

The Role of Schema for Effective EFL Reading Comprehension

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Abstract

Reading in second language is a complex activity. EFL readers construct meaning from clues found in a text which is related to the use of background knowledge in understanding the content of the written pages. Reading is an interactive process in which readers construct a meaningful representation of text using their schemata. Schema theory describes the process by which readers combine their own background knowledge with the information in a text to comprehend that text. All readers carry different schemata (background information). This is an important concept in EFL teaching. So, reading activities are designed along with the activation of the learners' schemata. It is still an area that has not been extensively understood and analyzed by both classroom teachers and researchers in Bangladesh. This paper makes a humble attempt to investigate the implication of schema theory in the teaching of reading comprehension of tertiary level students learning English as a foreign language (EFL). Two questionnaires were used to carry out the study (one surveyed among the students and another, among the teachers). Based on the findings, the researchers offer some recommendations for both teachers and students anticipating the gradual improvement of EFL learners' reading comprehension skills.

Key Words: Reading comprehension, schema, reader, reading activities, schema activation.

Literature Review

The importance of background knowledge has three main implications for teachers: first, the teacher must take into account the knowledge on which any written text is based. Second, if a reader is not actively using his/her background knowledge, a significant part of the reading process is not taking place. Third, teachers should have as their principal objective the development of problem solving, creative, interpretive strategies in which the students can exploit whatever knowledge or resources they may have. Teachers, in teaching students to activate and use their background knowledge, are helping them to become better readers. The aim of the present study is to investigate the importance of the activation of EFL learners' background knowledge and its result in the reading comprehension. The brief overview of some of the reading related definitions provides rationale of the study.

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Definition of Reading

The term reading seems very common to everybody. When teaching reading is the concern, it also raises the concern of the researchers considering the amount of complexity and diversity in teaching reading. Grabe (1991) points out the complexity of even defining reading by stating that “a description of reading has to account for the notions that fluent reading is rapid, purposeful, interactive, comprehending, flexible and gradually developing”(p.378). According to this definition, fluent reading is incorporated with few things which are the ultimate motivating factors to each other. For example, the purpose of reading can make it rapid, the interaction with the text can help to fulfill the goal of reading i.e. comprehending and the comprehensible reading can remove the fear of reading a text in foreign language and, ultimately makes it flexible to the reader. And gradual development is a matter of concern since it can be a vise-versa relationship with the others.

Reading comprehension

Over the years, reading comprehension has been defined in many ways. Nuttal (1996) mentions that the overriding purpose to reading is to get the correct message from a text – the message the writer intended for the reader to receive. Reading can be done using a number of processes that can be divided into two main categories.

Bottom-up approaches are processes where readers focus on sounds, letters, syllables, words, phrases, sentences, and paragraphs. The process of constructing the meaning begins with the written words. In other words, readers with this approach begin by focusing on smaller units of the texts. Often, they do not get the whole meaning of the text.

On the other hand, top-down approaches are the opposite of bottom-up approaches. Here, readers focus on the whole text passage and look for key information by activating prior knowledge and compensating for meanings of unknown vocabulary. Reading comprehension involves the passage, the reader, and the context. Readers construct meanings with various approaches, such as using background knowledge, analyzing words, inferring the text and identifying key vocabulary or information.

Murtagh (1989) stresses that the best second language readers are those who can “efficiently integrate” both bottom-up and top-down processes (p.102). Now-a-days, the idea of reading has changed and moved from what was considered a receptive process to an interactive process.

Definition of Schema

The relation between reader and the written pages is not always smooth enough. Sometimes, there remain certain gaps of information in the writing and it is assumed that the reader fills up those gaps with the assumptions which are shared by both the writer (encoder) and the reader (decoder).

The more the shared assumptions are, the more effective the reading is. These assumptions are technically described as schemata (plural of schema). They are abstract ideas of certain experiences and affect the interpretation of reading a text more precisely. Again, the knowledge people get from experiences is organized in a variety of ways depending on the individual minds. The knowledge gained from experiences is called background knowledge – also prior knowledge – which is supposed to consist of two main components: “our assimilated direct experiences of life and its manifold activities, and our assimilated verbal experiences and encounters” (Swales, 1990). Schemata are accepted as interlocking mental structures representing readers’ knowledge of ordinary events (Brown, 2001; Harmer, 2001; Nasaji, 2002). In the reading process, readers integrate the new information from the text into their preexisting schemata (Wallace, 2001). Not only do schemata influence how they recognize information but also how they store it. The notion of schema is related with the organization of information in the long-term memory that cognitive constructs allow.

Schemata are not constant which also shows cognitive development of a reader. They are always changing. Existing schemata may be changed or modified by new experiences, experiences derived from reading or from our daily affairs. To put it in Nuttall’s (p. 8) word, “a schema grows and changes throughout our lives, for as long as we retain the capacity to learn.”

Students build schemata based upon psychological and social experiences known as constructivism. Students relate to the same text in different ways. Discussions in groups; literature circles; and writings allow adolescents to share their unique perspectives of the text (Calfee and Patrick, 1995).

Similar to constructivism, sociocultural theory explains that students extract meaning from text based on their cultural and social backgrounds (Vygotsky, 1978). Reading is best practiced socially. Reading a variety of texts that provide a variety of cultural assimilation makes scope for social and cultural understanding.

Good readers make connections to their reading by keying into associations, feelings, attitudes, and ideas providing the deepest interaction between reader and text. This—I learned—is Reader Response Theory (Rosenblatt, L. M., 1978).

It has already been stated that schemata of a student play vital role in exploiting and understanding a text. According to Shahidullah (1995-96: 214), “teaching of reading concerns mainly with schema activation and schema availability.” Social, cultural, historical or even mythical or religious schemata are all important to understand a text properly.

Schema Theory and Its Psycholinguistic Model

Schema theory deals with the reading process, where readers are expected to combine their previous experiences with the text they are reading. Since each reader has different background knowledge, it is culture specific. Schema theory was developed by a psychologist

Sir Frederic Charles Bartlett (1932) “...who observed how people, when asked to repeat a story from memory, filled in details which did not occur in the original but conformed to their cultural norms”. Carrell and Eisterhold (1983) formalize the role of background knowledge in language comprehension as schema theory, and claim that any text either spoken or written does not itself carry meaning.

“In a broad sense, there are two types of schemata—content schemata and formal schemata. Content schemata contain general or specific information on a given topic. Formal/textural schemata contain information about how rhetoric is, or ought to be, organized”(Carrell, 1998).

Schemata Theory is based on Goodman’s (1967) psycholinguistic model that reading is a guessing game. The basic idea of the theory is that human memory consists of high levels of structures known as schemata, each of which encapsulates our knowledge about everything connected with a particular object or event. Coady (1979) has elaborated on this basic psycholinguistic model and has suggested a model in which the ESL reader’s background knowledge interacts with conceptual abilities and process strategies, more or less successfully, to produce comprehension. It is noted here that a text is comprehensible only to the readers when it is related to their own, previously acquired knowledge.

Methodology

Thirty-six students studying at Prime University (a private university in the capital city of Bangladesh), and 12 teachers teaching at different private universities took part in this study. The students were in a group studying a basic English course. The subjects were from different disciplines of study- B.B.A. , L.L.B., English, Engineering though they bear some common characteristics- same mother tongue, previously studied in Bengali medium, same age group, having the same goal to achieve a good command of the basic skills of the target language. The reason for their selection was their availability (the researchers’ own students).

The experiment lasted for four months and the participants answered the questions prepared by the researchers. The age limit of the student participants was 17 to 18. The findings are based on two questionnaires (one surveyed among the students and another among the teachers), classroom observation to see if background knowledge is being given attention in Bangladeshi EFL classes.

Findings

Materials in EFL reading classes in Bangladesh are about both Bangladeshi and foreign culture, but the activation of learners' background knowledge is not still properly cared by the teachers because of the lack of awareness of schema's role in reading comprehension or because of the limitation of class time and textbooks.

Q. No. i) Does your teacher open any discussion before starting a new lesson?

Often/Sometimes/Seldom/Never

In response to question no. i) surveyed among the students, 76% of the respondents' view is that the teachers seldom activate background knowledge before starting a new lesson.

Q. No. ii) Is the pre-discussion initiated by the teacher difficult to understand? Yes/No

And when in few instances the background knowledge activation process is done' the respondents' view is that in 55% instances, it is difficult to understand. Here it might be considered that there is a big scope of providing and activating the background knowledge of the Bangladeshi EFL learners.

Q. No. iii) Do you find any connection of the pre-discussion and the present material you are reading? Yes/No

Q. No. iv) Is the discussion held before reading the text enough for your text comprehension?

Yes/No

The aim of many EFL textbooks in Bangladesh is to activate schema by pre-reading activities in which the teachers make students think, write and discuss everything they know about the topic, employing techniques such as prediction, semantic mapping and reconciled reading. But the students do not find good connection (in 66% instances) of the background knowledge and the present material they are reading and so it does not become beneficial enough for the text comprehension (response to question no. iii. and iv.).

Q. No. v) In what form does your teacher activate your background knowledge?

Listening to a song/Reading a poem/Describing pictures/Question and answer/Watching a video program/Oral discussion

| | |
|--------------------------|---------------|
| Listening to a song | 09% instances |
| Reading a poem | 21% instances |
| Describing pictures | 25% instances |
| Question and answer | 49% instances |
| Watching a video program | 5% instances |
| Oral discussion | 53% instances |

Q. No. vi) Does your teacher use the reading tasks in the textbook to activate your background knowledge?

The majority of the participants' opinion is that the teachers sometimes use the reading tasks in the textbook to activate background knowledge.

In response to the questionnaire to the teachers, the opinion is quite different.

i) Do you activate background knowledge before each new lesson?
Most often/Sometimes/Seldom/Never

In response to this question, 85% teachers responded that they most often activate background knowledge before each new lesson.

ii) Do you consider the students level of language proficiency to provide background knowledge?
Most often/Sometimes/Seldom/Never

The teachers' reply in response to question ii) reveals the average real picture of the over populated country. 90% classrooms in Bangladesh are over-crowded. And placing students according to their language proficiency is rare practice in Bangladesh; more specifically it is a practice in the English Medium Schools and very rarely in some divisional cities' most renowned Bengali Medium Schools. The common practice of the private universities does not show very much improved scenario.

iii) What materials do you use to provide background knowledge?
Materials from the textbook/Materials from my own selections

58% of the respondents opined that they use materials from their own selections since there is no fixed textbook for the university students.

iv) In what form do you provide background knowledge?
Listening to a song/Reading a poem/Describing pictures/Question and answer/Watching a video program/Oral discussion

To activate background knowledge (response to question iv) the university teachers' most common practice is Question-Answer session. Listening to a song and watching a video are not also common practice in the universities. Reading a poem happens in very rare occasions. Describing pictures seems a childlike practice, so it is usually avoided by the university teachers.

v) Do you think that the background knowledge activities are acceptable to the students' proficiency?
Yes/No/Some are acceptable and others are not

In response to this question a mixed reaction is given by the teachers. According to them only 38% of the students' present proficiency level is ready to accept the background knowledge activities.

vi) Do you carefully scrutinize the text to ensure that the information in each paragraph is tested? Yes/No/Sometimes

The teachers unanimously responded positively in response to question no.vi).

The findings of this study collected mainly through the questionnaire and through some practical classroom observation in three of the private universities situated in the capital city of Bangladesh reveal the fact that almost all the teachers are well aware about schema activation but unfortunately the classroom practice is not well-consistent with their knowledge and education level.

There may be limits to the effectiveness of such activities and there may even have been some over-emphasis of the schema perspective and negligence to other areas specifically language proficiency. In some textbooks, the pre-reading activities are basically listening materials in the form of stories, dialogues and news; and less likely discussing and asking questions. These tasks are used to activate readers' background knowledge and they are sometimes beyond learners' language proficiency. These pre-reading activities add extra burden to learners' reading of the real text. Instead of activating their background knowledge, these activities expose learners to another new content area for which pertinent schema has to be built and activated. Therefore, most teachers omit these pre-reading activities and come directly to the real text using the grammar-translation method which is still a bottom-up level of reading.

Activation of EFL Learners' Background Knowledge through Teaching of Reading Comprehension

Based on the above analysis, it can be said that schemata can improve reading comprehension and reading, in turn, can help readers build new and correct schemata. The goal can be achieved through the efforts made in four aspects:

- i) Enhance Students' Background Knowledge
- ii) Cultivate Students' Ability to Make Prediction and Association of the Reading Material
- iii) Enrich Students' Schemata of Different Writing Styles
- iv) Activate Students' Existent Content Schema and Help to Create their New Content Schema

Enhance Students' Background Knowledge

Schemata are processing mechanisms which are active in selective environment. Readers comprehend events as a result of prior experiences which are abstract representation of environmental regularities. Language is the carrier of cultures, so, it is important to strengthen the teaching of cultural background knowledge in the teaching of reading comprehension. For different peoples, their traditions, views and norms, etc. toward the same thing may vary a great deal or even conflict because of cultural differences. Readers in Bangladesh may find trouble in reading and understanding weather forecast which is a daily affair in many parts of the world, e.g.

in the winter in America. Students, therefore, have to equip themselves with related background knowledge on different cultures to achieve good comprehension of the reading materials.

It is necessary for a teacher to strengthen his or her teaching of the related cultural background knowledge of the target language, besides the teaching of language itself. It helps them to enhance and activate their background knowledge. Therefore, students can consequently form new schemata about different cultures and improve their reading comprehension. What's more, students' interest in reading will be greatly boosted.

Cultivate Students' Ability to Make Prediction and Association of the Reading Material

Psychological schemata theory comes from practice; it also has practical guide. Ferdinand de Saussure, founder of modern linguistics, opines that Speech activity is heterogeneous and language is homogeneous. Making prediction means to build a psychological schema based on the information of the reading material. According to F. Smith (1994) "*making prediction is the core of reading comprehension and also the basis for us to understand the world around us*". The establishment of prediction-making schemata is dependent on what has been stored in our brain such as semantics, syntax and word meanings and the clues hidden in the reading material. In teaching reading comprehension, teachers should guide students to broaden their thinking and inspire them to make prediction from seemingly irrelevant information and extract related information from the brain so that students can gradually enhance their self-awareness of making prediction and association.

Enrich Students' Schemata of Different Writing Styles

In the reading process, readers are asked to identify the writing style of the text and form the schemata in their minds. They can use all kinds of knowledge, such as knowledge of the discourse and of the socio-linguistic rules to select the relevant schemata to get the theme and structure of the text. After knowing the type of the text whether it is a descriptive/narrative/informative/conversational the students can achieve a better understanding. It makes the students master the stylistic schema of the text; they process information more effectively and hence, improve their reading comprehension. Teachers should help students analyze the style, structure and theme of the material before they begin to read it so that they can develop stylistic schemata in their minds.

Activate Students' Existent Content Schema and Help to Create their New Content Schema

Smith (1994, 19–20) defines prediction as "*the prior elimination of unlikely alternatives*". According to him, predictions are questions the readers ask the world and comprehension is receiving the answers. He emphasizes that it is prediction that makes skilled readers effective

when reading texts contain familiar subject matter. “Prediction brings potential meaning to texts, reducing ambiguity and eliminating in advance irrelevant alternatives. Thus, we are able to generate comprehensible experience from inert pages of print” (Smith 1994, 18). According to schema theory, the new input information, decoding and encoding are all dependent on the existent schema. Hence, it is very much important to activate EFL students’ existent content schema and help to create their new content schema.

Conclusion and Recommendation

Enhancing students’ background knowledge helps the learners to make correct judgments and predictions of the questions while they are reading the target text. The closer the match between the reader’s schema and the text, the more comprehension occurs. Comprehension depends on knowledge; i.e., related to what we already know and what we don’t know. Our understanding of a text depends on how much related schema we possess while reading. Therefore, failure to make sense of a text happens because of the lack of an appropriate schema that can fit within the content of the text. This missing of an appropriate schema can be content, formal or linguistic ones.

Alvermann, Smith, and Readence (1985) investigated the relationship between content schemata and reading comprehension for fifth- and sixth-grade readers from three different American cultural groups (Hispanic, Black and White). R. Pickens (1982) worked with sixth graders from three American culturally diverse groups (Hispanic, American Indian and Anglo-American). They observed that familiarity with the cultural content schematic area of the text facilitates reading comprehension. The use of content schemata, which do not involve cultural specific knowledge, has also been examined.

Williams (1987) recommends the importance on three phases – which he calls the pre-reading phase, the reading phase, and the post-reading phase - - for teaching reading comprehension. Of these, the most important for building background knowledge is the first, pre-reading phase wherein the instructor has the opportunity to use pictures, slides, movies, games and other such devices to activate and build upon the students’ schema. In this phase, students might also be asked to write about their knowledge of the subject and, after writing, discuss their knowledge with other students. In the second phase, reading, the students read about the subject. In this way they continue to build upon their own existing schema. Each time they read on the same subject, their knowledge of the subject becomes greater. Then, through the activities of the third, post-reading phase, they integrate this background into a new schema structure.

Teachers should be aware of the comprehension difficulties which ESL/EFL readers encounter with a text due to a lack of schema. Teaching L2 students to read is not achievable by simply choosing any text or reading materials and expecting the students to make sense out of them. ESL teachers should realize that the extent to which L2 readers can make familiarity with the content of the text related to his/her background knowledge has a large impact on their reading comprehension.

ESL/EFL teachers should also work on minimizing their students' reading difficulties by activating their schema with familiar contents that include relevant cultural information which will then lead to a better understanding of what is being read.

For many students, reading is a passive process and they just passively get the information. In order to improve reading efficiency and quality, teachers should make a careful selection of the reading material so that students can achieve the effective accumulation of knowledge and thereby enrich their own content schema. Teachers are also advised to develop students' cultural sensitivity and activate students' existing schemata through the organization of class discussions on the subject of reading material.

References

- Bartlett, F. C.(1932) *Remembering: A Study in Experimental and Social Psychology*. Cambridge: Cambridge University Press.
- Brown, H.D. (2001) " Teaching by principles," *An interactive approach to language pedagogy*. White Plains, NY: Addison Wesley Longman, Inc.
- Calfee, R.C., & Patrick, C.L. (1995). *Teach our children well*. Stanford, CA: Stanford Alumni Association.
- Carrell, P.L. and Eisterhold, J.C. (1983). " Schema theory and ESL reading pedagogy," *TESOL Quarterly*, 17(4), 553-573.
- Coady, J. (1979) *A psycholinguistic model of the ESL reader*. R. Mackay, B. Barkman & R.B. Jordan . *Reading in a Second Language*. Rowley, MA: Newbury House Publishers.
- D. E. Alvermann, L. C. Smith, and J. E. Readence. (1985). " Prior knowledge activation and the comprehension of compatible and incompatible text," *Reading Research Quarterly*, 20, 420-436.
- Goodman, K. S. (1967) *Reading: A psycholinguistic guessing game*. *Journal of the Reading Specialist* . Vol. 6. pp 126-135.
- Grabe,W.(1991). *Current Developments in Second Language Reading Research*. *TESOL Quarterly*, 25:375-406.
- Harmer, J. (2001). "*The Practice of English Language Teaching*," Essex: Pearson Education Limited.
- Murtagh, L. (1989). *Reading in a Second or Foreign Language: Models, processes, and pedagogy*. *Language, Culture and Curriculum*, 2: 91-105.
- Nassaji,H. (2002)" Schema theory and knowledge-based processes in second language reading comprehension: a need for alternative perspectives,"*Language Learning*, 52: 439-481.
- Nuttall, C. (1982). *Teaching Reading Skills in a Foreign Language*. London:Heinemann Educational.
- Nuttall, C. (1996). *Teaching Reading Skills in a foreign language*. Oxford: Heinemann.
- Pickens, R. (1982). " A cross-cultural study examining the effects of cultural schemata on the reading comprehension of average sixth grade readers," Unpublished doctoral dissertation, The University of Wisconsin.
- Rosenblatt, L., (1978). *The reader, the text, the poem: The transactional theory of the literary work*. Carbondale, IL: Southern Illinois Press.
- Shahidullah, M. (1995-96). "Product and Process View of Reading and Their Pedagogical Implications". *Rajshahi University Studies*. Part-A. Vol. 23-24. pp. 209-230.
- Smith, F. (1994). *Understanding Reading*. 5th ed. Hillsdale, NJ: Lawrence Erlbaum.
- Swales,J. M. (1990). "*Genre Analysis*," Cambridge: Cambridge University Press.

Vygotsky, L.S. (1978). *Mind in society: The development of higher psychological*

Wallace, C. (1992). "Reading," Oxford, England. Oxford University Press.

Wallace, C. (2001). Reading. In Carter, R & Nunan, D (Eds). *The Cambridge guide to teaching English to speakers of other languages*. Cambridge: Cambridge University Press. 21-17

Williams, E. (1987) " Classroom reading through activating content-based schemata," *Reading in a Foreign Language*, 4, 1-7. nflrc.hawaii.edu/RFL/PastIssues/rfl41williams.pdf

Appendices

Appendix 1

Questionnaire for students

- i) Does your teacher open any discussion before starting a new lesson?
Often/Sometimes/Seldom/Never
- ii) Is the pre-discussion initiated by the teacher difficult to understand? Yes/No
- iii) Do you find any connection of the pre-discussion and the present material you are reading?
Yes/No
- iv) Is the discussion held before reading the text enough for your text comprehension?
Yes/No
- v) In what form does your teacher activate your background knowledge?
Listening to a song/Reading a poem/Describing pictures/Question and answer/Watching a video program/Oral discussion/Listening to a song
- vi) Does your teacher use the reading tasks in the textbook to activate your background knowledge?
Most often/Sometimes/Seldom/Never

Appendix 2

Questionnaire for teachers

- i) Do you activate background knowledge before each new lesson?
Most often/Sometimes/Seldom/Never
- ii) Do you consider the students level of language proficiency to provide background knowledge?
Most often/Sometimes/Seldom/Never
- iii) What materials do you use to provide background knowledge?
Materials from the textbook/Materials from my own selections
- iv) In what form do you provide background knowledge?
Listening to a song/Reading a poem/Describing pictures/Question and answer/Watching a video program/Oral discussion
- v) Do you think that the background knowledge activities are acceptable to the students' proficiency?
Yes/No/Some are acceptable and others are not
- vi) Do you carefully scrutinize the text to ensure that the information in each paragraph is tested?
Yes/No/Sometimes