A SCHEMATIC APPROACH TO TEACHING LISTENING COMPREHENSION

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Abstract: With recent developments in and studies of language teaching, the listening skill – once believed to be a passive skill - is today discovered to be an ‘interactive’ process in which the concept of background knowledge plays a very significant role. This background knowledge known as ‘schematic knowledge’ is today broadly acknowledged in second or foreign language teaching and a number of studies have been conducted to reveal the importance of schemata in both reading and listening comprehension. The schema theory does not have only one definition. It can be investigated under three main concepts: Linguistic schemata, formal schemata, and content schemata. These concepts are very closely related to learners’ listening comprehension in the acquisition of the second language.

This paper not only reviews the significance of schema, a term that refers to background knowledge in listening comprehension, but also demonstrates how it facilitates and positively affects the process of understanding spoken discourse.

Keywords: Schema theory, background knowledge, listening, listening comprehension

ŞEMA KURAMI AÇISINDAN DİNLEDİĞİNİ ANlama ÖĞRETİMİ


Bu makale axtaran bilgisi gösteren şema teriminin dinlediğini anlamadaki önemini gözden geçirmenin yanında sözlü söylemi anlaması sürecini nasıl kolaylaştırdığını ve olumlu bir biçimde etkilediğini de göstermektedir.

Anahtar Kelimeler: Şema kuramı, axtaran bilgisi, dinleme, dinlediğini anlamada.
1. INTRODUCTION

Listening, which should be considered as the most important skill to be improved since it is the most frequently employed skill in our daily lives, is defined as a highly complex problem-solving activity by Byrnes (1984). In the comprehension of this highly complex problem-solving activity, it has been hypothesised that background knowledge plays a crucial role. Since listening is now regarded as an active process, occurring between the listeners existing background knowledge and the listening material, it becomes essential to prepare the listeners prior to the listening activities in order to ease the comprehension. This preparation should seek the importance of cognitive faculties of students towards comprehension having used the pre-listening activities effectively to activate the students’ schemata and ease their listening process.

Since the beginning of cognitive psychology in the 1970s, the focus in listening pedagogy has greatly been on the bottom-up linguistic processing rather than top-down processing. After having gained benefits from the findings of cognitive psychology in the 1980s, the way the listening skill is approached has been changed. As researchers began to suggest that not only language schemata and knowledge schemata are essential for enriching and facilitating comprehension, the importance of background knowledge and the significance of schemata in comprehension have been more acknowledged. Thus, the importance of activating the learners’ existing background knowledge has automatically risen as well. The schemata knowledge, which has been highlighting the importance of pre-stored knowledge in language comprehension, puts forward that comprehending a text is an interactive process occurring between the learners’ already stored knowledge and the text itself, either spoken or written. In such a case, the job of a language teacher is to aid students by triggering their already existing knowledge and help them employ this knowledge to comprehend the new text. Having insufficient background knowledge may lead to difficulties in understanding; thus, teachers need to help students by improving their metalinguistic knowledge as well. By doing so, the teaching of listening can turn into a more motivating, interesting and enjoyable one.

2. REVIEW OF LITERATURE

2.1 Defining Listening

There have been a number of attempts to define the listening skill in the literature. For instance, Lundsteen (1979: 1) suggests that listening is the skill “by which spoken language is converted to meaning in the mind”. Anderson and Lynch (1988: 6) suggest that successful listening is “understanding is not something that happens because of what a speaker says: the listener has a crucial part in the process, by activating various types of knowledge, and by applying what he knows to what he hears and trying to understand what the speaker means”. Underwood (1989: 1) puts forward a simple definition that listening is “the activity of paying attention to and trying to get meaning from something we hear”. Mendelsohn (1994) puts forward that listening comprehension is to have the ability of understanding the spoken language produced by its native speakers. In addition, another definition that Rubin (1994) argues that listening is an active process in which information is selected and
interpreted by a listener via auditory and visual clues so that what the speakers are trying to express is defined. According to International Listening Association (ILA) (1995: 1), listening is “the active process of receiving, constructing meaning from, and responding to spoken and/or non-verbal messages. It involves the ability to retain information, as well as to react empathically and/or nonverbal messages”

In addition, Purdy (1997: 8) asserts that listening is “the active and dynamic process of attending, perceiving, interpreting, remembering, and responding to expressed needs, concerns, and information offered by other human beings”.

Imhof (1998: 83) sees listening as “an active process of selecting and integrating relevant information from acoustic input and this process is controlled by personal intentions which are critical to listening”.

Buck (2001) points out that listening is made up of both linguistic knowledge and non-linguistic knowledge. Linguistic knowledge, according to Buck (2001) is made up of semantics, discourse structure, phonology, lexis, sociolinguistics, and pragmatics. Nevertheless, the latter involves the context, and knowledge of the world. Moreover, Rost (2002: 3) claims that listening is “equal to experiencing contextual effects, that is, listening as a neurological event (experiencing) overlays a cognitive event, that is, creating a change in a representation”. Rost (2002) also stresses that listening goes through a process in which the listener gets what, in fact, the speaker says, representing and structuring meaning, establishing a negotiation in meaning (with the speaker), giving responses, building up meaning with the help of involvement, empathy and imagination. In addition, Jeon (2007: 50) characterises listening as “a set of activities that involves an individual’s capacity to apprehend, recognise, discriminate, or even ignore certain information. It has also been considered to contain complex and active processes that are involved in linguistic knowledge, personal expectation, cognitive processing skills, and world knowledge. Listening involves interaction and negotiation with a speaker and requires prior experience of a listener to best understand and interpret what a speaker says”. Steinberg (2007) suggests that listening is not just merely hearing but rather a complex process that involves four stages, such as sensing and attending, understanding and interpreting, remembering and responding. She also highlights that we are not generally aware of those stages we go through.

2.2 Defining Schema

Before looking at the schema theory, it is important to define what a ‘schema’ is (plural: schemata or schemas). It is clear in the literature that a British psychologist, Frederic Barlett (1932) coined the term ‘schema’ to refer to an active organisation of past experiences in his well-known book, Remembering. A schema can be viewed as a (hypothetical) mental patterns for representing generic concepts which are kept in memory. It can be defined as the organised background knowledge which can help us make predictions or expectations within our interpretation. As for an example, when a student is asked to tell his day in his school, s/he does not need to tell every single details, like taking a vehicle to school, attending the lessons, taking a seat, greeting his/her friends or the teacher, studying that day’s topics, and so on;
however, we can still fill in these missing details perfectly as our schemata for a lesson experience are already stored in our minds.

Despite the fact that the notion was introduced in the 1920s, it gained its value in the 1970s and 1980s as a result of the improvements in both cognitive psychology and also in cognitive science. The reason why Barlett’s idea became popular after fifty years was that, unluckily for Barlett, it was proposed during the period when behaviourism was heavily acknowledged in psychology and the mental entities were excluded from scientific psychology.

Barlett (1932) stated that the prior knowledge and people’s expectations form our remembrance and understanding, and these expectations, in our minds, are presented in some types of schematic organisation. Similarly, Rumelhart (1980) attempts to define the notion of schemata as units that all knowledge is packed in units, which he calls ‘the schemata’. He also points out that, embedded into these packs of knowledge, additionally knowledge itself, information about in what way this knowledge is to be utilised lays in these units. Adams and Collins (1979) define schemata as the previously acquired knowledge structures.

Taylor and Crocker (1981: 91) define the notion as ‘a cognitive structure that consists in part of the representation of some defined stimulus domain. The schema contains general knowledge about that domain, including a specification of the relationships among its attributes as well as specific examples or instances of the stimulus domain’.

Alba and Hasher (1983: 129) report that schema is ‘general knowledge a person processes about a particular domain.’

Brown and Yule (1983: 249) define the notion as an organised background knowledge which leads people to expect or predict aspects in their interpretation of discourse. They say that ‘our background knowledge is organised and stored in some fixed schemata, together with some other, more flexible schematic structures’.

Carrell and Eisterhold (1983: 559) state that "what is understood from a text is a function of the particular schemata that is activated at the time of processing the text"

Poplin (1988) attempts to define ‘schemata’ as the spiral of knowledge. Taglieber, Johnson, and Yarbrough (1988) highlight that comprehension occurs when readers make use of their schemata (i.e., knowledge structure in memory) and the text.

Yekovich and Walker (1988) call it as scripted knowledge.

Pichard (1990) defines schemata as our theories of the way things are, or as representations of one’s background experiences and it is clear that the culture one lives in impacts schemata.

Zhu’s (1997) simple definition suggests that schema is background knowledge and background information.

Juan and Flor (2006: 93) point out that ‘schemata, the relevant packages of prior knowledge and experience that we have in memory, can call on in the process of comprehension.’
Carroll (2008: 176) defines "a schema is a structure in semantic memory that specifies the general or expected arrangement of a body of information"

2.3 Schema Theory

The search for understanding the relation between comprehension and background knowledge have led to the model termed ‘schema theory’. According to this theory, meaning is shaped when it interacts with the previously acquired knowledge in which a text can only act as directions for reader/listeners. Huang (2009: 139) states that ‘according to schemata theory, any text, spoken or written, does not carry meaning itself. Comprehending words, sentences, and entire texts require the capacity to link the material to one’s own knowledge’.

Schema theory puts forward that understanding a text (spoken or written) occurs as a result of an interactive process that goes through between the listeners’ background knowledge and the text. This process was highlighted by Goodman (1975: 135) as“reading is a psycholinguistic process by which the reader, a language user, reconstructs as best as he/she can a message which has been encoded by a writer as a graphic display”.

Anderson (1977) states that one’s knowledge of the world is what determines every act of comprehension. Widdowson (1983) highlights that, "They [people] reflect the experiences, conceptual understanding, attitudes, values, skills, and strategies... [We] bring to a text situation" (as cited in Vacca & Vacca, 1999: 15). Widdowson’s views reflect similarities to the Rumelhart’s (1980) definition of schemata “the building blocks of cognition”. Smith (1994: 8), similar to Anderson (1977), states that “everything we know and believe is organised in a theory of what the world is like, a theory that is basis of all our perceptions and understanding of the world, the root of all learning, the source of hopes and fears, motive and expectations, 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”.

Basically, there are three types of schema that play a role in the process of understanding, which are linguistic schema, formal schema, and content schema (Yang, 2010). Linguistic schema refers to linguistic knowledge of a learner. It is the learner’s current language proficiency in grammar, vocabulary, phoneme, idioms, phrase, paragraph, cohesive structure, sentence structure, etc. Shortage in linguistic schema will lead a learner to have hard times in decoding and understanding a text, written or spoken. A learner activates his/her linguistic schema to decode syntax, phoneme, the meaning, and pronunciation. It is obvious that the more one has stored linguistic schema in his/her mind, a quicker and better understanding s/he receives. Formal schema refers to the knowledge of organisational and rhetorical structures of a discourse. It involves knowledge of divergences in genre, divergences in the pattern of fables, simple stories, poetry, newspaper articles, simple or scientific text, and so on. The findings of studies exhibit that being aware of what kind of genre of text is going to be read (or listened to) may ease understanding. Content schema can be defined as the background knowledge of the content area of a text, such as the subject(s) a text speaks about.
2.4. Significant Studies on the Place of Schema Theory in Listening Comprehension

Schemata facilitate the listening process since listeners are involved in a series of action towards forming meaning from the text they listen to, based upon their intentions, expectations inferences and prior knowledge. Listening comprehension occurs when listeners can successfully combine their pre-existing knowledge and experiences with the listening text. Zeng (2007) points out that teaching listening in an interactive process in which an information and storage processing are involved during which listeners need to apply the available knowledge of language, background knowledge and the listening material itself. In fact, listening comprehension occurs as a result of the two combinations of processes, known as top-down and bottom-up processes. Gough (1972) suggests a bottom-up model for the reading process in which a serial fashion is followed, that is, from letter to sound, then to words, followed by meaning. This process is accompanied by listeners’ bottom-up skills to decode words and phrases depending on their linguistic knowledge. Through top-down processing (also known as concept-driven model), listeners make inferences about what the speaker intended. A top-down model is an approach that highlights what the listener reflects to the spoken text itself, it claims that listening is made by meaning and proceeds from whole to part. To these theorists (e.g., Goodman, 1967; Smith, 1971), efficient reading is not the product of the absolute perception and recognition of all the items in a word, but is the product of the ability to select most essential cues. They argue that readers, based on their previously gained experiences and already stored knowledge (about language), they can build up a prior sense about what carries meaning in a (written or spoken) text.

Today, the place of schemata in listening comprehension is regarded as one of the most significant factors affecting comprehension. Many scholars believe that triggering students’ previously gained knowledge (schemata) is important to enrich understanding and building new schemata. In fact, our already stored schemata are modified by each new experience. A new schema is created when/if we encounter with a culture or discourse which is not familiar to us. This modification or creation of schemata carries a great value in the listening process if the listener is really eager to ‘learn’ from that event. Kemp (2010), however, says that the effect is probably cumulative. Maybe this is one of the reasons why some teachers mistakenly believe that listening is a matter of heavy practice.

Long (1989) highlights the impact of verbal and visual organisers, pre-published background knowledge, imaginary training on comprehension, story schemata, recall and learning. Berne (1995) states that knowing something about the (passage) content will ease L2 listening comprehension. Similarly, Johnson (1982) points out that providing students with some background knowledge will facilitate their learning and comprehending of unfamiliar texts. Zhang (2006) highlights that the effectiveness of pre-listening activities is the result of schemata theory. Pre-listening tasks are usually designed in the way that can reflect, build or activate the learners’ previously stored background knowledge. Actually, the significance of pre-listening tasks in triggering schema cannot be denied since in this stage, students are provided with the background knowledge which is essential for their comprehension of the listening text or triggering their already stored knowledge. In this necessary phase,
the students’ passive state of mind can be turned into an active one and they can be better prepared for the during or the while listening phase with a purpose, the necessary vocabulary, anticipation, and a high motivation. If the students in the pre-listening stage do not build up the necessary and the relevant schemata, then comprehension cannot be expected. Thus, in this stage, it is crucial to provide the concepts and an outline for the listening text. Goh (2002, as cited in Zeng, 2007: 35) suggests the following techniques to activate stored schemata (see Table 1).

**Table 1: Techniques to trigger stored schemata**

<table>
<thead>
<tr>
<th>Activity</th>
<th>How to do</th>
<th>Purpose</th>
</tr>
</thead>
<tbody>
<tr>
<td>Brainstorming</td>
<td>Call out related words or phrases to be put on the board or OHP</td>
<td>These knowledge-oriented activities aims to prepare students by encouraging them to activate stored schemata or acquire relevant types of world knowledge, which will facilitate top-down processing.</td>
</tr>
<tr>
<td>Mind-mapping</td>
<td>Write down words or draw simple pictures in a web</td>
<td></td>
</tr>
<tr>
<td>Discussion</td>
<td>Discussion similar or related issues based on prompt questions or pictures</td>
<td></td>
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<tr>
<td>Games</td>
<td>Simple word or information-gap games</td>
<td></td>
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<tr>
<td>Guide-questions</td>
<td>Guess answers to questions on the text</td>
<td></td>
</tr>
<tr>
<td>Picture/Diagram</td>
<td>Complete illustrations with simple drawings or words</td>
<td></td>
</tr>
<tr>
<td>Predictions</td>
<td>Predict contents, characters, setting or sequence of events</td>
<td></td>
</tr>
<tr>
<td>Elimination</td>
<td>Identify the odd one out from a group of pictures or words/phrases</td>
<td></td>
</tr>
<tr>
<td>Skimming</td>
<td>Read a related short text for gist</td>
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There have been a number of studies conducted to investigate the effect of schema on listening comprehension. For instance, Shin (1992) reveals that when listeners construct enough schemata of the lecture content, they will manage to understand the lecture effectively. Another study was conducted by Safamanzar (1994) among 90 male college students at Air University. For the sake of the study, he utilised two sets of listening passages and he divided the subjects into two groups, the control and the experimental. The experimental group was provided with passages that were accompanied by a content determining topic and a summary (of the text) which were utilised as pre-listening activities. On the other hand, the control group was not provided any special pre-listening activities. The study demonstrated that activating schemata had a facilitating effect on learners’ listening comprehension since the experimental group could remember information better than the control group. Tudor and Tuffs (1991) investigated the effects of prior activation of text-relevant schemata on listening comprehension among advanced level Belgian university students. For the sake of the study, researchers divided the students into three groups; two groups received formal and content schemata activation as...
treatment; whereas, a control group received no treatment. Their study showed that the level of improvement in the formal schemata group was higher than that of the control group. Baltova (1994) examined the role of video and/or sound in the processing of aural French as a second language in grade eight core French. Findings showed that visual cues were informative and enhanced general comprehension. Another study conducted by Chiang and Dunkel (1992) demonstrated that topic familiarity facilitates listening comprehension for low-level L2 language learners. Visual clues, such as pictures and video was discovered to be effective in stimulating background knowledge; thus, improving comprehension. Shemshadi (1995) did a study to examine the significance of schema-theory on learners’ listening comprehension. To reach his goal, the experimental group received suitable schema; yet, the control group received irrelevant information. The findings showed that schemata-building affected learners’ listening comprehension positively. Babaie (1996) studied the impact of stereotype typical schema utilising nonconventional and a typical input on listening comprehension among EFL learners who were at different levels of language proficiency. The results supported the positive role of schema in EFL listening comprehension. Markham and Latham (1987) conducted an investigation to reveal the impact of religious background in listening comprehension. Their study demonstrated that religious background affects listening comprehension. The findings showed that the participants were more successful in recalling the passage that was related to their own religion. Regarding the impact of background knowledge during the listening process, Bacon (1992) revealed that listeners who were successful in listening tented to utilise their personal, their world and their discourse knowledge; however, less successful listeners either structured imperfect meaning from their prior meaning or neglected it altogether. Weissender’s study (1987), in which the significance of both textual and content schemata in learning Spanish among intermediate and advanced learners were investigated, demonstrated that both textual and content schemata aided in triggering comprehension of the new data. Sadighi (2006) revealed that the facilitating role of background knowledge were consistent with the results of the majority of L2 listening investigations as he revealed that stimulating students’ background knowledge resulted in better comprehension.

3. CONCLUSION

Despite the fact that listening is the most frequently used language skill in our daily lives, in general, listening courses are not considered as important as the other skills. That is why, in the late 1990s, David Nunan (1997) referred to listening as the ‘Cinderella’ skill. Yet, unlike in the past when the listening skill was viewed as a passive skill, today, listening comprehension is strongly believed to be a process of interaction between the listeners’ background knowledge and the expected knowledge in the spoken text, that is, listeners employ all relevant previously stored knowledge to comprehend the incoming input. The role the background knowledge plays in comprehension has been formalised as ‘schema theory’ (Rumelhart, 1980). In the light of the notion of schema theory, it becomes essential to trigger the learners’ background knowledge and utilise this knowledge to fully comprehend the listening text. Thus, language teachers should aid their students in improving not
only their linguistic knowledge, but also their non-linguistic skills through some classroom activities and teaching techniques.

The application of schema theory in teaching listening provides effectiveness and efficiency and this has been proven by a number of studies. Since the schema theory strongly demonstrates that it can help the students with achieving better comprehension in listening and making the listening courses more interesting and motivating, it should be applied in language classes.

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