, it a popular way to send messages among people who do not like to use the telephone. Second, it is useful for sending suggestions or requests. The person who receives them has time
to think about their response. Also, e-mail messages always look the same, no matter who sends them. This means you don't have to worry about the quality of your letter paper. Furthermore, e-mail messages are uniform. They give no clues to the sender's age, gender, race, or physical condition. In addition, they do not give away the sender's feelings or emotional condition (Mikulecky and Jeffries 1996: 104).

Passage 3
The next big technological change will be the shift from gasoline to electric-powered automobiles. In some ways, the cars are quite similar. Like gasoline cars, the electric vehicles provide convenient, private transportation. The interior of the two vehicles is much the same. Steering, brakes, and wheels are not different. On the other hand, there is a major difference. Unlike gasoline cars, the electric vehicle is totally silent. In contrast to the sound of the ignition in a gasoline engine, the sound of starting an electric car is "click." There is no engine sound, either, in the electric car (Mikulecky and Jeffries 1996: 115).

Passage 4
A trip to another country requires a certain amount of planning. First, you must decide where you would like to go. Next, you need to look at maps and books about those places. When you have decided where to go, you should find out how to get there. An agent can tell you about ways to travel and the cost. Then, you should find out what kind of documents you will need to enter the country. In the meantime, you may want to find out the language spoken there. If you don't already know it, you might want to learn a few important words and phrases. Finally, you should make a packing list to make sure you bring everything necessary for a pleasant trip (Mikulecky and Jeffries 1996: 108).

Additional comprehension work similar to the one in Task 1-A can also be assigned to ensure that students understand and pay more attention to the function of each connective.

Comprehension Check in Task 1-B
Instructions: answer the following question about each passage.

(1) Listing passage
How many reasons can you find why communicating by e-mail is becoming increasingly popular? Summarize all the reasons.

(2) Sequential passage
List a certain amount of planning for a pleasant trip to another country in the sequential order.
(3) Cause-effect passage  
Why did Mark win the tennis tournament in both his junior and senior years? Write the causes.

(4) Comparison / Contrast passage  
Compare gasoline and electric cars and write the similarities and differences.

In stage one, teachers should provide their students with four differently organized passages as many as possible and lead their attention to the characteristic connectives to each pattern. In this sense, Mikulecky and Jeffries (1986: 101-28, 1996: 99-131) and Jimbo and Murto (1990) offer teachers an abundance of four rhetorical passages.

4.3.2 Tasks in Stage Two

Since stage two is the transitional stage between stage one and stage three, the tasks in this stage should be carefully sequenced in gradually ascending order of difficulty.

Task 2-A

Instructions: read the following passage and underline the connectives. Next, classify them into four categories: additive, adversative, causal, and temporal. Explain the role of each connective by referring to its antecedent and postcedent sentences.

The culture of a country affects its people in various ways. However, people always tend to take their own culture for granted. Most of them go through their lives without realizing that there can be patterns of cultural behavior, which one can see in the way we communicate or perform tasks, different from their own. Of course, the Japanese today are exposed to a lot of information from around the world, more and more Japanese travel abroad, and it is no longer unusual to see foreigners in our cities. As a result, most people know that customs, manners, and behavioral patterns are different from country to country. However, they usually only know about obvious and concrete differences in culture, that is, that part of culture which is called
As an example of overt cultural differences, we can talk about eating habits. For example, Japanese have traditionally eaten with chopsticks while people in the West eat with silverware. Also, in Japan, people like to eat raw sea urchin, but the same individuals could not imagine eating sheep’s brains. However, in Europe, many people like to eat sheep’s brains. By contrast, many Europeans would hate to eat raw sea urchin. When we learn about the eating habits of other countries, we often say to ourselves, “How can they eat things like that?” This is a typical response to differences in overt culture (quoted from GE pp. 120-21, adapted by the author).

The nature of this task is to have students identify connectives and classify them into the four categories, furthermore, to have them explain the function of each connective by referring to its antecedent and postcedent propositions. This manner of instruction is to be consistent and steady throughout this task-based program; therefore, task 2-A can be used as a basic and integral part of stages two and three.

Other more difficult tasks which have students further examining the function of connectives are presented as task 2-B and task 2-C.

Task 2-B
Instructions: focus on the underlined connectives and choose the most appropriate sentence that is to follow each underlined connective.

... Of course, the Japanese today are exposed to a lot of information from around the world, more and more Japanese travel abroad, and it is no longer unusual to see foreigners in our cities. As a result, (1). However, they usually only know about obvious and concrete differences in culture, that is, (2).

As an example of this cultural differences, we can talk about eating habits. For example, Japanese have traditionally eaten with chopsticks while people in the West eat with silverware. Also, in Japan, people like to eat raw sea urchin, but the same individuals could not imagine eating sheep’s brains. However, in Europe, many people like to eat sheep’s brains. By contrast, (3). . . .(quoted from GE pp. 120-21, adapted by the author)

1 a. most people know that customs, manners, and behavioral patterns are the same with each other
b. most people know that customs, manners, and behavioral patterns are different from country to country

c. most people know that customs, manners, and behavioral patterns never interact with each other

2 a. that part of culture which is called "covert culture."
b. that part of culture which is called "overt culture."
c. that part of culture which is called "mixed culture."

3 a. many Europeans like to eat raw sea urchin
b. many Europeans would like to eat raw sea urchin if they could use silverware
c. many Europeans would hate to eat raw sea urchin

Task 2-B requires students not only to focus on connectives but also to give more attention to the postcedent sentences: they have to choose the most appropriate postcedent sentence to form the logically consistent flow of ideas. This task helps students realize that connectives are important "cues to rely on in order to get an idea of what kind of sentence is likely to follow" (Keyuravong 1996: 33-4). A similar example is presented in APPENDIX B.

Task 2-C
Instructions: read the following passage and replace the incorrect connective(s) with correct one(s) for some of the underlined connectives.

Some scientists warn that the gradual warming of the earth's atmosphere, known as the Greenhouse Effect, will cause dramatic changes in the world as we now know it. First of all, because of the increase in temperature of up to 10 degrees F by the end of the next century, which some believe has already begun, there will be changes in existing patterns of agriculture. Such fertile areas as the U.S. Great Plains may become deserts, while the now arid lands in Saudi Arabia may become grain-producing farmland. First, since rainfall patterns will change, water supplies in some areas will diminish. Experts predict, for instance, that the rice fields in southeast Asia will someday require irrigation to sustain crops. Changes in water levels will also be responsible for altered living patterns. Coasted areas, such as Florida and the Netherlands, will experience such a dramatic rise in water levels that they will fall below sea level and become uninhabitable. In other areas, like the Great Lakes, water levels will fall; nevertheless, they will no longer be able to support industry with energy supplies and a ready means of transportation. Most experts are convinced
that the Greenhouse Effect is irreversible; therefore, they advise us to plan now for how best to cope with a changing world (Arnaudet and Barrett 1990: 96, adapted by the author).

Task 2-C is more difficult than task 2-B because, though all the connectives are explicitly underlined, students have to distinguish incorrect connective(s) by referring to both antecedent and postcedent propositions. In addition, they are required to replace incorrect connective(s) with correct one(s). APPENDIX C is an illustration of this type of task.

Next, the following task, 2-D, is the most difficult one among the tasks in which connectives are explicitly stated.

---

**Task 2-D**

Instructions: read the paragraph below. You are given the first and the last sentences, but the middle of the paragraph has been jumbled up. Write the numbers of the sentences in their proper order with attention to the underlined connectives.

In the past, Japan was protected from the outside world by the sea as well as the actions of some strong Japanese leaders.

1. After two hundred years of separation, a lot of Japanese still have this feeling of being unique.

2. For example, many seem to think that their language is too hard for anyone from other countries to master - even someone like Donald Keene, who has studied Japanese for more than 40 years. Some Japanese even think that their bodies are different - and need different medical care - from those of foreign people.

3. All of this saved Japan from trouble with the Mongols and later with Europe, but the Japanese began to think of themselves as unique.

4. But a new kind of Japanese person is working hard to become international.

Although this is very difficult, these people are learning the good feeling of traveling to other countries and having foreign friends (quoted from SP p. 157, adapted by the author).
This sequential synthetic task imposes on students not only conjunction of propositions by explicit connectives as clues but also identification of other linguistic clues such as given-new information and anaphora. Another sample is illustrated in APPENDIX D.

So far the author has presented task 2-A, 2-B, 2-C, and 2-D, all of which show connectives explicitly. In order to complete these tasks, the significant function of connectives cannot be overemphasized. Having a thorough practice and good foundation in this state of connectives, students move on to the next, more challenging series of tasks in stage two.

<table>
<thead>
<tr>
<th>Task 2-E</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Instructions:</strong> read the paragraph below. Fill in the blanks with the following connectives. <em>however, therefore, moreover, meanwhile</em></td>
</tr>
<tr>
<td>Many African mothers carry, or nestle, their babies on their backs. This custom has advantages for both mother and child. A working mother who has nobody to look after the baby, knows he is safe on her back, while her hands are free for her work. (1), the baby stays in close contact with his mother and feels warm and safe. This sense of security may be suddenly broken, (2), when the child can no longer be carried. He may be put down and expected to behave like a grown-up child. But he has been over-protected for so long through nestling that he now feels very insecure and may behave like a baby. Children need freedom and the chance to use their limbs. They need to be able to observe and explore their environment. They also need to learn how to make and do things on their own. (3) even when mothers must carry their babies everywhere, they should try to set them free whenever possible. (4), in the hot months, the less back-nestling the better (Willis 1981: 146, adapted by the author).</td>
</tr>
</tbody>
</table>

This task can be placed as the outset of the following tasks in which connectives are implicitly stated, but should be distinguished from those in stage three in the way that answers are presented to students. Although task
2-E imposes bridging inference on students, they have only to select the most appropriate connective from explicit answers. An instructive suggestion for teachers is to delete four different types of connectives in order for students to identify additional, adversative, causal, and temporal relationships as seen in task 2-E. A similar sample is presented in APPENDIX E. A variation of this task, which is a little more difficult, is the following one.

Task 2-F
Instructions: read the paragraph below. Fill in the blanks with the most appropriate connective. Select the number from the four alternatives respectively.

Many African mothers carry, or nestle, their babies on their backs. This custom has advantages for both mother and child. A working mother who has nobody to look after the baby, knows he is safe on her back, while her hands are free for her work. (A), the baby stays in close contact with his mother and feels warm and safe. This sense of security may be suddenly broken, (B), when the child can no longer be carried. He may be put down and expected to behave like a grown-up child. But he has been over-protected for so long through nestling that he now feels very insecure and may behave like a baby.

Children need freedom and the chance to use their limbs. They need to be able to observe and explore their environment. They also need to learn how to make and do things on their own. (C) even when mothers must carry their babies everywhere, they should try to set them free whenever possible. (D), in the hot months, the less back-nestling the better.

Many women, (E), prefer to carry their children all day long. They feel the children are safe, sleep longer, keep quieter and do not make a mess! I once visited a friend's home where the mama-nurse was nestling my friend's eleven-month-old child. Seeing he was restless, I asked the mama-nurse to put him down. At first she didn't want to because she thought the child would make the room untidy. When she finally agreed I asked for some kitchen pots, spoons, unopened tins and boxes since there were no toys to play with. (F) the child started examining them one by one. (G) he started banging the pots and boxes with the spoons. The different sounds fascinated him. (H) mama-nurse didn't like the noise or the mess (Willis 1981: 146, adapted by the author).

A 1. For example 2. However 3. Otherwise 4. Meanwhile
B 1. first 2. besides 3. however 4. therefore
For devising the combination of correct answer and three distractors, the same suggestion for teachers as in task 2-E can be applied: the combination should consist of four different categories of connectives for students to choose from. APPENDIX F is an illustration of task 2-F.

Both task 2-E and task 2-F, which require pseudo-inference of connectives, could provide enough instruction in strategic arrangements for students to move on to the final stage where they challenge genuine inference of connectives to gain sufficient proficiency at the text level.

4.3.3 Tasks in Stage Three

As mentioned above, stage three concentrates its tasks on inference of implicit or missing connectives in a text. With regard to this issue, in the scant literature Kintsch (1994) argues from the viewpoint of a situation model as follows:

... if two sentences are not explicitly connected, there is no linguistic cue in the text by which one could select a suitable sentence connective—say, because, or therefore, or but. The reader can make such a connection only on the basis of a deep understanding of the situation. Thus, by omitting linguistic surface features, deep situational processing on the part of the reader can be encouraged.

(emphases added, 302)
Kintsch's remark indicates that inference of implicit or missing connectives can be decisive for the active construction of a coherent representation of a situation model. Therefore, tasks in stage three or the final stage of this instruction should be correspondent with the ultimate goal, namely, inference of implicit or missing connectives.

**Task 3-A**

Instructions: read the following passage and fill in the blanks with the most appropriate connectives.

Why don't people have fewer children? There are good reasons for this. Statistics from developed countries show that it is only when people's living standards begin to rise that birth rates begin to fall. At present, ( ), for various reasons, developing countries still cannot afford adequate social services and old age pensions, and people cannot get enough income to set aside for savings. ( ), people expect their children to provide them with security in their old age. ( ) even while children are still quite young, they can do a lot of useful jobs. ( ), having a large family can be a form of insurance ( quoted from MI pp. 27-9, adapted by the author).

As shown in the task above, teachers should provide a cloze format to indicate the positioning of the deleted connectives. Students are encouraged then to infer the missing connectives by focusing their attention on the blanks. A variation of this task, or the most difficult and final one, is having students infer by themselves the adequate places to be filled with the most appropriate connectives. This is by far the most challenging task in our series because there is no aid, no blanks in the text. Task 3-B below serves this final goal.

**Task 3-B**
Instructions: read the following passage and add the most appropriate connective(s) to the correct place(s).

Why don't people have fewer children? There are good reasons for this. Statistics from developed countries show that it is only when people's living standards begin to rise that birth rates begin to fall. At present, for various reasons, developing countries still cannot afford adequate social services and old age pensions, and people cannot get enough income to set aside for savings. People expect their children to provide them with security in their old age. Even while children are still quite young, they can do a lot of useful jobs. Having a large family can be a form of insurance (quoted from MI pp. 27-9, adapted by the author).

Similar examples of task 3-A and task 3-B are presented in APPENDIX G and APPENDIX H respectively.

4.4 Summary

In the previous section, the author has exemplified ten tasks for the learning of connectives at the text level. They are in order from easy to difficult, task 1-A, 1-B (stage one), task 2-A, 2-B, 2-C, 2-D, 2-E, and 2-F (stage two), task 3-A, 3-B (stage three). By incorporating these tasks into the framework for the task-based instruction (see Table 7), we can obtain a complete framework as follows.

Table 8
Pedagogically Graded Tasks for the Learning of Connectives

<table>
<thead>
<tr>
<th>Stage</th>
<th>STAGE 1</th>
<th>STAGE 2</th>
<th>STAGE 3</th>
</tr>
</thead>
<tbody>
<tr>
<td>Text Type</td>
<td>Listing</td>
<td>Miscellaneous</td>
<td>Miscellaneous</td>
</tr>
<tr>
<td></td>
<td>Sequence</td>
<td>Cause-Effect</td>
<td>Comparison/Contrast</td>
</tr>
<tr>
<td></td>
<td>Explicit</td>
<td>Explicit/Implicit</td>
<td>Implicit</td>
</tr>
<tr>
<td>State of Connectives</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
Table 8 entitled pedagogically graded tasks for the learning of connectives is not intended to be a definitive or exclusive framework but attempts to present a comprehensive and exhaustive framework in which the pedagogically graded three stages include systematically ordered tasks for the purpose of the learning of connectives at the text level. Needless to say, the author does not deny the existence of other potential tasks, they would however seem to fall within the framework of the above described three stages and could be seen as being variations of the ten aforementioned tasks.

In concluding this chapter, the author firmly believes that this framework and systematically ordered ten tasks will not only fulfill the goal of this task-based instruction, namely, teaching the function of connectives for expository text comprehension, but also substantially serve classroom teachers as pedagogically graded testing tasks in order to assess students' understanding of connectives as a cohesive device (Bachman 1990: 88-9, Bachman and Palmer 1996: 68).
5.1 Conclusion

Although the significance of connectives as discourse markers in expository text comprehension has been widely discussed among researchers (see previous research reviewed in sections two and three of Chapter 1), connectives not at the sentence but at the text level have remained a Cinderella in the sense that little attention has been given to the teaching of them, much less to the creating of systematically graded tasks which are designed in order to speed their acquisition.

Therefore, as far as the author knows, this paper is a first attempt to explore comprehensive and intensive instruction for the purpose of learning connectives at the text level and to furnish various tasks which are based on a set of clearly defined principles and systematically graded in order to meet this goal. Here, the point the author wishes to emphasize is that the pedagogical spirit is consistent throughout this task-based instruction: challenging any task at any stage, students are no doubt encouraged to make an effort to capture various coherence relations by referring to both antecedent and postcedent propositions due to the functional nature of connectives at the text level.

In concluding this paper, it is the author's hope that the systematically graded tasks presented herein will be of use to classroom teachers wishing to offset the infrequency of connectives in their present teaching materials and
will aid their students in learning to recognize the crucial function of connectives and utilize them appropriately in a text.

5.2 Implications for Further Research

As mentioned in the introduction, this research is offered as a reasonable starting point for further research on coherence relations in that it focuses on only the function of explicit connectives as discourse markers in expository text comprehension.

Inevitably, the author can go on to consider the next stage as a direction for further research, that is, research on how one can identify and comprehend coherence relations where there are no connectives. Regarding this issue, Nunan (1989: 201) distinguished reading skills from the viewpoint of seven-graded reading activities as follows:

Level 5
— identify logical relationships marked by conjunctions in three to five paragraph texts on familiar topics

Level 6
— identify logical relationships marked by conjunctions in five to ten paragraph texts on unfamiliar topics

Level 7
— identify unmarked logical relationships in five to ten paragraph texts on unfamiliar topics

(emphases added)

Apart from the number of paragraphs in a text and familiarity of its topic, it is worth noting that he considered comprehension of unmarked coherence relations as the most difficult reading skill. Thus, comprehension of unmarked coherence relations can be regarded as the highest of reading skills
as it directly concerns the very core of the essential issue for text comprehension, namely, inference.

As also argued in Abe, Momouchi, Kaneko, and Yi (1994: 308), whatever the unmarked coherence relations are, human beings do identify and comprehend a certain semantic relationship between discourse segments. What enables them to do this is not only knowledge about the language such as word meanings or syntactic knowledge but also knowledge about the world that the text is about (Garnham and Oakhill 1996: 334-35). This implies that further research on comprehension of coherence relations without connectives could have far-reaching implications at the deepest levels of text comprehension, targeting reader-based sources of coherence in text comprehension such as inference and world knowledge.

Indeed, the Zeitgeist has shifted from the shallow (such as lexical processing, syntactic parsing, and the interpretation of explicit text) to the deepest levels of text comprehension involving pragmatics, inferences, and world knowledge (Graesser, Swamer, Baggett, and Sell 1996: 1).

Given the perspective of further research and led by the new Zeitgeist, the author, as a novice researcher, hopes not to miss this ongoing shift in the discipline, and also as a language teacher intends to evaluate and put into practice any valuable findings from a pedagogical standpoint.
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Textbooks Used for the Analysis


Reading Materials Used for the Survey

Here are three questions for you. They are all about English. See how well you can answer them.

Question One: How many English-speaking countries can you name? Here, an English-speaking country means a country of people who speak English as their mother tongue. If you can only name two or three countries, you don't know much about the language you are studying. (A) English is the mother tongue of people in Britain, the United States, Canada, Australia, New Zealand, Jamaica, Trinidad and many, many other countries.

Are you ready for Question Two? Here it is. In some parts of the world, English may not be the everyday language of people but an official or common language of law, business and government. How many such areas can you name? If you don't understand the question, think about the case of India. Many local languages are used in India, but English is clearly an important common language. Papers are written in English in the government. Business is done in English in many company offices. English is the state language of two of the states of India, and it is taught at school in all parts of the country. Just as in India, English is used for government or business communication in many parts of the world, outside of the English-speaking countries listed above. The Philippines and South Africa belong to the group of such countries.

English was just a language spoken in a small corner of Europe until some centuries ago, but it is now the mother tongue of about five hundred million people living all over the world.

(B) we come to our third question. Question Three: Who else uses English? The answer is: non-English-speaking people—like us, the Japanese—who use English for international communication. For example, Japanese airplane pilots use English to speak with pilots from other countries. Japanese pilots also speak in English with people at control towers at airports abroad. There are companies that have offices all over the world. English is the language of business in many of those companies. (C) a Spanish worker in the Madrid office of a large company may write a business letter in English to an Egyptian worker in the Cairo office of that same company.

English is also used for international communication outside of the world of business. A non-English-speaking scholar may write a book or article in English. He or she may go to an international meeting of scholars and use English for discussion. A non-English-speaking tourist may use English outside of his or her own country. (D) a German tourist and a Chinese traveler may meet on a pleasure boat on the Seine and start talking with each other in English.

The answers to the three questions will clearly show this: English can help, and does help, a huge number of people to communicate with one another. English can go very far. Learn it well and enjoy meeting, talking with, and working with people from other countries.
Why do Japanese front doors open outward? First of all, in Japan we usually do not have much space inside the front door. (A), we take off our shoes inside the front door and leave them there. If the door opens inward, the shoes will get in the way.

(B), we use water when we clean the entrance of our homes. To make the water run out, we usually slope the floor of the entrance a little. (C), the door won't open all the way if it opens inward. We can avoid these problems if we open our front doors outward. Japanese front doors are good for the Japanese way of life.

(D), why do Western front doors open inward? In the West people often visit each other's homes. So first of all, when a visitor enters your house, it is simple to pass through the front door if the door opens inward.

Secondly, you may want to shake hands with your visitor at the door. It is not so easy to do this if the door opens outward. Western front doors are good for the Western way of life.
APPENDIX B

A Sample of Task 2-B

Instructions: focus on the underlined connectives and choose the most appropriate sentence or phrase that is to follow each underlined connective.

In recent years the number of foreign students studying in Japan has increased greatly. It is expected to continue to increase. These students face a wide variety of problems, including financial problems and problems adjusting to life in Japan. I think that the Japanese government and businesses should do more to help foreign students studying in Japan, for example. (1).

Foreign students who have a positive experience in Japan will have warm feelings about Japan in the future. Many of these students are likely to be in a position to influence business and government in their own countries. If they have good feelings about Japan, Japan will benefit from their positive feelings. However, (2). It is possible that these bad feelings will have negative effects on relations with Japan. Therefore, (3).

(Kitao and Kitao 1993: 59, adapted by the author)

1 a. by providing housing and financial support
   b. by rising house rent and prices
   c. by increasing the number of foreign students

2 a. students who have negative experiences with Japan will also have good feelings about Japan in the future
   b. students who have negative experiences with Japan will have bad feelings about Japan in the future
   c. students who have positive experiences with Japan will sometimes have bad feelings about Japan in the future

3 a. Japanese government and business should try to make sure that foreign students have both positive and negative experiences in Japan
   b. Japanese government and business should try to make sure that foreign students have negative experiences in Japan
   c. Japanese government and business should try to make sure that foreign students have positive experiences in Japan
APPENDIX C

A Sample of Task 2-C

Instructions: read the following passage and replace the incorrect connective(s) with correct one(s) for some of the underlined connectives.

OFFICE MEMORANDUM

To: Director  Date: Sept. 3
From: Office Manager  Subject: Reducing Staff

I have several proposals for cutting down on office staff. First, I suggest that we eliminate the full-time position of order clerk, since there is not enough work to occupy him throughout the month. Orders and requests for sales information are heaviest at the end of the month; because, there is little to do the first two weeks of each month. Nevertheless, I recommend that we hire temporary help for the last two weeks of each month and give the orders from the first of the month to the sales department to process.

Second, now that our systems are completely computerized we no longer need a computer programmer on staff. It's true, we will need computer programming services occasionally in future, for instance, when we revise our billing system. In such cases, however, we can hire a freelance programmer.

Third, I suggest that I share my secretary with the assistant office manager, thus eliminating one secretarial position. Since this will increase the managerial workload, I feel we can handle it. Moreover, we can always hire temporary help to get us through particularly busy periods.

If these suggestions are followed, we should be able to save approximately $26,000 in the coming year in salaries alone. However, I believe these changes will result in greater work efficiency.

(Withrow 1987: 55, adapted by the author)
A Sample of Task 2-D

Instructions: read the paragraph below. You are given the first and the last sentences, but the middle of the paragraph has been jumbled up. Write the numbers of the sentences in their proper order with attention to the underlined connectives.

There are three separate sources of hazard in the process of supplying energy by nuclear power.

1. **Second**, there is the problem of waste. All nuclear power stations produce wastes that in most cases will remain radioactive for thousands of years. It is impossible to make these wastes nonradioactive, and so they must be stored in one of the inconvenient ways that scientists have invented.

2. **Nevertheless**, it can happen.

3. **Third**, there is the problem of accidental exposure due to a leak or an explosion at the power station. As with the other two hazards, this is not very likely, so it does not provide a serious objection to the nuclear program.

4. **Although** the power stations themselves are solidly built, the containers used for the transport of the materials are not. There are normally only two methods of transport available, namely road or rail. Unfortunately, both of these involve close contact with the general public, since the routes are sure to pass near, or even through, heavily populated areas.

5. **First**, the radioactive material must travel from its place of manufacture to the power station.

6. **However**, these methods do not solve the problem, since an earthquake could easily crack the containers open.

7. **For example**, they may be buried under the ground, or dropped into abandoned mines, or sunk in the sea.

Separately, these three types of risks are not a great cause for concern. Taken together, though, the probability of disaster is extremely high.

(Withrow 1987: 34, adapted by the author)
APPENDIX E

A Sample of Task 2-E

Instructions: read the paragraph below. Fill in the blanks with the following connectives.

nevertheless, for example, similarly, thus

Map information is conveyed by means of symbols, words and colour or shading.... Information on maps is conveyed also by the patterns of lines, shading and symbols and this is the point at which recognition and relationships can become confused. (1), a town will be recognised by the name lettering, the combination of housing and road symbols, etc. (2), the primary activity will be the recognition and identification of the main features of the town. (3), other geographical features may be recognised by simple relative patterns: (4), contour lines and water lines may give information about drainage patterns, river basins and watersheds.

(Salkie 1995: 80, adapted by the author)
APPENDIX F

A Sample of Task 2-F

Instructions: read the paragraph below. Fill in the blanks with the most appropriate connectives. Select the number from the four alternatives respectively.

( A ) most UK playgroups and nurseries are entirely female preserves, and the man who regularly puts in as many hours with his child as he does at his work is rare. ( B ) a draft proposal for a European Commission recommendation on childcare suggests this could change. The proposal, published next month, aims to promote equal treatment of the sexes in the labour market. ( C ), it calls for action to encourage men as childcarers, ( D ) for more public funding for pre-school education.

(Salkie 1995: 86, adapted by the author)

B  1. In short,  2. Furthermore,  3. But  4. Otherwise,
C  1. Therefore  2. Just then  3. By the way  4. On the contrary
D  1. rather,  2. thus,  3. before  4. and
APPENDIX G

A Sample of Task 3-A

Instructions: read the following passage and fill in the blanks with the most appropriate connectives.

Our earth is warmed by the heat of the sun. This heat comes down and is absorbed by the earth. Later it is released into the atmosphere as infrared rays. ( ), as our industrial world has grown, we have used enormous amounts of energy. ( ), we have produced large amounts of methane, CO₂ and Fron. These chemicals absorb the infrared rays and so the heat from the sun can no longer be set free. This heat now makes the earth warmer. If the temperature increases gradually over 10,000 years, there is little cause for concern, but if it happens in a short time, ( ) 100 years, it becomes very serious.

(Okajima and Hartley 1993: 12, adapted by the author)
APPENDIX H

A Sample of Task 3-B

Instructions: read the following passage and add the most appropriate connective(s) to the correct place(s).

Our earth is warmed by the heat of the sun. This heat comes down and is absorbed by the earth. Later it is released into the atmosphere as infrared rays. As our industrial world has grown, we have used enormous amounts of energy. We have produced large amounts of methane, CO₂ and Fron. These chemicals absorb the infrared rays and so the heat from the sun can no longer be set free. This heat now makes the earth warmer. If the temperature increases gradually over 10,000 years, there is little cause for concern, but if it happens in a short time, 100 years, it becomes very serious.

(Okajima and Hartley 1993: 12, adapted by the author)