

**PRIOR KNOWLEDGE IN READING
AND COMPREHENSION**

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UNIVERSITI PENDIDIKAN SULTAN IDRIS

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DECLARATION

I hereby declare that the work in this dissertation is my own except for quotations and summaries which have been duly acknowledged.

07.04.2006

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Lastly, I must ever be thankful to my husband for his support and motivation and my children, Ly and Qim who are responsible for shaping my understanding in their learning. To my mum, this literary labour of love is for you. I thank each and everyone who challenged everything and contributed so much.

ABSTRACT

Prior Knowledge in Reading and Comprehension

This research investigates a group of primary five students utilizing their prior knowledge as they construct meaning while reading the expository texts in the English as the Second Language (ESL) classroom. In this case, the students are viewed as bringing personal meaning actively to the reading process. The reading comprehension lessons were carried out with a group of elementary students' reading behaviours being observed and audio-recorded and the data were collected and analyzed qualitatively. The KWLS grid was used to assist students to activate their prior knowledge by generating questions and discussion to construct meaning while reading.

Activating and developing prior knowledge presents background material supporting the importance of schemata and prior knowledge for literacy development. In short, the outcome of this research showed that comprehension can and should be taught. At this time, the challenge for the field is to mesh research with reality. Students of all ages need to get the message that reading is about constructing meaning. The findings of this research were echoed in the main complaint for teachers who proclaimed that their students have no trouble with decoding but they do not understand what they read.

As teachers, we must strive to move forward with the challenge and yet rewarding task of teaching students to comprehend – to activate prior knowledge and to evaluate arguments with a critical eye.

ABSTRAK

Pengetahuan Sedia Ada Dalam Bacaan dan Pemahaman

Kajian ini menyelidik sekumpulan pelajar Tahun Lima di sekolah rendah yang mempelajari Bahasa Inggeris sebagai Bahasa Kedua (ESL) yang menjana pengetahuan sedia ada sewaktu membaca teks berbentuk fakta untuk membina pengertian. Dalam kes begini, para pelajar dilihat seperti membawa makna tersendiri secara aktif dalam proses membaca teks. Proses membaca dan memahami teks oleh sekumpulan pelajar ini dikendalikan di kelas Bahasa Inggeris sewaktu sesi bacaan telah memperlihatkan tingkahlaku bacaan mereka. Data yang dikumpul melalui temubual, pemerhatian dan rakaman audio yang dijalankan sewaktu sesi bacaan dianalisa secara kualitatif.

Menjana dan memperkembangkan pengetahuan sedia ada di kalangan pelajar memperlihatkan kajian asal yang menyokong kepentingan skemata dan pengetahuan sedia ada demi untuk merealisasikan pembangunan literasi. Sebagai rumusan, hasil kajian ini menunjukkan bahawa pemahaman boleh dan patut diajar kepada pelajar. Pada masa kini, cabaran kajian lapangan ini perlu direalisasikan. Pelajar dalam pelbagai lingkungan umur perlu mengetahui bahawa proses membaca adalah untuk membina pengertian. Hasil kajian ini memberi arah tuju kepada para guru yang menghadapi situasi pelajar yang tiada bermasalah dalam mendekod teks yang dibaca tetapi bermasalah dalam memahami teks tersebut.

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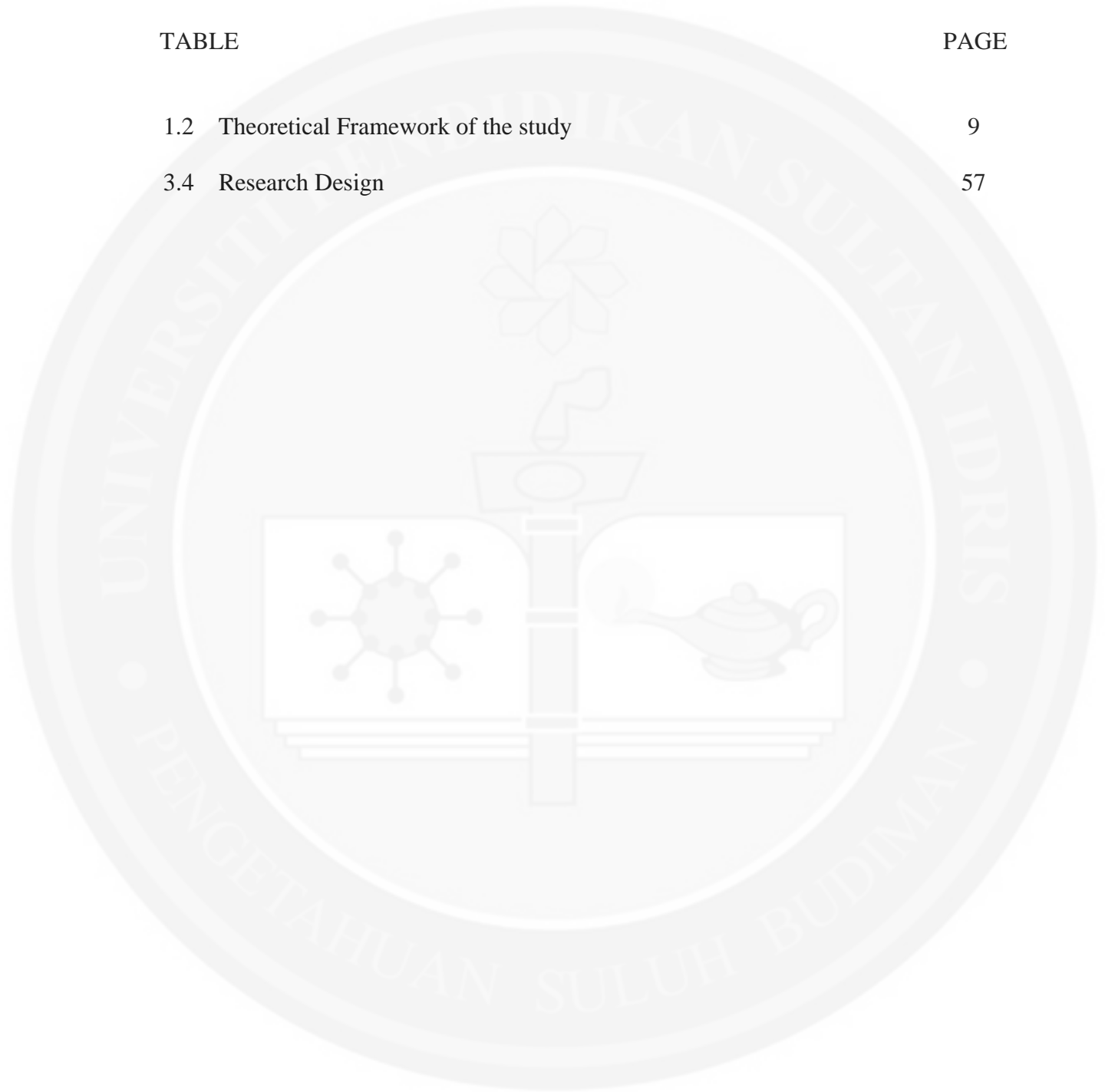
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CHAPTER 1

INTRODUCTION

1.0 Introduction

This study investigates a group of primary students on how they utilize prior knowledge to construct meaning while reading in a Malaysian primary school. Specifically, it aims to find out whether students can activate their prior knowledge while reading. This chapter will look into the background of the study, the theoretical framework of the study, the purpose and the significance of the study in which relating to the statements of the problems. The definition of terms will provide some understanding of the investigation of this study.

This study explores on issues of construction of meaning in reading by a group of primary five students who learn English as a second language in an elementary school. It investigates on how students' prior knowledge or schemata influence their construction of meaning as they read. Specifically, this study aims to probe into the act of learning another person's thoughts while reading. We create mental representations based on the

detailed and analytical interaction with text (Kintsch & van Dijk, 1978). Both the text itself and our prior knowledge influence the reading and constructing meaning (Anderson & Pearson, 1984). The purpose should be to understand and to actively create this representation and put it to use (Pressley & Harris, 2000).

Precisely, this study is a call to view reading comprehension as a strategic process. Here, participants play active role in developing and implementing specific strategies of self-generating questions and discussion to help them to maximize their understanding of text. Further, this study examines participants' abilities to discern their own progress in reading a text and to choose and implement strategies to activate and develop their schemata for a purpose of constructing meaning. The teacher's role is to guide participants toward achieving that level of reading independence. Therefore, this research probes into participants' reading behaviours and interactions during the reading session in a naturalistic social context in an ESL elementary classroom.

1.1 Background of the study

Success in literacy learning for all students continues to be the national goal and priority in the Malaysian educational system. Learning is very much associated with literacy. In our effort to investigate how the participants read and construct meaning is to understand literacy in which will provide background on the views of reading, language acquisition and prior knowledge. Thousands of students and teachers in the past years have provided many ideas and reactions on the understanding of reading and its process of constructing meaning in a Second Language setting. Since many years ago, educators and

psychologists have tried to understand what really happens when an individual learns to read (Smith, 1973).

As teachers place greater emphasis on decoding, they find that many students still do not understand what they read and comprehension does not take place automatically (Smith, 1973). But today's technological world has brought an escalating need for literate, critical thinkers who can fully participate in society. Current thinking supports teachers using questions as prompts to focus students' attention on the important aspects of a text (Shake & Allington, 1985). Numerous researches have dealt with issues of reading process. Reading is a transaction between the reader and the text and established the beliefs that readers have the right to establish or construct their own meanings (Rosenblatt, 1978).

In the last quarter of a century, especially in an educational context, much of the discussion, of students' language development were in view. This is the view that was embodied into the 'creativity' and 'personal growth'. The challenge then, is to explain what participants do when they read and comprehend text. The major emphasis of this discussion is to provide explanation of how the reading process occurs in the classroom context involving reader, text and teacher. From the socio cognitive interactive model, reading is conceptualized as a meaning construction process in the instructional context of the classroom.

As noted, the prior knowledge construction and its potent influence on students' text-based learning were enduring legacies of this era (Alexander & Knight, 1993). Specifically, the readers' knowledge base was shown to be powerful, pervasive, individualistic, and modifiable. Prior knowledge was linked to individuals' perspectives

on what they read or heard, their allocation of attention (Anderson, Pichert, & Shirey, 1983), and their interpretations and recall of written text (Bransford & Franks, 1972; Lipson, 1983). In addition, significant associations were established between readers' existing knowledge and their subsequent reading performance (Stanovich, 1986), comprehension (Alvermann, Smith, & Readence, 1985) and strategic processing (Alexander & Judy, 1988; Garner, 1987).

Because of the primacy of reading-specific studies during this period, there arose an extensive literature on text-based factors, particularly in relation to comprehension. Further, in parallel with the focuses within the broader cognitive field, reading theories and researchers investigated the organization of knowledge in the mind (Anderson, 1996; Rumelhart, 1980) and how that organization distinguished novice readers from more expert readers (Allington, 1980; August, Flavell, & Clift, 1984).

The information-processing research of this period resulted in a multitude of cognition-related constructs. Of the many constructs articulated in this decade, schema theory remains one of the most potent legacies of the time. In fact, Baldwin et al. (1992) described schema theory as "one of the hottest topics in the history of NRC" (National Reading conference, p.507). The theoretical construct of schemata as what (Rumelhart, 1980) called the building blocks of cognition drew explicitly from the philosophy of Kant (Anderson et al., 1977) and embodied the power, pervasiveness, individuality, and modifiability of knowledge previously mentioned. Even those forwarding alternative explanations for the structure of human knowledge and the processing of information have had to counter the tenets of schema theory and the body of supporting evidence (Sadoski, Paivio, & Goetz, 1991).

Many researchers in the 1990s investigate on the way learners and learning perceived within the literacy community. This forces lead to changing perceptions of text, readers and the reading process. Texts are generally defined as printed materials such as books or magazines and to read in linear fashion (Wade & Moje, 2000). In addition, some recent researches suggest that the readers targeted in the research are most often young children acquiring the ability to decode and comprehend written language or older students struggling with the demands of traditional text-based learning (Hiebert & Taylor, 2000). Engagement also pertains directly to students' meaningful and goal-directed participation in text-based learning. While the philosophical writings of Skinner, Chomsky, Kant, and Vygotsky were central to prior eras of reading research, the writings of John Dewey, 1913 with his notions of experiential learning and interest are evident in the conceptions of engagement frame within the burgeoning motivation research and have resulted in a unification of once oppositional stances. Still, the literature on reading indicates that the perception differs from the Kantian distinction between the sensible and the intelligible world inherent in information processing theory and the efferent distinction underlying the psycholinguistic perspective of reading (Goodman & Goodman, 1991).

The study proves and establishes that learners are more than passive receptacles of information (Guthrie & Wigfield, 2000) and they are active and willful participants in the construction of knowledge. In particular, while the learner still resides and operates within a socio cultural context, attention again is turned to the individual working to create a personally meaningful and socially valuable body of knowledge. Thus, the portrait of the engaged readers frame by the research is a group of readers actively

engaged in the process of learning rekindling the interest in strategic processing. The body of literature on learning strategies, particularly reading comprehension has grown in recent years in response to this new view of readers (Pressley, 2002).

The primary focus of recent comprehension research is on what the reader brings to the text (Weiner, 1979). The research demonstrates that schema or organized prior knowledge plays a vital role in comprehension. Comprehension is an active process. It depends on a dynamic interactive memory structure or set of structures that are schemata used to organize and interpret what is heard or read. What we remember, and consequently infer from a passage, seems to be affected not only by linguistic cues and semantic content, but also by the knowledge that we bring to a passage. Schema theory is a theory about the way knowledge is structured and stored in memory (Rumelhart 1980; Pearson and Stephens 1994; Pressley 2002).

A central tenet of schema theory is that much of what we know is stored in complex relational structures known as schemata that is the plural of schema. Schemata are like containers into which we store particular experiences we have. The schema for chair is stored in our chair schema. The schema for a wedding ceremony is stored in our wedding ceremony schema. Schema theory explains not only how and when we store information in memory but also how we establish relations between one and another, and this enables us to understand events easily. Events may be similarly encoded in the minds; therefore when the readers read they may be constantly referring to prototypic experiences that allow them to make sense of the text.

Schematic processing is top-down, in that the higher order process is triggered first and this triggers attention to the details. Schematic processing influences

comprehension of events around us from early in life and it is this knowledge that allows readers to draw inferences from text that includes information related to their schematic knowledge. Thus the richer a child's world experiences whether he accounts from real or vicarious or reading and television, the stronger the schematic knowledge base (Pressley, 2000). Clearly, another term for schematic knowledge is prior knowledge that the psycholinguists greatly stressed. Schema theory fits well with the constructivist notion of learning, that all learners build their own meanings. In terms of comprehending written language, this means that the prior knowledge the reader brings to the text is crucially important.

Some theorists and researchers attempt to identify types of schemata. House and Acker (1979) categorized schemata into two categories that is content schema and relational schema. Content schema is receiver stored knowledge about objects and events and they are not specifically related to other people but to knowledge of historical events and mathematical theorems. Relational schema is the expectations for the different ways people relate to one. It is suggested that a reader can acquire schemata through experience and or training.

Along with prior knowledge, making inferences is a critical component of reading comprehension. Carr (1987) points that information that can be logically assumed maybe omitted by authors. The reader uses information from the explicit text, plus knowledge of the world to infer the missing information. Inferences are generated by matching up internal representatives encoded in the memory with the reader's existing prior knowledge or schemata. When a match occurs and an inference is generated, comprehension results. In this way, readers draw on a broad range of world knowledge,

spontaneously, integrating the information, making inferences, assumptions, and best guesses.

Existing schemata provide the basis for the identification and organization of the critical semantic elements of a message. The readers are merely using their prior knowledge to make sense of the text. When comprehension fails on the part of the reader, it may be due to a schemata deficiency where in the reader has no experience at all with the subject or it may be that through inattentive reading, the appropriate schemata, although existing in the reader's mind, is not summoned up to make sense of the text.

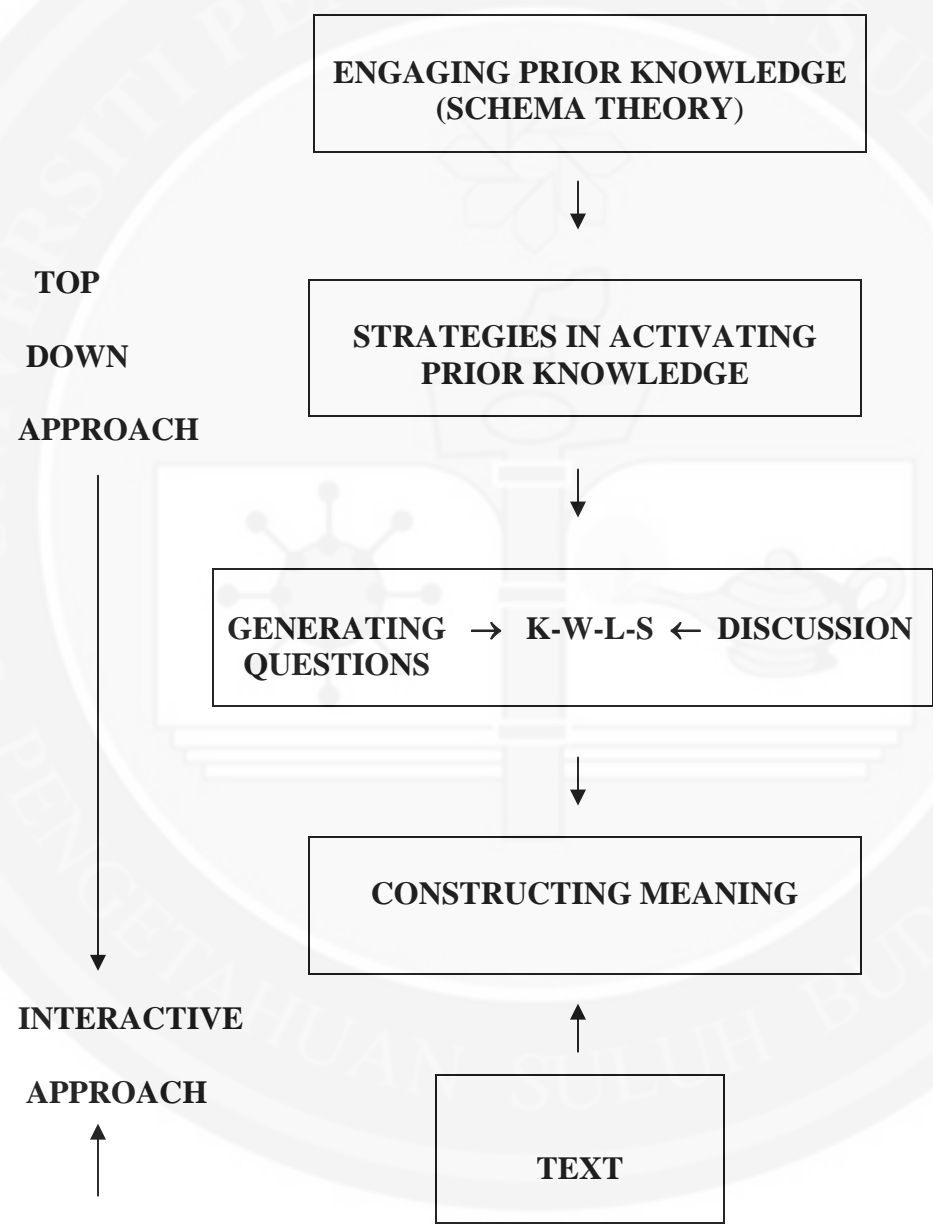
Comprehension strategies are not skills that can simply be taught by drill methods rather they are plans for constructing meaning (Duffy et al, 1987). Being strategic is not simply about knowing the strategies like self-questioning, predicting based on prior knowledge but about knowing how and when to apply them. With a little guidance, young readers are able to question themselves as they read. The purpose of helping students to generate questions as they read is to enable them to construct better memory representations of the text contents thus promoting reading comprehension.

1.2 Theoretical framework of the study

The theoretical framework provides the concepts and assumptions that directs the researcher to the research questions and suggest ways for the researcher to make sense of data. Furthermore, theoretical framework increases the researcher's awareness of the interconnection of the broader significance of data by refining their concepts and

assumptions of the models. For this study, the theoretical framework develops as the researcher gathers and analyzes the data.

Figure 1.2 Theoretical Framework of the study



The theoretical framework of this study draws on top down approach. The top-down approaches generally place their emphasis on the active role of the reader in comprehending a text. The top-down approach, or whole to part model, is a more holistic approach to reading. In this case, the participants are of primary importance, bringing personal meaning to the reading process from her background of experiences. In this way, the participants are the catalyst to comprehension, breathing life into seemingly inert words upon the page.

Therefore, this reading process is said to begin with the highest level of unit that is meaning in the mind of the reader and deals with lower level units like words. This processing operates in a single direction and in a top-down perspective which emphasis on that the view is from the reader to the text (Graves et al., 2001,p.14). With the top down approach, learning to read is much like learning to speak. Speaking is such a natural process as children gather oral language, immersed in the verbal world around them. To get the meaning of a story, then the participants draw on their personal background knowledge collected from the world around them, on their innate ability to use language, and on their expectations of what will happen in the story. In short, the top-down approach for reading is meaning-driven process rather than print-driven (Reutzel & Cooter, 2000). With this approach, the tale would be to read the passage aloud several times and they can savor it in its entirety. Essentially, this top-down approach reading is seen as an active process.

The interactive approach in reading reflects the view that the reading process is actually an interactive process between the reader and the text and that the reader actively interacts with the text using top down and bottom up approaches. When examining the

reading process in this study, through the lens of the interactive model, be noted that both the reader and the text play critical roles in the reading process. Rumelhart (1980) and his colleagues expostulated that the processing of the information is not expressly in one direction or the other. Instead, they believed that a reader grasps the meaning of the text by simultaneously synthesizing information from a number of sources in order to accurately interpret what the reader is reading or comprehending. The role of the background or prior knowledge in reading comprehension is widely known as schema theory. This theory gives direction to readers to construct their own meanings from their own previously acquired knowledge or schema. Hence, comprehending a text as this study takes the focus is an interactive process between the text and the reader and the reader's schema.

Rumelhart has devised a theory of reading comprehension that utilizes the principle of interactive stages. There are no fixed steps through which a reader must progress to arrive at comprehension. It is both a top-down and bottom-up process. While Rumelhart's theory is predicated on the belief that a reader will begin with graphemic input and advance through the other stages to comprehension, it does allow the reader to begin at any point and work in any direction. Although in schema theory which takes the interactive nature of the reading process, the emphasis in the theory is on the top-down processing in reading. This study is aimed to look at the models of approaches and theories that underline the reading process and its construction of meaning in an ESL reading classroom. It will look into documenting the readers' behaviours and processes as they activate their prior knowledge and their generations of questions to infer meaning and confirming their inferences through discussion to construct meaning interactively.