Building Schema for

English Language Learners

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Introduction

Many classrooms today have ESL students who do not speak English and are completely lost. How can teachers help these students comprehend what they are learning in English? The purpose of this research is to identify effective reading strategies to build schema for English language learners (ELLs) to help them comprehend. Rea and Mercuri (2006) state that, "A schema is the mental framework by which we organize concepts…Teachers encourage schema building…by helping students build background knowledge,…access the background knowledge,… and use it as a bridge to new learning (p. 47). The background knowledge ELLs bring such as their cultural, academic, personal, and mental connections help them become successful in learning new content. ELLs need to be taught strategies to become aware of their own thinking and apply them to other learning situations. What are some effective research-based reading strategies teachers can use to help ELLs build schema?

Background Information

Second language learners represent the fastest growing population in K-12 classrooms. In 2003-2004, 5.5 million school-age children were ELLs (Leos, 2004). This shows a 100 % increase from the previous decade. This group unfortunately struggles in schools and has higher dropout rates and achievement gaps on state and national assessments (Snow & Biancarosa, 2003; White House Initiative on Educational Excellence for Hispanic Amercians, 1999).

Teachers lack the training necessary to help ELLs succeed academically; this makes it difficult to meet content standards set by the state and aligning them with the language proficiency of the students. The National Center for Education Statistics (1997), says that only 30 percent of teachers with ELLs have received appropriate

training to teach them. The government's No Child Left Behind Act calls for highly

qualified teachers in every academic classroom by 2006, but many teachers in these

classrooms do not have the background or training in second-language acquisitions or

English as a second language approaches (Echevarria & Short, 2004/2005).

<div align="center">ELLs and Reading English</div>

Why is it important for ELLs to build and activate their background knowledge?

"An ESL reader's failure to activate an appropriate schema during reading may result in

various degrees of non-comprehension" (Carrell, 1984, p.333). Literature argues that

background knowledge of text has a major impact on whether or not a reader can

comprehend text (Anderson& Pearson, 1984; Bransford, Stein & Shelton, 1984; Kintsch

& van Kijk, 1978; Wilson & Anderson, 1986). Thus, it is imperative for English as a

second language (ESL) students' schema to be activated.

Carrell (1984) says that the reason why ELLs are unable to activate their

background knowledge is because the reader does not possess the appropriate schema

anticipated by the author and/or is not properly activating his bottom-up processing

mode. For many of them, reading about certain events is new to them. For example, if

immigrant students are given a passage that talks about the U.S. Civil War, they may not

have studied about it in their native country and may have very little knowledge to

comprehend the text (Echevarria & Short, 2004/2005). The focus of this research will be

on building background knowledge because of how crucial this component is for ELLs to

succeed in comprehending what they read.

<div align="center">Background Knowledge</div>

Background knowledge is an individual's previously acquired knowledge, also

called schemata (Carrell, 1984). According to Anderson, Anderson & Pichert (1978),

schemata has six functions. It provides scaffolding for incorporating text, facilitates a reader's ability to decide where to pay close attention, helps make inferences, provides a guide to search for memory, aids in editing and summarizing, and helps produce hypotheses about information that is missing. This realization confirms that building schema is crucial for any reader to be able to comprehend text.

<div align="center">Schema</div>

According to Anderson (1994), a reader's schema is organized knowledge of the world, which provides information for comprehending, remembering ideas, and learning. He also explains that in order to comprehend a message, a reader must bring a schema to mind that will give an accurate account of the events and content described in a given message. This definition has been built upon Immanuel Kant's (1781/1963) explanation that says that new information, concepts, and ideas have meaning merely when they can be related to something the person already knows. Carrell and Eisterhold (1983) agree that this applies to second language comprehension and native language comprehension. Recent research in this area is known as schema theory (Carrell & Eisterhold, 1983).

<div align="center">Schema Theory</div>

According to schema theory, text does not carry meaning itself but rather provides hints to allow readers and listeners to create meaning from prior knowledge; the text triggers and builds on existing schemata (Perason-Casanave, 1984). Carrell (1984) explains that schema theory is an interactive process between text and background knowledge. Anderson's (1994) research stresses that more than one interpretation of text is possible; the schema that is activated is based on the culture of the reader.

Schema theory brings forth two modes of processing information called the bottom-up and top-down mode of processing. When incoming data is presented, the

bottom-up processing is brought to mind; it is also known as data-driven (Carrell & Eisterhold, 1983). The top-down mode uses one's higher level of thinking to process information to bring forth a schema. This process is called conceptually-driven. The importance of these modes is that both should be activated concurrently (Rumelhart 1980).

Schema theory confirms that background knowledge is important within a reading psycholinguistic model of ESL reading. This theory comes under the influence of Goodman's (1967, 1971, 1973a) psycholinguistic model of reading. Coady (1979) reinterpreted Goodman's model into one suited for second language learners. He believes the reading process requires process strategies, background knowledge, and conceptual abilities. According to Coady (1979), background knowledge has been ignored the most in ESL reading.

<div align="center">Discussion of Findings</div>

When working with ELLs, teachers must be cautious with the assumptions about what they already know about the topic being discussed. According to Echevarria and Short (2004/2005), when ELLs are struggling with class work, teachers should take under consideration that the problem may be linked to background knowledge and does not necessarily mean it is due to intellectual ability. To help students learn new information, it is important to find out what they already know. This requires specific preparation in working with ELLs in order to determine what their prior education experiences were.

Before reading, teachers must assess the students' background knowledge needed to understand the text that will be read (Peregoy & Boyle, 2000). A way to assess a student's background knowledge is to brainstorm and cluster in small groups on a topic that will be taught. Teachers cannot assume that a student has the same background

experiences as their peers because they live in the United States and are the same age (Rea & Mercuri, 2006). Given the importance of building background knowledge and helping ELLs create schema, various strategies (Pre-reading, Communicative Pre-Reading, Vocabulary Instruction, Visual Cues, Questioning Methods, Comprehension Instruction, and Appreciating Their Culture) to reach this goal are described.

Pre-reading Activities

Pre-reading strategies that help activate background knowledge in ELLs include introducing key vocabulary, visuals, and questioning methods (Carrell, 1984). By introducing graphics that illustrate a couple of examples that will be presented in texts and previewing the chapter in a book by examining headings and illustrations, teachers can prepare students for text they may not be familiar with (Peregoy & Boyle, 2000). Carrell (1984) suggests that viewing movies, pictures, going to filed trips, promoting real-life experiences, having debates, plays, predictions generated by students about text, and reviewing key words prior to reading promotes building background knowledge.

Communicative Pre-Reading Activity

Pearson-Casanave (1984) explains that the Communicative Pre-Reading Activity (CPA) is effective in helping students build schemata after experimenting with an ESL reading class. First, the teacher examines the text to be read and determines what background knowledge is necessary based on the classroom's cultural backgrounds, familiarity to topic, and group-work experiences. Then students are asked to draw a picture related to the topic. In this study taken by Rogers and Pearson (1983), students were asked to draw a travel line of their trip to the Unites States because they all shared this prior experience. After this, students shared and discussed, were asked vocabulary questions (did not use lists or drills), surveyed, and predicted what the selection was

going to be about. This prepared them to read. Results showed that the students did not

have to rely on dictionaries, were familiar with the topic presented, vocabulary, and the

article's organization. Findings show that because they were able to build schemata

based on their previous experiences, they were able to predict the sequence of events and

better comprehend the text (Pearson-Casanave, 1984).

Vocabulary Instruction

"One needs only to pick up a newspaper in an unknown language to verify that

background knowledge and predicting are severely constrained by the need to know

vocabulary and structure" (Grabe, 1991). Vocabulary is a crucial component of reading

comprehension (Berman, 1984; Carrell, 1989a; Eskey, 1986; Koda, 1989; Swaffer,

1988). This concurs with the idea that vocabulary knowledge has become known as a

critical element to reading (Koda, 1989; McKeown & Curtis, 1987; Nagy, 1988; Nation

& Coady, 1988; Stanovich, 1986; Stother & Ulijn, 1987). One problem with second

language learners not being able to use their top-down method of processing is because

their vocabulary knowledge is low and are not yet able to process text at the bottom-up

level. Carrell (1984) believes that ESL students cannot learn vocabulary words

effectively through context clues, synonym exercises, or use of dictionaries. Meaningful

opportunities through communication, interaction, and oral language, allow the reader to

repeat and use new words in a meaningful way (Schank, 1982).

Visual Cues

Visuals play a major role in building schema for ELLs. Hudson (1982) compared

two pre-reading vocabulary activities. One included having students view picture cues,

discuss, and generate predictions prior to reading. The other was composed of having

students read a list of vocabulary words silently along with their definitions over and

over. The study found that picture cues aided in reading comprehension far more than

the second activity for beginning and intermediate ESL readers. Fitzerald and Graves

(2004/2005) agree that showing photographs prior to reading motivates and builds

background knowledge for ESL students.

Questioning Methods

Prediction questions allow the reader to keep questions in mind while reading,

consequently aiding comprehension (Carrell, 1984, Peregoy & Boyle, 2000). Predicting

questions help motivate students to read with a purpose, gain the information necessary to

answer questions, and help predict what the story or text will be about. In addition,

student responses to predicting questions inform the teacher about the students'

background knowledge and/or cultural problems that need to be addressed; this will help

the teacher plan for teaching strategies to assist students in building the schema necessary

to comprehend text (Carrell & Eisterhold, 1983). "At best…prereading questions may

function to help readers predict which prior, existing knowledge to access; they will not

do much toward actually building that knowledge in the reader" (Carrell, 1984, p. 335).

Both questioning methods and other pre-reading activities must be introduced by the

teacher. Echevarria and Short (2004/ 2005) suggest that teachers engage their students in

discussions by asking questions rather than allowing them to answer with one word

responses. Examples include, "Tell me more." or "Why do you think that way?"

Comprehension Instruction

According to Durkin (1978-79), less than one percent of instruction is focused on

teaching comprehension skills and more is spent on assessing comprehension. She also

found that the teachers' manuals contain more focus on assessment than on

comprehension practice. Research by Carrell (1985) found that ESL students who are

able to understand the organizational structure of texts are able to recall and

comprehend the information. Comprehension strategies to build schema (Language

Experience Approach, Narrow Reading, and Sustained Silent Reading) are explained.

Language Experience Approach

ESL teachers can maximize reading comprehension by providing students with

culturally significant information (Carrell & Eisterhold, 1983). The Language

Experience Approach (LEA) by Rigg (1981) helps students prepare for reading and aids

in comprehension. In this approach, the teacher writes down what the student says about

a wordless book. Next, the teacher and student talk about the main ideas in the text.

Then, the teacher types the text and cuts the text into strips. Finally, the student uses the

strips to add to the wordless book and reads it. The benefits of the LEA approach are that

students' background knowledge is used as a tool to comprehend.

Narrow Reading

Narrow reading is another method suggested by Krashen (1981). Narrow reading

includes reading strictly about one topic from texts by the same author. It facilitates

comprehension and works well with ELLs because the selections are short and allow the

reader to get used to an author's style and become familiar with the vocabulary. This

lowers the level of frustration on the reader. The advantage from the schema theory point

of view is that a schema is constantly accessed, expanded, and resulting in

comprehension gains (Carrell & Eisterhold, 1983).

Sustained Silent Reading

Carrell and Eisterhold (1983), also promote the Sustained Silent Reading (SSR)

method because it helps ELLs build schemata. The reason is that students are interested

in the selection they are reading because they select their own books. The books should

be at their appropriate level and length. The reason that schema is activated through this method is because readers tend to be intrigued with reading selections that are relevant to their own prior experiences and use these experiences to understand the text.

Appreciating Their Culture

According to Xu (2003), in order to activate background knowledge, ELLs should be exposed to a variety of text that reflects their linguistic and cultural experiences. Xu's idea correlates with the SSR method. One study by Carrell (1987) showed that comprehension was greater when ESL students read passages that reflected their own cultural traditions. ELLs should be encouraged to read texts in their native language and discuss the texts in class. This will also allow the teacher to assess how much they know about language. Having books in class that are based on TV shows (e.g., Blue's Clues, Dora the Explorer, Pokemon) are recommended so ELLs can use their background knowledge to comprehend and talk about the texts because of the familiarity they have with the shows. In addition, teachers should encourage students and parents to bring books that are written in their native language and have someone translate texts in English to their native language. Exposing ELLs to texts they are familiar with supports them in feeling comfortable in the classroom environment, access their background knowledge, and use it to aid in comprehension (Freeman & Freeman, 2000).

Conclusion

In conclusion, the research presented reveals meaningful strategies that will help ESL students build and activate background knowledge. This in turn will help them develop a schema when reading or listening to a message and be able to say, "Aha, that reminds me of…" and make connections to the text. With enough practice, modeling, and exposure, teachers can implement some of these strategies in their classrooms to accommodate ESL

students that may be present. Without building background knowledge, students will

be unable to comprehend what they read. Building background knowledge is critical for

ELLs because they do not bring the same experiences that others may have due to their

culture and/or past experiences. Teachers must be conscientious of these factors and

keep them in mind when planning instruction. Most importantly, teachers must take time

to listen to their students discuss different topics and texts by asking probing questions

that promote elaborate responses and provide experiences to make this possible. By

helping ESL students feel that their culture is valued through literature, they will become

comfortable in discussing prior experiences; this helps teachers become familiar with

their students' prior knowledge and cultural backgrounds. The more teachers know about

their students' culture and background knowledge, the easier it will be to identify what

strategies they need to build schema. As a result, the education system will come closer

to filling in the gaps where ESL students are not meeting state standards. In order for

ELLs to begin activating their top-down method of processing information or higher

order thinking, strategies to build schema and vocabulary must be taught. By providing

ELLs with the necessary background knowledge to help build schema, they will be able

to reach every reader's goal which is to become independent readers.

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