

Schema Theory and the Teaching of College English News Listening

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Abstract—At present, English news broadcasts have become necessary in the teaching process of listening. English majors and non-English majors are all required to listen to English news broadcasts. English news broadcasts provide the listeners with a good chance to learn English. But it is a great difficulty not only for the students to learn but also for the teachers to teach. This thesis tries to explore effective methods to improve the students' ability for English news listening from the perspective of schema theory.

Index Terms—English news listening, schema theory, linguistic schema, content schema, formal schema

I. LITERATURE REVIEW

A. An Overview of the Schema Theory

The word schema comes from the Greek word "σχῆμα" (skhēma), which means shape, or more generally, plan. The plural is "σχήματα" (skhēmata). In English, both schemas and schemata are used as plural forms. Kant further developed the notion. After that many other terms have been used, for example "frame," "scene," "scenario," "script" and even "model", "theory". The development of schema theory was made in several fields, such as linguistics, psychology, anthropology, and artificial intelligence. Schema theory is one of the theories that have been applied to explain the mental comprehensive process by cognitive psychologists. It was first proposed by psychologist Kant in 1781. He pointed out that meaning exists only when concept is related to personal known information. For example, he describes the "dog" schema a mental pattern which "can delineate the figure of a four-footed animal in a general manner, without limitation to any single determinate figure as experience, or any possible image that I can represent in concrete.". After that, American artificial intelligence expert Rumelhart (1980) took schema as "a structure in semantic memory that specifies the expected sequence of events". There are various kinds of schemata in man's mind, such as car schemata, teacher schemata, building schemata and so on. The main point of schema theory is that: One needs to connect new things with those known concept, background knowledge, or past experience to understand new things. Understanding and interpretation of new things depend on the existing schema in mind and the input information must match with existing schema.

As an important aspect of cognitive science, schema theory is about how knowledge is acquired, processed, and retrieved. Schema is the technical term. It is used by cognitive scientists to describe how people process, organize, and store information in their heads. Schemas, or schemata, are seen as cognitive constructs by which we organize information in our long-term memory (Widdowson, 1983). Schemata have been called "the building blocks of cognition" (Rumelhart, 1980) because they represent elaborate networks of information that people use to make sense of new stimuli, events, and situations. They "reflect the experiences, conceptual understanding, attitudes, values, skills, and strategies we bring to a text situation". Schema theory is based on the belief that "every act of comprehension involves one's knowledge of the world" (Anderson et al. 1977, cited in Carrell & Eisterhold, 1983, p.73). Smith, (1994, p. 8) states: Everything we know and believe is organized in a theory of what the world is like, a theory that is the basis of all our perceptions and understanding of the world, the root of all learning, the source of hopes and fears, motive and expectancies, reasoning and creativity. And this theory is all we have. If we make sense of the world at all, it is by interpreting our interactions with the world in the light of our theory. The theory is our shield against bewilderment."

Schema theory is very important for listening theory for several reasons. First, selection, interpretation, and retrieval of information are components of listening. When listeners are provided with a message, they are thought to engage in selective processes that permit them to attend to some parts of a message more than others. They then interpret the message subjectively and remember a stored or incomplete version. Schema theory provides one explanation for these effects. Second a database involving orally administered tasks already exists in schema theory research. Subjects in experiments have listened to messages and then have responded to them using both oral and written formats.

B. The Definition of News

What is news? It is necessary to answer this question first.

Professional news reporter is "precise and neutral", thus eliminates all subjectivity and constructs texts where "the only things on show are the raw facts". Carter and Nash (1990) said that, "After all, newspaper reports should ideally report the facts in as core a vocabulary as possible". Lu Dingyi states that news report is the report of facts that happened recently. It has the primary function of keeping people informed of the facts. These words clearly show that

the position of news report should be objective, factual and neutral. The English news broadcasts are rich in content and easy to get. Listening to English news report very often can not only improve the listeners' pronunciation, intonation, but also make them know about what have happened in the world recently, and broaden their horizon.

II. AN EXPERIMENTAL STUDY ON ENGLISH NEWS LISTENING

A. Research Objective

We try to answer the following questions: 1) what are the problems students confront in the process of English news listening? 2) Do the three schemata have any effect on students' English news listening and how? 3) What are the problems teachers encounter in the teaching of English news listening?

B. Subjects

The subjects are 130 students at Taishan College who major in English. They were sophomores from three classes. And we also chose 3 teachers who have taught English news listening for several years to receive an interview.

C. Instruments

We carried out the questionnaire among the students and an interview with the teachers. The questionnaire is a closed one in Chinese. It consists of twenty multiple-choice questions. There are three categories for these questions. The first one is about the students' relevant concepts and evaluations. The second one is students' experience of English news listening. And the last one is to what degree students need the support of schema theory. There is only one choice for these questions. And there was no limit of time for them to answer these questions.

After 130 copies were collected, seven of them were found invalid. Then the data of 123 questionnaires were used and analyzed as samples for this study.

The interview was carried out among the three teachers. The interview also consists three parts: teachers' comments on students; common problems in English news listening; teachers' concepts on schema theory, their evaluations of the effects of three schemata; teachers' comments on their problems in the teaching of English news listening.

D. Results and Discussions of the Questionnaire and the Interview

From the answers of question No.1 and No. 2 we can know the current situation of students' listening comprehension and English news listening.

Q No. \ Answer	A	B	C	D
1	12.0%	21.0%	25.0%	42.0%
2	---	---	22.1%	77.9%

When the students are asked to evaluate their own level of listening, 12% of them think they are excellent in listening. 21% of them think they are good and 25% OK and 42% bad. According to this result we can see that although they have practiced listening for one year, nearly half of them are not satisfied with their listening ability.

When they were asked to evaluate their ability on English news listening, the result is more dissatisfying. 77.9% of them choose badly. 22.1% of them choose OK and none of them choose excellent or good. From this result we can know how difficult the English news are for them and they showed the low confidence on English news listening.

Then how important do they think schema theory in English news listening is? Question NO.3, 4, 5 Can give us some clues on students' concept of schema theory.

Q No. \ Answer	A	B	C
3	20.0%	70.0%	10.0%
4	70.0%	20.0%	10.0%
5	---	2.0%	98.0%

When they were asked if the listening including news listening should be taught, 70% of them think they want to be taught and guided by some theories, not merely to be mechanically drilled. But little of them know schema theory.

Question No. 6 to 18 are from the angles of language, content, and structure of English news listening which is in accordance with the three schemata of the schema theory. Question No 6, 7, 8, 9, 10 are from the angle of linguistic schema.

Q No. \ Answer	A	B	C
6	82.1%	17.9%	---
7	59.0%	36.8%	3.2%
8	73%	27.0%	---
9	42.8%	40%	17.2%
10	31.0%	42.0%	27.0%

When the students were asked if they can follow the speed of English news, the majority of them can not keep up. It shows a big problem the students confront in English news listening. If the students can not keep up the speed, they can not understand the news. When asked if they could get used to different announcers' pronunciation and intonation. 59% chose the choice "no". As to the vocabulary, 73% of the students confronted many new words in English news listening. This is understandable, because news covers a wide range of topics. In the last chapter we have mentioned, it covers economy, military, politics, arts and so on. And many news words appeared continuously. So the vocabulary in English news is one of the students' obstacles to understand the news. So the students should enlarge their vocabulary especially grasp the Journalistic English.

As to the students' opinions towards the length of sentences in news, the students who think sentences are long are 42.8%, which are slightly more than the students who think sentences are short. Only 17.2% of them think the sentences are short. It seems the length of the sentences influence some students' comprehension. For some students it does not matter too much. It is the same with the grammar. Nearly one third of them think it is simple, which is in accordance with the character of English news that is simple in grammar.

In addition to linguistic schema, content schema is also very important in English news listening. It can not only provide the students background information but also help the students to predict and infer. Question No.11, 12, 13, 14, 15 are aimed to find out students performance on content schema.

Q No. \ Answer	A	B	C
11	35.0%	70.0%	---
12	25.5%	74.5%	---
13	27.0%	40.0%	33%
14	24.0%	40%	36.0%
15	31.0%	69.0%	---

From the answer of question No.11 and No. 12, we can know that about two thirds of the students are not familiar with the topic, and don not know the background of the listening materials. It shows that the students paid no attention to the background knowledge of listening materials. Deficiency in background knowledge is one of the obstacles of English news listening.

From the answers of Question No. 13 and 14, we can conclude before listening that most students can use clues to predict often or occasionally, but when listening many of them can not readjust their prediction. This means during the process of listening, they are much more passive than before listening. The answer of the question No. 15 is more surprising. Nearly two thirds of the students said they had a vague idea on what they listened to.

Questions No 16, 17, 18 are about the formal schema of English news.

Q No. \ Answer	A	B	C	D
16	16.0%	84.0%	---	---
17	20.0%	11.0%	32.0%	37.0%
18	14.0%	14.0%	7.0%	65.0%

From No 16, we can know that most students do not know the structure of news, and two thirds of them do not know the news lead, but fortunately more than half of them will pay attention to the news lead though some of them don't know what is news lead. Because most students do not know much about the English news, as is shown in question 16 and 17, when answering question 18, most students chose D. To sum up, that most students know little about the relative knowledge of news, which becomes the obstacle of English news listening. If they learn more about news, for example the structure, the news lead, they will improve their ability of English news listening.

The above data show the students' difficulties in English news listening. Though the students know little about schema theory, they actually need the help of schema theory to improve their listening ability, which is reflected from the answers of question 19 and 20.

Q No. \ Answer	A	B	C	D
19	---	18.0%	82.0%	---
20	70.0%	23.0%	3.0%	4.0%

From No.19, only 17% of the students know some characteristics of language, content, and structure of English news listening. Most of them think the teaching of these characteristics of news will give them much help and they also show their desire to learn more about the news.

This questionnaire is a self-evaluation on the students' current situation of English news listening. From the answers of the questionnaire, we can conclude the students' problems in English news listening, which mainly fall into 3 kinds: linguistic knowledge, background knowledge and structural knowledge of news listening. The speed, the accent, vocabulary, sentence and grammar become the obstacles of the English news listening more or less. And they are also lack of background knowledge and at the same time they can not use the content schema to predict and make inference

effectively. What's more, they are also deficient in structural knowledge. All these become the obstacles of English news listening. So to improve their ability of English news listening, schema theory is very important and from themselves they also expect to apply schema theory to their news listening.

The questionnaire is a self-evaluation of the students' current situation of news listening. From it we know the problems the students confront in the English news listening with the eye of the students. In order to validate the results of the questionnaire with the eye of teachers, three teachers who have taught English news for several years participate in the interview. They were asked to answer 3 questions, which are open in Chinese.

When they are invited to list the students' problems in English news listening, they listed the following problems: when listening to English news, the students shows low confidence and nervousness; they know little about listening strategies; they can not remember what they listened to; when listening, they can not focus on what they are listening; they are lack of interest and so on.

For the second question, all the three teachers answered they have heard the schema theory, and know it more or less. But none of them have never applied the schema theory to English news listening. About the three schemata, all of them think linguistic schema is most helpful to improve the students listening ability. As to the content schemata and formal schemata, they think content schema is more helpful than formal schema.

When they were asked to list the problems they confront in the teaching of English news listening, they listed 2 major problems. One is the problem of time. They complained that there were only two periods of listening class in one week. On the one hand, they had to finish the textbook, on the other hand they had to save time for Band 4 and Band 8, and they are too task-overloaded. They seldom have time to apply some listening theories in class. Another major problem is the textbook. News is changing, so they need a textbook which is not too old for the news or too difficult for the students to listen to.

III. MAJOR FINDINGS

Through the above experimental study, we can find the problems the students confront in English news listening.

A. *Poor Linguistic Ability*

Deficiency in linguistic schema is the biggest obstacle for the students in English news listening.

1. **Poor Phonetic Knowledge**

A large number of students have a large vocabulary and are good in grammar. They can understand written articles well, but they even hardly understand the Special English. What's the reason? It is because that they haven't received enough sound training in the process of study. They can't distinguish basic phonetic knowledge (intonation, word stress, sentence stress, and the tone group) and the speech changes (loss of plosion, sound linking, strong and weak forms and assimilation). They are not accustomed with the standard speech, intonation, speed and the tone group, which are different from their own ways of reading. For example, in the following sentence "Many people mistakenly believe that old age is a time of increased illness and loneliness." In fact, people do not suddenly change." In the tape's reading "is" and "a" are sound linking. The pronunciation of "s" is a Weak Form. In "do not", it's hard to hear "do" clearly due to Weak Form. So it is impossible for them to know "do" and "is" clearly. If students have poor phonetic knowledge, they can't recognize every phonetic unit well and they had a false listening. Another example there is a sentence in a piece of news "there are still seven American hostages being held in Lebanon by different political groups." Many students mistook "several" for "seven" because "seven" was read too quickly and "n" was pronounced too weakly. In another sentence "Officials say it is an act of self-defense", as a result of sound linking students will hear "active" instead of "an act of".

2. **Lacking a Large Vocabulary**

The vocabulary is a significant feature of English news. The news report covers many topics like culture, science, economy, politics, and military. It is necessary for the listeners to grasp a large vocabulary. According to VOA's Magazine-Voice, the vocabulary of Special English in common use is about 1500 words, and the vocabulary of Standard English is about 4,000 words

There are proper nouns about government office's name (the White House, No.10 Downing Street and Pentagon), country's name, the capitals (Afghanistan, Rome, Israel, Seoul.), people's name (George Walker Bush and Tony Blair). There are also many proper nouns and acronyms in the vocabulary of English news including religion, arms, media, organization (EEC, OPEC, WHO).

Besides, in order to make his article lively, the reporter always uses some new words or some reduced forms (space sickness, crib death, and beatnik).

However the students usually grasp many simple basic words, and most of them know less new words. So during the process of English news listening when the students encounter these unfamiliar words, their attention will be interrupted by those words and they can't be coherent. The vocabulary is a big obstacle for most students, so it is difficult for them to do the English news listening well.

B. *Deficient Schema and Background Information*

Content and form schema are very important for the students to improve the listening ability to English news.

1. Lacking Schema

Schema is a philosophical conception, which was raised by Konda. Pearson regarded schema as “the vision or the association in one’s mind which is produced when people listen to or read something.” Cook described schema as “the knowledge previously stored in one’s mind.” In the 20th century, with the generation and development of Modern Cognitive Philosophy, the concept of “schema” got fuller definition. Schema is the basic material of cognition and the necessary part of understanding all kinds of information. So the listener can receive and understand the information depending on the “schema”.

Usually the construction of schema which the students accumulate is about the material which is closely related to daily life. So when listening to English news, most of the students will become vacant because the listening materials of English news cover different topics of western society, like economy, politics, culture, military. Students lack the schema related to these materials so it is difficult for them to comprehend the English news. It is also a big obstacle for news listening comprehension.

2. Lacking Background Information

According to the interview, there are always two phenomena in English news teaching process. One is that the students often mistake the background information as the reality of the news when they are asked to tell the main idea of English news; the other is the students always feel confused when they are asked “why did this matter happen?”. It clearly shows that students don’t have enough background information of English news.

In the book *Writing Theory and Practice of News Broadcasting*: “the background information refers to the related facts of the explanations of the news.” From it we know the background information is not the reality of the news, it is to explain the news. If the listener doesn’t know the necessary background information, to English learners who’re not very familiar with the western society and culture, it is difficult for them to understand the listening materials. For example, there is a sentence “It provides 800 telephone service.” in a piece of news which introduced the telephone net of America. According to the literal meaning, people will think this sentence means “this net supply people 800 telephone services.” It is right in grammar. But in fact, it is completely wrong. The meaning of the sentence is “this net provides 800 telephone services for free.” Because in America, if people want to have a long distance call for free, they need to dial 800. If the students don’t know this background information, they will understand the news mistakenly.

Another example, in America, after the report of the pop of the White House, Treasury Secretary deals with the matter by himself. When listening to this, they will feel surprised if the listeners don’t know the background information that “American Treasury Secretary” is responsible for the president’s safety.

C. Psychological Obstacle

In the process of studying foreign language, if the students can’t create a linguistic atmosphere to practice it just like their mother tongue, and the chance of practicing foreign language is small, it is easy for them to feel anxious and fearful while they are listening.

Usually, the scared psychology widely consists in the process of student’s listening. Its main reflection is that the mind is much nervous and the attention is not focused on. While there is a test or a quiz, the students will become very nervous. If one feels nervous, the reason is that some students are eager to win, this kind of mind increases students’ pressure and makes them feel intense; or because of insufficient preparation, some students are afraid of being asked a question. These two situations result in vacancy of one’s mind, which influences the continuity and the accuracy of listening. If one doesn’t focus his attention on listening, maybe this is because he has listened to the material for a long time; or the listening material is too difficult, this will made students feel very tired.

All of these problems would have a bad effect on students’ normal studying and training; sometimes the problems will let the students have no confidence with them.

Although the study has some limitations, it gives some implications in the teaching learning in English news listening.

IV. THE IMPLICATIONS FOR THE ENGLISH NEWS LISTENING

A. Improving Student’s Linguistic Ability

Linguistic schema is the most important for English news listening. The built of linguistic schema is helpful for the students.

1. Knowing the Phonetic Difference and Overcoming the Phonetic Obstacle

If the students want to have a good understanding of the news, they need to practice English news listening more. But if students haven’t learnt some basic phonetic knowledge well, they will not do well in the listening. Students should pay much attention to phonetic differences, especially when listening to English news. If they don’t give enough attention to them, after a long time, they will form false pronunciation. That is the reason why they can easily understand a sentence, but while listening, they are not able to understand the same sentence.

In China, English education always follows the phonology of RP (Received Pronunciation) that is the British teaching system. BBC always uses this phonology of RP. There is also another kind of phonology of GA (General American), which is also known as Standard American English (SAE). The American radio broadcaster often uses GA. RP and GA are quite different from each other, for example:

	RP	GA
Fast	/fɑ:st/	/fæst/
Tomato	/tə ˈmɑ:təʊ/	/tə ˈmeɪtəʊ/
Either	/aɪðə/	/iðə/

The teachers should teach the students some basic knowledge of phonetics such as stress, sound linking, and intonation. Another thing students need to remember is they should insist on practicing everyday in order to overcome the obstacle.

2. Memorizing the News Vocabulary

The news report is the newest message and its content covers all kinds of social affairs. The main characteristic of English news is its vocabulary. Most of its vocabulary is concerned with politics, economy, military, science, technology and nature.

If students want to understand English news well, they have to pay great attention to these news words and accumulate these words to enlarge their vocabulary. This can help students to listen to the news without the teacher's instruction. In addition, students ought to learn more the words such as main city's name, country's name, and famous people's name, and abbreviations of organizations.

For example proper nouns, some students don't want to memorize them because they don't think the proper nouns are English words. But in order to improve their listening, it is necessary for them to do so. If students are not familiar with these proper nouns which appear frequently in the news, it will be difficult for them to understand the English news. Here is a piece of news:

"Another American has been kidnapped in West Beirut. Fifty-three year old Frank Reed was abducted by four gun men this morning. Islamic Jihad claimed responsibility, accusing Reed of being a spy. The pro-Iranian group already holds at least three other Americans and three Frenchmen."

There are about forty or fifty words, including proper nouns like "Beirut, Islamic, Jihad, Iranian, American", and words such as "abduct, claim responsibility, accused of", are all words or phrases that are commonly used in English news. If students don't know these words, it will be difficult for them to understand the news.

B. Having Rich Background Information

The cultural tradition and customs are quite different in China, Great Britain and America. Chinese learners usually analyze and understand English sentences with "Chinese-style mind" because they are influenced deeply by their own countries' culture and their mother tongue. As a result of shortage of sensibility for the difference between Chinese culture and English culture, students can't understand the actual meaning and the real main purpose of the information.

If students don't know the background information of western world, such as the social customs, local conditions, thinking modes, social systems, and value ideas, there will be a big obstacle in the listening comprehension. So it is very helpful for students to know a great amount of background information, which is proved by the research of Chiang, Dunkel and Schmidt-Rinehart. Take the following sentence as an example: The congress which assembled Monday for its last session is full of what they call "Lame Ducks". In America, after the presidential election, the new president and officials feel very happy, but the former president and government officials all become disappointed. "Lame duck" refers to lame duck, which can't fly. If the listener doesn't know the allusion of "Lame Ducks", they would not understand the sentence well.

There is another example: *"The path to November is uphill all the way."* If students don't know what "November" refers to, it is impossible for them to understand the sentence. Here, "November" refers to "the presidential election to be held in November".

Background information has a close relation to English news listening so it is important for students to know more about western countries. There are many ways for students to accumulate background information, like reading Chinese, listening to radio programs (VOA and BBC) and English newspapers and magazines, and watching TV programs of CCTV-9.

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