

Analysis on Text Structure

Zhang Zhimin

College of Foreign Languages, Yanan University
Yanan, Shaanxi, 716000

Abstract—Texts are multidimensional resources for the overall development of second language learners. Yet traditional text teaching only focuses on the structure of language. It explores texts at its linguistic level, leaving other potentials of texts intact. Text structure analysis approaches and interprets texts in a semantic way. It explores texts at linguistic, social, cultural and cognitive levels. This process of texts helps learners to memorize the text in the light of cognitive theory. This study may throw light on language teaching. First, teachers might try text structure analysis in the conduction of narrative text and argumentative text to help students to acquire language forms and ideas. Second, teachers might introduce text type knowledge in terms of structures and features of language when conducting different text types. This study helps students to understand and command different text genres in their later communication.

Keywords—Analysis; Text structure; Retention of text; Text type

I. INTRODUCTION

Texts are the chief materials in second language learning. From elementary level to advanced level, texts in different textbooks accompany the progress of second language learners. The majority of Chinese learners share this learning experience. Texts as independent units to convey coherent ideas and information, have layers of potentials beyond the linguistic surface. A text can be a highly complex phenomenon, the product of a highly complex ideational and interpersonal environment (Halliday, 1985: xvi). The multi-functions of text can be summarized as follows:

First, texts are linguistic resources. The linguistic frame of a text involves every physical aspect of a language: phonetics, words, phrases and paragraphs. The linear and flat arrangement of these elements constitute the material exterior of the text. The language points are the core part and the basis in second language acquisition. By mastering them, learners' linguistic competence and discourse competence are developed. Underneath the form of a text is the multi-dimensional content.

Second, texts are world knowledge resources. From the objective perspective — what texts say, texts are knowledge and facts database. They involve every aspect of the world. To a certain degree, they are the simulations of the world. The scholars of the Prague School instituted the information structure and studied what they called "the communicative dynamism" of the elements contributing to a sentence, within the framework of "functional sentence perspective" (Brawn & Yule, 1983:153). Text learning in this sense is the process of

acquiring knowledge. Learners accordingly broaden their visions, enrich their life experiences and optimize their knowledge structures in the course of learning.

Third, texts are resources of thoughts. From the subjective perspective of texts— how writers present knowledge or information, texts are ideas, concepts and emotion database. Texts are the channels of personal interpretation of the objective world. The ideas, values and thoughts reflected in texts are the most valuable part of human culture. They are resources for modeling learners' ideology and life orientations. Text learning in this sense contributes to the affective development of learners.

Fourth, texts are resources for cognitive study. The intrinsic relation between text and cognition (Hu Zhuanglin, 1993: 6) indicates that texts are sources to trace the cognitive orientations of human beings. The way of the production of information, or the development of a text, implies the cognitive trait of a writer. Many studies have confirmed this idea. Iconicity is represented by syntactic structures in terms of iconic sequence, iconic proximity and iconic quantity (Wen Xu, 1999: 38). Liu Jinli (1999: 408-419) compared the macrostructures of Chinese texts and English texts and found the differences between the mode of thinking between the two nations. By tracing the features of the development of texts, learners can acquire the way of thinking of target language and improve their cognitive competence.

The above discussion illustrates that a text is a comprehensive and multi-dimensional schema. It can provide diverse nutrition for the overall growth of a second language learner if it is appropriately and effectively utilized. The absorption of knowledge at different levels can contribute to the development of a whole person (Gao Yihong, 1992: 417).

However, traditional text teaching shows scant concern to the potential values of a text. Under different theoretical views there are different teaching methods and objectives. The conduction and interpretation of texts under traditional method — word or sentence level approach, is guided by the structural view that language is a system of structurally related elements for the code of meaning. The target of language learning is seen to be the acquisition of the elements of this system. Both the word-centered and the sentence-centered approaches stress the pure linguistic competence. Such approaches result in a mere extension of supplementary exercises for vocabulary improvement and grammar, with all the logical meaning and cultural content lost in a jumble of words and structures. This leaves students with unbalanced development among various competences, namely linguistic competence, pragmatic

competence and critical competence (Gao Yihong, 1999, 7), thus hinders the development of learners' creativity of language use. Problems of "plateau phenomenon" which refers to the sluggish linguistic progress in the second year English major students and "the shortest board in the bucket" (Gao Yihong, 1999:6-9) which refers to the underdeveloped critical thinking competence, are caused by the lack of world knowledge and life experience. This can be complemented by the process of texts at different levels.

Therefore, just as Van Dijk (1985:4) points out, structural analysis disregards the functional relations with the contexts, of which discourse is a part. A complete characterization of discourse as a complex event requires further analysis in terms of the relations with the cognitive, social, and cultural contexts.

II. TEXT STRUCTURE ANALYSIS

Text structure analysis approach in this study takes form and meaning as a coherent whole. It gives considerations to the development of the integrated competences a language learner is expected to have. The semantic interpretation of the text is a conceptually driven process. It involves all the potentials of a text as discussed above. The theoretical basis of this approach is Halliday's systematic and functional theory that language is interpreted as a system of meanings, accompanied by forms through which the meanings can be realized. The forms of a language are means to an end, rather than an end in themselves (Halliday, 1985: xiv). The operational guidance for practice is Van Dijk 's concepts and methods of "macrostructures" (Van Dijk, 1985: 115-117, vol.II). The ultimate goal of this approach is to generalize the abstract meaning or the global coherence of the text through the analysis of the language forms. Text structure analysis involves a two-sided analysis: macrostructure analysis and microstructure analysis.

Macrostructure refers to the theoretical reconstruction or intuitive notions such as "topic" or "theme" of a discourse. It explains what is most relevant, important, or prominent in the semantic information of the discourse as a whole. At the same time, the macrostructure of a discourse defines its global coherence. Without such a global coherence, there would be no overall control upon the local connections and continuations. The global structure is abstracted by macro rules: deleting, generalizing, and grouping of the propositions. Macrostructure analysis is realized by the working out of the local structures.

Microstructure refers to the meanings of words and phrases within a sentence. They are related so as to form the meaning of the sentence as a whole. Microstructure explains how the propositions of a discourse are linked up in a sequence, and how they add up to more complex meaning. A discourse is not just a set of sentences but an ordered sequence, with conventional constraints on the possible orderings if it is to be meaningful. In general, the proposition sequence underlying an accepted discourse must satisfy various conditions of what is called "coherence". Surface structure — expressions, morphological, syntactic and lexical structures of the respective sentences, must appropriately signal this

coherence by word order, sentence order, the use of connectives, sentential adverbs, verb tense, pronouns, which function as cohesive devices.

The analysis of the microstructure of a text is the first step to acquire meaning. It is the linguistic base to derive the contextual meaning and the basis for the inference of higher level meaning. Local context is established through the analysis of sense relations. Sense relations refer to the relationship between the meanings of a word with other words in a text. Normally, it includes the following: synonymy, antonym, hyponymy, metonymy, lexical sets and collocations. A clear understanding of sense relations can provide precision in guiding students towards meaning and helping them to define the boundaries that separate lexical items (Garins & Redman, 1986:32). Relevant activities are designed to realize this objective.

III. THEORETICAL RATIONALE

The internal relation between discourse and cognition presupposes the interactive relation between studies of discourse analysis and cognition. The following review is roughly from two directions: the influence of cognitive studies on text comprehension and the influence of studies of text analysis on cognition, though in a strict sense, some studies may go to either of the categories.

A. *The Influence of Cognitive Science on the Study of Text Comprehension*

Bartlett 's study in 1932 is recognized as the first study on the relation between reading comprehension and memory (Wang Suiping, etc. 1999:525). Bartlett holds that reader's comprehension and memory of an article is a constructive process of schema. In about forty years after Bartlett's research, scant studies followed the cognitive orientation even though studies in this period started to use on-line methods to measure memory.

The study of text reading became a domain in empirical psychology in 1970s. This is due to the following reasons. First, many cognitive scientists put forward significant theories in encoding, representation, retrieval, and the use of language. Kintsch's study directly focuses on text comprehension. The other theories have different connections with text understanding. Second, the introduction of eye tracking by computer greatly enhanced the development of text studies. Rayner and McConkie, the initiators of eye tracking, studied the perceptive scope of readers and made careful analysis of the features of readers' perception. The third reason is the establishment of the theory for text process by Kintsch and other people. They integrated the ideas of computer model concerning memory and put forward hypotheses about the internal processing device in the course of reading. This theory bridged the studies of reading between the early stage and the post stage. Studies of text reading comprehension reaches its climax in 1980s.

The present situation is promising. This is due to the following reasons.

First, the rise of on-line method and technology.

In 1980, Just and Carpenter put forward a new theory of processing texts. It shared the same theoretical frame with Kintsch and Van Dijk, but focused on reading comprehension. They assumed that the reader shifted his fixation only after finishing the process of the current information. This hypothesis of the combination of cognitive process and eye movement made the observation of the psychological dictionary, syntactic analysis and semantic process easier in the course of reading.

Second, the establishment and influence of construction-integration model.

In 1985, Kintsch put forward the construction-integration model. It has become the generally recognized model of the combination of production system and connection system, and the accurate formulation of the relation between text topic representation and situational model.

B. The influence of Text Structure Analysis on Learner's Learning and Cognition

Many studies confirm that if texts are processed in terms of hierarchic structures, this fact should be reflected in the reader's memory for them. Specifically, it has been argued (Bower, 1976; Thornchay&Yekovich,1980) that recall will start at the top of the hierarchy and work its way down by associative cuing. Retrieval paths will be longer to the low-level propositions. Hence, their retrieval probability will be lower. Studies in psychology have proved that meaningful material is easier to be retrieved than meaningless material (Ye Luanqian and Zhu Beili, 1994: 135). Some studies of discourse analysis aim to show the positive effect of teaching at text level on the improvement of learners' linguistic competence. Yang Li's study confirmed the correlation between the command of discourse knowledge and the improvement of reading and writing competences (Yang Li, 1996: 46-48).

Few studies are conducted as to the relation between text structure analysis and the retention of text. Zhang Dajun and Yu Lin (1998) " conducted a study on the influence of the training in text-structure analysis on reading comprehension. The results showed: the training was helpful in developing learners' reading comprehension, in developing their sensitivity to text structure, and in retaining and recalling the text information.

The present study is to confirm the results of the previous studies in this field and the two hypotheses put forward by this study.

IV. CONCLUSION

A text is a schema, representing an independent and complex information block. Text structure analysis is to differentiate and process the information so that learners can easily absorb the various knowledge. Text retention is the prerequisite to convert the different resources to different competences. If a learner can retain the global structure and local structure of a text, he will retain the corresponding information. This will enhance his cognitive development, linguistic development and affective development. Learning a

text is like creating a new file if the schema is totally new or like enlarging an established file if the schema can be related to the established schema in the learners' minds (Wadsworth, 1979: 9-19). If text structure analysis helps learners to retain the content of the text, it helps to establish new schema or enlarge the established schema in their minds.

Theoretically, text structure analysis helps the retention of text. By macrostructure analysis and microstructure analysis, information is processed at social, cultural and cognitive levels. Theories of cognition hold that recall is superior if information is processed at a deep level(Matlin, 1994: 158) and high-level knowledge structures are used in understanding and retrieving texts (Bower and Cirilo,1985:96)

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