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DEVELOPING INFERENCE-MAKING THROUGH EXPLICIT INSTRUCTIONS

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ABSTRACT

This part is related to a larger study exploring the implementation of inference-making strategies in reading comprehension lessons. This part of the study focused on the best way to develop inference-making when teaching reading comprehension. There is significant evidence that reading comprehension has long been a popular topic in educational contexts. The level of reading comprehension can be influenced by a variety of elements such as cognitive capacity, a lack of vocabulary, text complexity, reading techniques, and students' prior knowledge. As a result, readers must be able to use a variety of reading strategies in order to comprehend the reading texts, such as making connections, asking questions, inferring meaning, summarizing main ideas, and drawing conclusions. In this perspective, inference-making is regarded as the most important part of the reading process. It is the ability to deduce meaning from textual and contextual information. As a result, it has been proven that explicitly teaching children how to draw conclusions and make inferences can improve their understanding of what they're reading.

KEYWORDS: *Explicit Instructions - Inference-Making, Reading Comprehension, Reading Strategies*

INTRODUCTION

What is Explicit Instruction?

Jones-Carey (2013) defined explicit instruction as the explicit teaching of strategies that students need to deal with new content. It is “a systematic method of teaching with an emphasis on proceeding in small steps, checking for student understanding, and achieving active and successful participation by all students” (Rosenshine, 1987, p. 34). Kamil et al. (2008) considered explicit instruction as an effective approach for teaching comprehension strategies. In this approach, the teacher provides explicit explanations, demonstrating and guided practice. In other words, it is an instructional technique that involves explanation, modeling, and guided practice on how to apply the technique. Then,the application of what has been learned through independent practice of the technique (Kamil et al., 2008; Pearson & Gallagher, 1983; and Pressley, 2000).

Thus, explicit instruction helps students become more independent and in charge of their own learning. It helps them also to become metacognitive readers who can employ different comprehension strategies to understand any reading text.

What is Inference-Making?

According to Anderson & Pearson (1984),the inference is the heart of the reading comprehension process. It refers to the ability to deduce meaning from textual and contextual information. The inference is also defined by Van den Broek,

Risden, & Husebye-Hartmann (1995: 353) as "any information about events, relations, and so on that the reader adds to the information that is explicitly presented." Similarly, Beers (2003, p. 6162) reported that “an inference is the ability to connect what is in the text with what is in mind to create an educated guess.” It means they are interacting with the reading text and building logical conclusions based on text clues and their prior knowledge, as indicated by Keene & Zimmerman (1997). Therefore, the readers need to make different types of inferences in order to comprehend any text. This includes determining the author's point of view, the meaning of unfamiliar words, and the antecedents for pronouns. They must also draw conclusions based on the text's information or provide interpretations of specific events.

By reviewing the literature, it seems that there is no consensus about the types of inference and how they should be classified. However, according to several studies, there are two main types of inferences which are coherence inferences and elaborative inferences. The coherence inference refers to the reader's ability to connect different pieces of information from the text, and the elaborative inferences refer to the reader's ability to connect information from the text with background knowledge. Also, Oakhill & McCarthy (2015) discussed two main types of inferences; the first type is local cohesion inferences, which are needed to build coherence across different portions of the text that might be triggered by "linguistic cues" like a specific reference or other anaphoric linkages like pronouns. The second type is global coherence inferences, which make the text more coherent by connecting the meanings of words or phrases in the text. On the other hand, the inference was categorized into 13 sub-classes by Graesser, Singer, and Trabasso (1994).The classes are causal antecedent, case structure role assignment, referential, causal consequence, character emotional reaction, thematic, super ordinate goal, the emotion of reader, instrument, author’s intent, subordinate goal-action, instantiation of noun category, and state.

In conclusion, despite the fact that many types of inference have been used in the literature, it can be divided into two main categories. The first category is the ability to connect the different ideas within the text to achieve the coherence meaning of the reading passage. The second type involves activating background information to comprehend the text's explicit and implicit meanings.

Yuill and Oakhill (1991) identified two main reasons for variations in inference-making between competent and less-talented readers. The specified reasons are limited abilities to integrate text’s information with background knowledge and the lack of general knowledge when or how to make inferences. Accordingly, Kispal (2008) suggested that in order for readers to be good at inferencing, they should:

- Be an engaged reader who is trying to figure out what's going on in the text
- Check for understanding and correct any misunderstandings
- Possess a large vocabulary
- Possess a good working memory
- Possess a broad range of knowledge
- Have similar cultural backgrounds

Several researchers have looked into the relationship between understanding and learners' ability to make inferences. For example, Cain et al. (2001) looked into the relationship between young learners' comprehension skills and their ability to make inferences. The students were exposed to a variety of stories in order to measure their ability to make two classes of inferences: coherence and elaborative inferences. The study showed a strong link between comprehension and the ability to make inferences even when all participants had equal access to information. Another study was conducted by Attaprechakul (2013) to investigate the essential inference mechanisms for reading journal articles. Participants read and answered comprehension questions about education and economic progress. The study revealed that the majority of students depended on bottom-up processing and were unable to comprehend technical knowledge and graphic drawings. They were also less able to deduce the basic argument, the article's tone, and other people's reactions to the research findings. Carlson et al. (2014) looked at the differences in inference construction amongst readers with various comprehension ability levels when they engaged in a causal questioning activity while reading. Fourth-graders with varying levels of comprehension were introduced to narrative texts to read aloud, with questions posed at various points throughout the reading. They found that in terms of readers' text-based inferences produced in response to the causal questions, there was no primary influence of comprehension quality. Also, another study on young children (7 to 8-year-old) was undertaken by Yuill and Joscelyne (1988).They discovered that teaching less experienced readers to look for hints in the text improved their ability to infer information from the text.

How to Develop Inference-Making in Reading Comprehension?

Several studies have looked at the influence of explicit training and discovered that teaching students directly how to draw conclusions and make inferences improves their ability to understand what they are reading (Byrnes and Purta, 1995: & Hansen and Pearson, 1983). For example, according to Byrnes and Purta (1995), teachers cannot improve student reading achievement just by giving additional time to silent reading: they must also give direct instructional scaffolding. This means that students will not be able to integrate their background knowledge with the text's clues if they are not taught how to make inferences while reading. As a result, Wilhelm (2001) recommended that students need to be provided a variety of authentic texts when learning inference strategies, such as fiction, nonfiction, newspaper articles, short tales, poetry, and so on.

Since making inferences is a critical thinking skill, it may be difficult for some students for different reasons. However, explicit teaching of inferential procedures can be used to enable students to make different types of inferences when reading. Therefore, Marzano (2010) proposed four main ways to teach students inferences, including:

- Raising students' awareness of a specific piece of information or conclusion they can draw.
- Assisting students in comprehending different types of information to draw inferences from the text or from their prior knowledge.
- Encouraging students to consider the legitimacy of their assumptions.
- Assisting students in developing the habit of revising their ideas.

As mentioned, several studies have looked at the influence of explicit training and discovered that teaching students directly how to draw conclusions and make inferences improves their ability to understand what they are reading (Hansen & Pearson, 1983; and Beers, 2003). For instance, Beers (2003) reported that struggling readers should be taught

directly how expert readers absorb while reading and what techniques they employ. It means that the teacher needs to reflect on students' reading and establish a context to help students make different types of inferences. Also, in order to make inferences, the teacher needs to assist them in combining textual cues with their prior knowledge.

Thus, explicit instruction is a useful instructional strategy for assisting students in comprehending the meaning of any reading content (Biancarosa & Snow, 2004; and Kamil et al., 2008). Several studies have found that explicitly teaching reading skills improves reading achievement and comprehension. For instance, Kolic-Vehovec & Bajsanski (2006 p.440) reported that "strategic reading reflects metacognition and motivation because readers need to know the strategies and be willing to use them." Similarly, according to Gooden (2012), training on comprehension strategies allows students to be flexible thinkers who can deal with a variety of texts. Also, Takallou (2011) indicated that reading strategies need to be taught explicitly in a meaningful context in order to be acquired successfully. He stated that "strategy instruction is much more effective when it is integrated into regular classroom learning activities, rather than treated separately, and when numerous strategies are taught over a longer period" (p. 279).

Rosenshine (1987) stated that "explicit instruction is a systematic method of teaching with an emphasis on proceeding in small steps, checking for student understanding, and achieving active and successful participation by all students" (p. 34). According to Rosenshine and Stevens (1986), there are three fundamental characteristics of explicit instruction:

- Lesson Planning: it contains learning objectives as well as necessary skills.
- Lesson Delivery: it includes introduction, model, guided practice, individual practice, and conclusion.
- Lesson Assessment: it includes competence, maintenance, and generalization.

As a result, the teacher needs to pay careful attention when planning a lesson by considering the required skills, introducing the skills directly, modeling practice, assessing students' interactions, and helping them maintain their performance over time. According to Kamil et al. (2008), there is substantial evidence to support the use of explicit instruction at all grade levels. They analysed five studies that focused on using explicit instruction in the classroom to teach comprehension methods like summarization and question-answering. They discovered that 67% of the research they looked at had a beneficial effect on struggling readers. Also, Elleman (2017) conducted a meta-analysis of twenty-five studies that looked at inference instruction treatments for both struggling and proficient readers. They found that inference instruction improved students' inferential comprehension and general comprehension. Arianti (2013) also conducted a pre-experimental study to determine the efficacy of employing the Directed Reading Thinking Activity (DRTA) to teach narrative text inference. The young students were given 30 multiple-choice items to complete, and the results were analysed using a t-test and the effect size calculation. The findings showed that teaching with the DRTA technique improves students' capacity to make inferences. Kim, Vaughn, Wanzek, Wei (2004) also explored the influence of using the graphic organizer's technique for students with particular learning disabilities. It was found that the students were able to generalize the technique to other areas when the instruction was direct for the use of visual organizers.

Several studies appear to agree that inference-making should be taught in the middle grades once basic decoding and fluency skills have been developed. When reading passages become longer and more complicated, it's vital to keep improving your reading comprehension skills. This will encourage the students to make conclusions by connecting

information from different parts of the text with their background knowledge in order to fill in gaps and improve the text's coherence (Baker, 2005; Cain, Oakhill, Barnes, & Bryant, 2001; and van den Broek et al., 1995).

Kispal (2008) indicated that in order to make inferences, the reader must have enough prior knowledge of the text's vocabulary and concepts, assign the relevant information, combine the previous and new information, and monitor understanding. While Van den Broek and Espin (2012) mentioned that some other aspects of reading must be developed before students be able to make inferences. The students must be able to read the words, consider what is being said, and then deduce meaning from the text.

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