



Schema Theory and Listening Teaching in Teaching Chinese as a Foreign Language

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Abstract

Schema theory is an important theory of cognitive psychology. It has been applied to the study of listening comprehension in TCSL. There are three types of schema that can influence listening comprehension, that is, formal schema, linguistic schema and content schema, and they play the different role in the information processing. According to the characteristics of schema, we can design a series of listening training activities to activate the preexisting schema in learners' mind to get a better result of listening comprehension.

Keywords: schema theory, Chinese listening teaching, listening training activities, activate

Introduction

Listening is an important skill of language learning. Studies have shown that, "Listening" is twice the utilization of "speaking", is four times to "reading", and is five times to "writing" ^[1]. So, from this, we can see the importance of listening. But, for a long time, all of academia of foreign language teaching believes that listening is self-developing capability. Wherefore they neglect the research of listening teaching, as the result, the research of listening teaching relatively fall behind other research of language teaching. And this view also affects the listening teaching in teaching Chinese as a foreign language (TCFL). The research about listening teaching in TCFL begins from late 1970s

and it hadn't the great development until 1990s. The research of listening teaching in TCFL also influences the development of listening teaching. In hence, the development of listening becomes the encumbrance of Chinese level improving for foreign students.

Part of scholar have recognized the importance of listening and began to study listening teaching from the method of teaching, learner's psychology and their tactics of learning. The study that uses schema theory of cognitive psychology in the listening teaching is a breakthrough of the research of listening teaching.

Schema

i. Definitions of Schema

It is the British psychologist Frederick Bartlett that first used the term of schema in his classic work *Remembering* [2]. "Schema" refers to an active organization of past reactions, or of past experiences, which must be supposed to be operating in any well-adapted organic response. That is, whenever there is any order or regularity of behavior, a particular response is possible only because it is related to other similar responses which have been serially organized, yet which operate, not simply as individual members coming one after another, but as a unitary mass. Determination by schemata is the most fundamental of all the ways in which we can be influenced by reactions and experiences which occurred sometime in the past." [2] Some scholars put forward different opinion to "schema" Schank and Abelson [3] think schema is the stereotypical knowledge about the situations that person often experience; Carrell and Eisterhold [4] consider that it is the structure of knowledge acquired by students; Eysenck and Keane [5] think schema is a group of conceptions that have been organized, involving common knowledge. Human beings can use it to indicate or symbolize event, event series, maxim, situations, relationship, object and so on...In totally, the main idea of schema theory is the way we dealing with message and our reaction to specific environment largely depend on related-knowledge stored in our brains, and these knowledge have been organized in the form of schema. Schema is a cognitive structure what can offer a framework in order to organize the message about the world, event, human and behavior. Owing to the characteristic of schema, "schemata have a deep

influence on 'world perception' and 'language understanding'. [6]

ii. Types of Schema

Schemas are classified into five types: social schema, ideological schema, formal schema, linguistic schema and content schema. There are only the last three types of schema that played a part in the act of listening comprehension.

1. Formal Schema

Formal schemata refer to the organizational forms and rhetorical structures of written texts, including knowledge of different text types and genres, and the acknowledgement that different types of texts use text, organization, language structures, vocabulary, grammar and level of formality differently.

2. Linguistic Schema

Linguistic schema includes the decoding features a person needs in order to understand how words are organized and fit together in a sentence. Linguistic schema is the foundation of other schema, and it's a kind of substructure of schema.

3. Content Schema

Content schema is the background knowledge of the content of a text, including the topic familiarity, cultural knowledge and the previous experience with the topic. Content schema is a high-level schema. To some extent, content schema can make up for the lack of lack of linguistic schema, and thus help learners understand texts by predicting, choosing information and removing ambiguities.

These three schemas affect language comprehension in various degrees. Study shows, content schema plays the most important role in language comprehension, linguistic schema takes

second place, and the formal schema influences language comprehension in the smallest extent.

iii. Scheme Theory and Listening comprehension

The importance of schema to language comprehension is now widely acknowledged. So schema theory is applied to the study of reading comprehension. According to Piaget^{【7】}, cognition is composed of schema, assimilation, accommodation and equilibrium. He regards schema as a kind of assimilation. Through assimilation, we take in new information or experiences and incorporate them into our existing ideas. Schemas can change with the accommodation of knowledge. However, without some schema into which the knowledge can be accommodated, the situation or experience is incomprehensible and of little pedagogical use. These views broke through the schema theory before because reading ceased to be considered a matter of simple word recognition; instead, attention was placed on the reader's role in the process of comprehension. In modern schema theory, reading is considered a process interacting between reader's background knowledge and the text.

Reading and listening have something in common in their process and model of getting information, so the schema theory also can be applied to study listening comprehension. It can explain the reason why listening comprehension is difficult and prone to bias from learner's cognitive perspective, can change traditional listening training method, and can offer theoretical and psychological basis for finding out scientific Chinese listening training method.

In listening comprehension, there are two types of model for information processing: top-down processing and bottom-up processing. Top-down processing is schema-driven information processing. In this processing, it predicts, reasons, filters, absorbs or assimilates information, starting from the abstract or general concept. On the contrary, bottom-up processing is a conceptual -driven processing. That is, it deals with information starting from specific materials and concept, and finishes the process with high-level schematic instantiation. In brief, top-down processing is a process which is from whole to part; to facilitate the learners understand listening materials as a whole, while the bottom-up process is from part to whole. Because of advantages and limitations of these two processing, the best way to help listening comprehension is to combine these two types of processing to deal with heard information. In the process of listening comprehension, learners can use the bottom-up processing first to analyze the text, and then use the top-down model for a higher-level interpretation of the acoustic discourse. This kind of interactive model is advocated by current foreign language teaching academia. In listening comprehension trainings, learners should be asked not only to grasp the gist of the texts but also to find some specific information or details from the text. Therefore, the most effective information processing model is the interactive model.

The Application of Schema Theory in Listening Training

It's relatively late to use schema theory in the study of listening comprehension. But some achievements made in the study of reading

comprehension also can be applied to the study of listening comprehension. Therefore, it has made the great development in relatively short time to use schema theory to study listening comprehension.

i. Schema Theory to Listening Training

1. We can use various types of schema to help the listener understand the listening materials.

Listening comprehension has closely relationship with linguistic schema, formal schema and content schema. They all affect learners' comprehension of the listening text. According to the characteristics of different types of schema, we should give full play to the different schema, in order to help the listener to understand the listening materials better.

The linguistic schema is the foundation of listening comprehension, and if there is no the preexisting knowledge of linguistic elements contained in linguistic schema, the learner could not understand heard content. And in general, the lower level the language learners have, the more they are inclined to use the linguistic schema to comprehend the listening material. If they are lack of basic linguistic knowledge, the learner cannot utilize other listening strategies. But for the understanding of the listening material is not simply add the meaning of words, phrases and grammar rules together, we need to use a higher -level schema, such as formal schema or content schema. Formal schema can help the listener to use the existing knowledge of discourse, predicting the structure and the form of the listening material and so on. Carrel's experiment proved ^[8], distinguishing the knowledge of different style in language teaching can make a

higher accuracy of reading. The influence of formal schema also cannot be ignored in listening comprehension. Content schema is the key of the language comprehension. Whether the learner can comprehend the listening materials depend on their familiarity of the topic and understanding of the relevant cultural background knowledge. When learners are both familiar with the formal schema and content schema, the effect of listening comprehension is best.

2. Cultivate students' ability to use interactive model to process information consciously.

Interactive model is considered to be the most effectual model of information processing. It is a combination of advantages of top-down and bottom-up processing. It can help learners to fully understand the listening material. The beginners of language learning are accustomed to using bottom-up processing model, which makes difficult to understand the text as a whole. If we can cultivate learners to use the top-down model actively while processing language information, combining with the bottom-up model, it will improve the efficiency and accuracy of listening comprehension fundamentally.

3. Lead students to use the correct schema to predict, perceive and analyze the listening material, avoiding the misunderstanding and distortion caused by the misusing schema.

Previous studies mainly focus on the effects of correct schema on language comprehension, but seldom notice the negative impacts of using improper schema. Actually, in the process of listening comprehension, inputting information may be misunderstood or changed as the activation of the improper schema, then cause

the wrong result of listening comprehension.

Teachers should give some guidance to avoid students activating the wrong schemas.

ii. Listening activities guided by schema theory

According to Anderson [9], the process of listening comprehension consists of three stages: perceptual processing, parsing and utilization. We can use schema to deal with the inputting information in all these three stages and because of the priority of schema and its property which can be activated, we propose that a pre-listening stage used to activate the schema be added before these three stages when we are teaching listening skills. Schema has different functions in different stages of listening comprehension. Teachers may organize activities of listening teaching by using the pattern of activating schema—using schema to perceive、split information—properly understanding the listening material on the basis of schema and make full use of the properties and advantages of schema to help learners to understand what they have heard effectively. For this purpose, we will design the following listening practices:

1. Activities of activating schema:

Researchers have long been concerned about how to activate schema effectively and many relevant jobs have been done. Here we will introduce some effective activities based on our listening teaching experience.

(1) Brainstorming: tell students the subject of the listening material firstly and

then ask them to make as much association as possible and note down the key words of the association. In this way, we try to activate the schema related to this subject in their mind to make preparation for the coming listening

comprehension.

(2) Information-gap game: divide the students into groups and ask them to

discuss with each other about the subject of the listening material. Each group should summarize the result of the discussion and exchange it with other groups to activate the schema.

(3) Making lists: Ask students to make a list of the words and language points

related to the subject and list the possibilities, points of view or proposal relevant to the subject after making association. In this way, the schema related to the subject in the listeners' mind can be activated. Try to list information as completely as possible, in which both linguistic schema and content schema are included, this can activate the schema in the learners' minds.

2. Activities of perceiving, splitting and processing information:

(1) Listening and taking notes:

During the process of listening, if learners do not take notes, they usually cannot do well in the following tasks because the learners cannot understand what they have heard on the whole, while focusing their minds on some words or difficult sentences and just using a “bottom-up process” model to deal with the listening material. Therefore, while listening, we may note down the key words and main sentence patterns of the listening material and combine “top-down processing” with “bottom-up processing” to better perceive and split the listening material.

(2) Raising some questions before listening

Before listening, raising some questions relevant to the subject and main idea of the material is useful for learners to perceive and

split listening materials and take a “top-down processing” consciously.

3. Post-listening activities

Schema and listening comprehension are interrelated to each other. On the one hand, better listening comprehension depends on the activation and use of the schema in learners' minds. On the other hand, the established schema can be consolidated by these activities and the contents of the schema can be enriched to make a basis for the understanding of later listening materials.

(1) Retelling the listening materials

After listening, we can consolidate the established schema through a series of activities, for example, retelling the listening materials is one of the effective ways which can help learners turn short-term memory into long-term memory, which plays a very important role in improving the level of listening comprehension.

(2) Role-playing

Proper role-playing can be designed according to the listening materials to consolidate the established schema and improve the learners' level of listening comprehension.

(3) Subject discussion

Let learners have discussions about the listening materials on the basis of the established schema. Teachers may help learners summarize the language schema and content schema relevant to the listening materials on the basis of discussions to consolidate the schema.

Conclusion

Schemata Theory plays an important role in teaching Chinese as a foreign language. Learners' efficiency and degree of accuracy of dealing with information during listening

practices can be greatly improved by making full use of the established linguistic schema, content schema and formal schema which have existed in the learners' minds. What we need to keep in mind is that learners should combine “top-down processing” with “bottom-up processing”. For those elementary level learners, we should guide them to take “bottom-up processing”. Under the guidance of the schema theory, we can change the traditional listening training pattern and design a series of training activities to improve learners' level of listening comprehension by making full use of the influence of schema on the learners.

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