

# A Study on the Strategies of Improving English Listening Comprehension among Non-English Major Undergraduates from the Perspective of Schema Theory

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**Abstract:** More and more attention is paid on listening comprehension in recent years. However, learners usually put more emphasis on vocabulary, grammar, pronunciation or accent to enhance the listening performance. This paper aims to analyze students' listening attitudes and abilities from the perspective of schema theory and discuss the strategies and application of schema theory in English listening comprehension. Interviews and questionnaires are both included in this paper among non-English major undergraduates in order to figure out the obstacles in the listening procedure and try to address the issue to improve the English listening abilities. The results showed that some of the learners have the consciousness and awareness to apply the schema theory to the listening comprehension. Therefore, the significance of questionnaires and interviews supports that the schema theory might be effective in English listening learning.

**Keywords:** Schema Theory; Listening Learning; Listening Comprehension

## 1. Introduction

Listening, speaking, reading and writing are four basic language skills, among which listening plays a significant role in language learning. Listening comprehension serves as a complex cognitive process which requires to the processing of linguistic and non-linguistic knowledge (Huang, 2004). As a fundamental skill of language learning, listening has been put on more emphasis to improve it through different ways. With the continuous intensity of informatization and internationalization of the higher education, cultivating innovative talents has become the dominating direction, which requires higher demands in English learning. Therefore, how to change the current situation of “deaf English” becomes a focus to enhance the ability of application in English teaching and learning (Liu & Dai, 2004), especially in listening and speaking.

In recent years, abundant studies have been focused on the topic of listening. Shen, Qu and Zhang (2014) combined multimodality with metacognition to enhance listeners' performance, which provided suggestions and implications from the study. Furthermore, Terzioğlu & Kurt (2022) conducted a quasi-experimental study to elucidate the effectiveness of a learning management system (LMS) on listening skill development and speaking fluency among intermediate students, and the result showed that there was a significant difference between the experimental group and the control group as the former one surpassed the latter one in both listening skills and speaking fluency. Zhang & Graham (2020) highlighted the complex interplay of vocabulary knowledge, listening proficiency and instructional conditions, factors useful when planning activities to enhance vocabulary learning through listening.

However, it must be admitted that the significance of English listening is underestimated. The traditional methods of learning English cause a lot of issues that need to be addressed. In order to identify these problems and improve them in an effective way, this thesis is endeavoring to enhance listeners' listening ability with schema theory in college.

## **2. Literature review**

### **2.1. Schema theory**

The understanding of words, sentences and passages cannot exist without the background knowledge that human beings already knew about the world (Anderson & Lynch, 2020). The acquisition and application of language knowledge is the process of storage and retrieval of information. The British psychologist Barlett (1932) put forward the concept of schema theory in 1932, which stated that the word of schema referred to the accumulation of experience and knowledge a person gained in his brain that produces the reflection on the experience of the past. Until the late 1970s, modern schema theory appeared and was applied in linguistics, anthropology, psychology, artificial intelligence and some other areas, which promotes the rapid development of schema theory. Although different linguists argue different definitions on the notion of schema theory, they still have the basic opinion in common, which refers that schema is the general cognition to the world stored in people's brains and can help people to predict, modify and testify new information.

### **2.2. The classification of schema theory**

With year's researching, schema could be generally divided into three categories, which are known as linguistic schema, content schema and formal schema.

As a matter of fact, linguistic schema refers to a kind of language system which consists all the language knowledge people have experienced in their real life. Linguistic schema is acknowledged as a precondition for the application of other two schemata and serves as a solid foundation of the entire system. Therefore, language learning cannot exist without linguistic schema, especially in understanding the meaning of the contexts in listening comprehension.

Moreover, the concept of content schema pays more attention on culture, which is relevant to the background and culture of the theme. Learners may not have enough background knowledge when dealing with listening comprehension because of the insufficient content schema. In the process of listening comprehension, the listeners require not only the language knowledge to understand each word and sentence of the context but also get a framework to surmise the intention of the speaker. Different countries have different cultures and customs, so it is vital for listeners to identify the information accurately.

Last but not least, formal schema refers to the notion of structures of different texts related to various forms, rhetoric and organizations. During the process of listening comprehension, different types of listening materials such as interviews, monologues and reports have their distinctive characteristics from the angle of organizational structures so that listeners are able to gain the main ideas and guess what will happen next. Therefore, applying useful schema knowledge and strategies may help listeners to get the target information efficiently.

### **2.3. Previous studies on the strategies and applications of schema theory to listening learning**

This section elucidates the previous studies on the application of schema theory to listening learning at home and abroad.

First of all, Yang (2013) found that the input of background knowledge can effectively improve students' listening scores and have different influences on students with different levels. In addition, Luo (2005) utilized two theoretical bases to address the issue of information gap in listening comprehension, which referred to the strategic advantages of "concept-driven processing" and the interpretation of "concept-driven processing" from the perspective of schema theory. What's more, Shi & Lv (2004) activated the schemata that students already owned and helped them to establish new schemata to gain useful information in English listening comprehension.

Moreover, Farangi & Saadi (2017) compared dynamic assessment with schema theory to claim the effectiveness in enhancing EFL learners' listening capabilities and the results of statistical tests did not show a significant difference between the groups. The findings may have significant implications for language teachers and teacher educators. Furthermore, Roddy & Bridges (2020) argued that the mapping problem which arises when designing a sonification could be addressed by using modals from the field of embodied cognitive science, including embodied image schema theory, conceptual metaphor theory and conceptual blends.

### **3. Research design**

In last section, the author has already presented the schema theory in detail, which showed that this theory plays a prominent role in language teaching and learning. Thus, this study is going to see how schema theory affects listeners' listening strategies, and whether it has positive influence on the improvement of listening skills. Interviews and questionnaires are both included in this section.

#### **3.1. Participants**

The participants in this research are 30 undergraduates from a college in Shanghai, of which the author chooses 30 non-English major college students. Among them, 24 are female while 6 others are male.

#### **3.2. Instruments**

Two main instruments are utilized in this study to figure out the significance of schema theory in listening comprehension. The first one is interview, and the second one is known as questionnaires which is used to know students' listening habits and their attitudes towards the listening methods and strategies relied on the schema theory.

##### **3.2.1. Interviews**

The author interviews 10 students from the participants randomly to know their attitudes towards English listening comprehension. Questions in the interview are summarized as the students' attitudes towards listening learning and their usual listening class. The author records all the answers from the students in order to know their real thoughts on this topic. Furthermore, both Chinese and English are accepted to express themselves specifically.

##### **3.2.2. Questionnaires**

The majority of the students may have no idea about schema theory and they even do not realize what strategies they are using when doing the listening comprehension. Hence, the author explained the notion at the beginning of the questionnaire. The questionnaire has 10 questions and all questions in this questionnaire are multiple choices with A, B, C, D and E options, which represents different levels of students' habits and attitudes towards listening comprehension. In order to make sure of the quality, the questions are all presented in Chinese. Students need to finish it in 8 minutes.

### **4. Results and analysis**

The author collects and analyzes the results of interviews and questionnaires to figure out whether students use the schema theory unconsciously and if it helps.

#### **4.1. Results and analysis of the interviews**

There are five questions in the interview and the participants have various opinions on the questions.

Question 1: What kind of difficulties do you meet during the process of listening comprehension? And how to overcome the difficulties you have met?

As for the first question, five students regarded that the new words they met during the process of listening might be the most difficult part for them to understand the entire contexts. How to address the issue always remains to be a tough obstacle for them, and two of them overcome it through the way of neglecting the new words first and surmising the general meaning according to the contexts. While the rest three of them would focus on the new words and become anxious that cannot move on to the following contexts. In other words, the understanding of the new words may disrupt their rhythms of whole process. Therefore, two students who followed the formal schema get higher scores in listening of English final tests and CET than another two students.

The rest five students in the interview said the liaison of the phrases, the accents of the speakers, the speed of the listening, the misunderstandings of the meaning by the speakers and the anxiety to the listening comprehension are all the most difficult part they found in English listening. They have no idea of how to deal with such problems and just keep listening to try to avoid these issues.

Question 2: What kind of strategies do you use to improve your listening skill?

As for the second question, one of them said she always captures some key words or information during the process of listening to gain a general framework of the contexts. Four of them regarded that immersing themselves in a real atmosphere and environment such as listening original news report online or watching original TV series is beneficial for them to enhance listening performance. However, the rest of them just utilize the most traditional method that is known as listening to the tape and then checking the answers after finishing the questions on the paper. Subsequently, they repeat the procedure again and again and keep practice in order to get a higher score in the tests.

Question 3: What actions do you think should be taken during the process of pre-listening, while listening and post-listening?

As for the third question, two students give the similar answers and said that it is vital to read the materials and underline the key words to gain a general context before listening. While listening, pay attention to the entire meaning instead of the meaning of a particular word and take notes of the key words and information you hear. After listening, fill in the blanks and make up the missing information through the notes you took before. Actually, this is a comprehensive plan for a student to improve listening ability, which strictly observe the schema theory. Three of them just underline the key words and read the choices before listening to get some basic information and have no action while listening and after listening.

However, the rest of them felt confused and wondered why listening should be divided into three sections. They usually wait for the teachers to play the tape and check the answers when dealing with the listening comprehension.

Question 4: Do you think your past experience and knowledge reserve is helpful for listening comprehension?

As for the fourth question, seven of them considered it helpful for listening comprehension because when they are familiar with the topic, they find it easier to finish the listening tasks. For example, when the topic is related to culture, politics or economy, and a certain listener is interested in this area by coincidence. So that might be conducive for him to understand the listening material with the background information and predict what will happen then. The listener also becomes much more confident in listening instead of fear and anxiety.

While three of them regarded that it will become an obstacle for them imperceptibly and may disrupt them to find the correct answers.

Question 5: Do you think pre-listening prediction and post-listening review are helpful for future listening activities?

As for the last question, eight of the students reckoned that it is meaningful and different from the traditional listening learning, which will improve their listening skills. Some of them has already apply this method to the usual practice. Although it spends more time than the traditional method, it could enhance the accuracy and gain more extra information to help listeners deal with the listening tasks.

However, the rest of them regarded that it is useless to take these measures because that is a waste of time and the prediction before listening may interfere with the following contexts so that the rhythm will be disrupted.

All in all, some students have the conscious to apply the schema theory to the English listening, which helps them to understand the listening material better. In addition, the schema theory can also create a relaxing language learning environment and harmonious relationship between learners and teachers.

#### ***4.2. Results and analysis of the questionnaires***

The author designed and conducted the questionnaire in order to investigate listeners' listening habits and attitudes towards listening strategies based on the schema theory. The questions in the questionnaire include two parts, the first eight questions are designed to see if listeners can apply the schema theory to English listening tasks unconsciously, and the following two questions are designed to know listeners' attitudes towards English listening. The results of the questions in the questionnaire will be discussed in this section. Choice A refers to totally agree; choice B refers to partly agree; choice C refers to neutrality; choice D refers to partly disagree; choice E refers to totally disagree.

*Table 1: Data analysis in the questionnaire of question 1 to question 3*

Questions	Choices				
	A (%)	B (%)	C (%)	D (%)	E (%)
1	27%	30%	20%	13%	10%
2	60%	17%	20%	0%	3%
3	54%	33%	7%	3%	3%

Question 1 to question 3 are mainly about listeners' listening habits before listening activities. As shown in table 1, for question 1, the topic or theme of the listening materials will affect the emotion before listening, over half of the listeners agreed or partly agreed with the statement and admitted that their mood could be influenced by the familiarity of the topic of the listening materials. For question 2, I make predictions according to the given information before listening, and the majority of the listeners would take such action, while 3% of the listeners chose not to predict before listening. For question 3, I scan the given choices and predict the possible questions before listening, only 6% of the listeners would not scan the provided options and guess the questions raised by the speakers.

According to the data analyzed above, the author finds that the majority of the listeners would take some certain actions before listening. With these preparations, they might feel more confident when dealing with the listening comprehension.

*Table 2: Data analysis in the questionnaire of question 4 to question 7*

Questions	Choices				
	A (%)	B (%)	C (%)	D (%)	E (%)
4	17%	6%	23%	37%	17%
5	17%	27%	43%	10%	3%
6	40%	30%	7%	23%	0%
7	37%	40%	13%	10%	0%

Question 4 to question 7 aims to know the strategies listened applied while listening. For question 4, I get used to translate each word and then understand the materials while listening, 23% of the listeners said that they would do this rather than pay attention to the key words. For question 5, I get used to predict the following contexts according to the given information, almost half of the listeners said that they would infer what will happen based on the information obtained. For question 6, I get used to make notes to hint myself while listening, 70% of the listeners utilize this way to avoid the loss of the information. For the last question in this part, I will guess the meaning with my own experience or background knowledge instead of staying for a long time if I cannot understand or miss the audio, two thirds of the listeners said they would definitely do so.

According to the data, the majority of listeners always take some measures to help them to understand the listening comprehension better. Capturing key words or phrases, taking notes and making prediction are all useful for participants to analyze listening materials and have a stable mood in listening tasks.

*Table 3: Data analysis in the questionnaire of question 8 to question 10*

Questions	Choices				
	A (%)	B (%)	C (%)	D (%)	E (%)
8	20%	27%	33%	13%	6%
9	60%	24%	13%	3%	0%
10	40%	30%	24%	3%	3%

Question 8 to question 10 mainly focuses on the actions after listening and some extra factors that influence the listening. For question 8, I usually put aside the listening materials I have heard and not review the relevant cultural background, almost half of the listeners would just correct their mistakes instead of making best use of the listening materials. For question 9, the topics of listening materials that I familiar with could help me understand the listening comprehension, 84% of the listeners agreed on this opinion. However, in question 8, 47% of the listeners ignored the listening materials after listening. The reason why this phenomenon happens might be the different sources of the background knowledge. Most students find it more acceptable to accumulate such knowledge in daily learning, including news report, novels and so on rather than the listening materials. For question 10, I think my past experience is beneficial to listening comprehension, 70% of the listeners agreed on this perspective.

According to the data above, the author finds some of the students do not realize the significance of

the listening materials, which could enlarge their background knowledge to lay a solid foundation for the future learning. In addition, some students have the ability to associate their own background knowledge with the listening materials to make the listening comprehension much easier.

## 5. Conclusions

The application of schema theory in different areas in linguistics has been popular for many years. In this paper, the author finds a large number of students in this research have already applied the schema theory to the listening comprehension partially, which contributes to their listening learning. Interviews and questionnaires were conducted and analyzed to see listeners' listening strategies and attitudes towards listening comprehension. There still remains limitations in this study such as the small sample and lack of pretests and posttests which needs to be further studied in future research and hopes to enhance listeners' listening performance.

## References

- [1] Anderson, A. & T. Lynch. *Listening [M]*. Oxford: Oxford University Press, 2000.
- [2] Barlet, F. C. *Remembering: A Study in Experimental and Social Psychology [M]*. Cambridge University Press, 1932.
- [3] Farangi, M. R. & Z. K. Saadi. *Dynamic assessment or schema theory: The case of listening Comprehension [J]*. *Cogent Education*, 2017(04): 1-13.
- [4] Huang, J. *The theory and practice of information processing in listening comprehension [J]*. *Technology Enhanced Foreign Languages*, 2004(04): 31-35.
- [5] Liu, R. & M. Dai. *On the reform of college English teaching in China [J]*. *CELEA Journal*, 2004(27): 3-8.
- [6] Luo, Q. *Applying schema theory to bridge the information gap in listening comprehension [J]*. *Technology Enhanced Foreign Languages*, 2005(04): 28-32.
- [7] Roddy, S. & B. Bridges. *Mapping for Meaning: The Embodied Sonification Listening Model and its Implications for the Mapping Problem in Sonic Information Design [J]*. *Journal on Multimodal User Interfaces*, 2020(14): 143-151.
- [8] Shen, Y., Qu, X. & J. Zhang. *A study on the promotion of multimodality and metacognition to English listening in the modern educational technology environment [J]*. *Chinese Audi-Visual Education*, 2014(08): 125-129.
- [9] Shi, X. & Y. Lv. *The application of schema theory in the teaching of English listening [J]*. *Technology Enhanced Foreign Languages*, 2004(04): 49-52.
- [10] Terzioğlu, Y. & M. Kurt. *Elevating English Language Learners' Speaking Fluency and Listening Skill Through a Learning Management System [J]*. *SAGE Open*, 2022(12): 1-15.
- [11] Yang, Y. *An experimental study on listening teaching model of professional English based on schema theory [J]*. *Journal of Guangdong University of Foreign Studies*, 2013(05): 96-100.
- [12] Zhang, P. & S. Graham. *Learning Vocabulary through Listening: The Role of Vocabulary Knowledge and Listening Proficiency [J]*. *LANGUAGE LEARNING*, 2020(04): 1017-1053.