استخدام النصوص المعلوماتية القائمة على التقدم فى دراسة التنور القرائى العالمى لتنمية الوعى بمهارات الفهم الأدبى في اللغة الإنجليزية لدى تلاميذ المرحلة الإبتدائية

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استخدام النصوص المعلوماتية القائمة على التقدم فى دراسة التنور القرائى العالمى لتنمية الوعى بمهارات الفهم الأدبى في اللغة الإنجليزية لدى تلاميذ المرحلة الإبتدائية

إعـــداد

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ملخص الدراسة

هدفت الدراسة الحالية لتحديد فاعلية استخدام النصوص المعلوماتية القائمة على التقدم فى دراسة التنور القرائى العالمى لتنمية الوعى بمهارات الفهم الأدبى في اللغة الإنجليزية لدى تلاميذ المرحلة الإبتدائية. تكونت عينة الدراسة من ٦٠ طالباً بمدرسة الشبان المسلمين للغات ببنها بمحافظة القليوبية. تم تقسيم العينة إلى مجموعة تجريبية وعددها ٣٠ طالباً ومجموعة ضابطة وعددها ٣٠ طالباً. إستخدمت الدراسة الحالية الأدوات الآتية: شكلان متكافئان من إختبار مهارات الفهم الأدبى في اللغة الإنجليزية (من إعداد الباحثة)، وأداة لتصحيحه. تم تطبيق إختبار مهارات الفهم الأدبى في اللغة الإنجليزية قبل وبعد تطبيق النصوص المعلوماتية القائمة على التقدم فى دراسة التنور القرائى العالمى . أظهرت نتائج الدراسة فاعلية استخدام النصوص المعلوماتية القائمة على التقدم فى دراسة التنور القرائى العالمى لتنمية الوعى بمهارات الفهم الأدبى في اللغة الإنجليزية لدى تلاميذ المرحلة الإبتدائية ، حيث أن نتائج المجموعة التجريبية كانت أفضل من نتائج المجموعة الضابطة فى مهارات الفهم الأدبى في اللغة الإنجليزية.

الكلمات المفتاحية: النصوص المعلوماتية القائمة على التقدم فى دراسة التنور القرائى العالمى، مهارات الفهم الأدبى

Abstract

The purpose of this study was to investigate the effectiveness of using informational texts based on "Pirls" for enhancing the pupils awareness of literary comprehension skills among primary school pupils. The participants were sixty pupils in the fifth year from El-Shobban Al-Muslimeen Language School in Benha at Quliobeya Governorate. The participants of the study were divided into two groups, the experimental group (N=30) and the control group (N=30). The pre literary comprehension skills test was administered to the participants before the treatment. Then, the experimental group was taught using informational texts based on "Pirls" while the control group was taught using the

regular method. Then the post literary comprehension skills test was administered to both groups. Results of the study revealed that using informational texts strategy based on "Pirls" was effective in enhancing the pupils awareness of literary comprehension skills among primary school pupils.

Key words: informational texts based on "Pirls", literary comprehension

Introduction:

There are many schools of thought as to how a reader comprehends text. For the purpose of this research, Bruner's Constructivist Theory will serve as the theoretical framework (Bruner, 1966). The constructivist theory stated that learning is an active process with the learner interacting with new knowledge and integrating text with existing prior knowledge as they read. Learners also are continuously adjusting and questioning new knowledge and using multiple strategies in order to comprehend text. Reutzel, Smith, and Fawson (2005) noted, "Good readers do not use comprehension strategies one at a time as they read. Rather they orchestrate and coordinate a 'set' or 'family' of strategies to comprehend text". This literature review begins by looking at (a) classroom literacy instruction, (b) metacognitive instruction, (c) effective student behaviors aligned with student comprehension, and (d) challenges with instruction in the content areas and with more complex texts. It also includes reading research in which the PIRLS international database was analyzed or the data were used to answer questions about literacy.

In the first point, (classroom literacy instruction), Durkin (1978) conducted a study to observe teachers in hopes of learning more about reading comprehension instruction. Durkin noted three assumptions that the National Institute of Education made in its Request for Proposal (RFP) in 1976 describing a need for a Center for the Study of Reading, which focused on comprehension. Those assumptions are the following, (1) reading comprehension can be taught; (2) reading comprehension is taught; (3) comprehension instruction needs to be more effective if reading problems are to be reduced. Durkin (1978) observed grades 3 through 6 in social studies and comprehension instruction to test the validity of the assumptions. Before conducting the study, Durkin sought to locate a definition for reading comprehension instruction within the literature. The search resulted in little success, which prompted her to create a working definition of comprehension instruction for the study. Her reading comprehension framework include (a) "to teach children the meaning of a unit that is larger than a word, or (b) to teach them how to work out the meaning of such units".

Furthermore, Durkin (1978) conducted three sub studies to identify how much time was spent on comprehension instruction. The first study

concentrated on fourth grade, the second determined whether different schools and varying grade levels devoted the same amount of time to comprehension instruction, and the third examination concentrated on individual children and their perspectives on reading instruction. After observing in classrooms, Durkin and two other observers concluded that almost no comprehension instruction occurred during any of these observations based on their working definition of reading comprehension. They found that questioning by teachers during literacy instruction was common as well as comprehension assessment. Reading skills such as phonics, structural analysis, and word meaning were part of some lessons, but the majority of time was spent with teachers giving out written assignments.

In another classroom-based study, Taylor et al. (2002) explored "what" was included in effective comprehension instruction by teachers in eight high-poverty schools and "how" that instruction was provided to students in grades k-6. Each teacher who participated was observed in the fall, winter, and spring during reading instruction. Observers documented classroom practices in the teaching of reading. Field notes included materials being used, grouping patterns, teacher interactions styles, and expected responses of the students. Teachers standing in front of the rooms and providing information to students and recitation were the major interaction styles of all grades, and some coaching was also observed. Students were observed in passive response activities such as round robin reading rather than active response activities such as reading, writing, and manipulating. After looking at relationships between literacy instruction and students' reading and writing growth, a negative relationship was found regarding fluency scores for students being told words they did not know. The use of higher-level questioning resulted in a significant positive relationship to student growth in reading and writing (Taylor et al., 2002).

Historically, comprehension strategy instruction began as a "same size fits all" philosophy (Tomlinson, 2001). All students were given the same instruction and the same materials in order to learn how to read. With this philosophy some students were learning how to read but many continued to struggle, and the question of how to reach all students began to be an important topic of discussion and research. Matching literacy instruction to each student's readiness, learning preferences, and interests all required differentiation in the regular classroom (Tomlinson, 2001). In order to differentiate, teachers needed to know the strengths and weaknesses of their students and adjust the strategies of instruction to meet those needs (Tomlinson, 2001). Schools provided professional development, observations occurred focusing on differentiations, and

differentiation became the educational trend in all academic areas still educators claimed that differentiation was difficult to prepare and time consuming (Corley, 2005; Nunley, 2006).

Gilson, Little, Ruegg, and Bruce-Davis conducted qualitative research in 2014 to investigate teacher questioning in the literacy classroom. This study was based on the social constructivist theory in which the teacher's role was described as one of modeling and exposing students to materials above their level while providing guidance until students can become more independent known as Vygotsky's "zone of proximal development" (Vygotsky, 1978). The focusing questions of their research were, "what types of follow-up questions do SEM-R teachers ask during individualized conferences?" and, "To what extend do SEM-R teachers use different types of follow-up questions in individualized conferences for students at different reading levels?" (Gilson et al., 2014). SEM-R (Reis et al., 2005) is a framework that was developed at the National Research Center on the Gifted and Talented to engage students in reading experiences.

As a result of data collection and analysis, the research team determined that the teachers asked a variety of follow-up questions that required both higher- and lower-level thinking during reading conferences, although lower-level thinking questions appeared more frequently in the data (Gilson et al., 2014). Some examples of lower-level follow-up questions asked students about their background knowledge or story elements such as "Who are the characters?" and "What is the setting?" When analyzing follow-up questions, it was determined that teachers accessed both higher- and lower-level thinking regardless of students' reading levels (Gilson et al., 2014).

Several studies have indicated that fluency and reading comprehension should be taught simultaneously in order for students to comprehend text and be successful readers (Allington, 2006; Espin & Foegen, 1996; Rasinski, 2012; Vaughn et al., 2000). This "balance" between the teaching of reading fluency and comprehension instruction was the focus of a quasi-experimental study conducted by Jefferson, Grant, and Sander (2017). Participants were non-struggling readers in the general education Tier I instructional groups in third grade. These students came from three different elementary schools in a rural school district in the Midwestern region. All students were Caucasian with 53% of children receiving free or reduced-price lunch in the control group and 84% of the children in the intervention groups receiving free and reduced-price lunch. Research focused on answering the question, "How might a differentiated reading skills and practice approach benefit students who are receiving only core curricular (Tier I) instruction in

terms of fluency, comprehension, and high-stakes test scores?" (Jefferson et al., 2017).

Teachers in the intervention classrooms were provided training on repeated readings, vocabulary review, self-questioning, and graphic organizer activities (Jefferson et al., 2017). Students in the intervention classrooms were given the Corrective Reading placement test and assigned to differentiation groups based on reading indicators and standardized reading scores. Students were then trained in fluency techniques such as paired reading, echo reading, and choral reading. They also were trained to use graphic organizers, semantic maps, visualizing maps and other written comprehension activities. Teachers in comparison classrooms used the district core curriculum (Jefferson et al., 2017).

The results from these studies revealed nonsignificant intra-class correlational coefficients. An analysis of the comparison and intervention groups revealed significant differences between these two groups on fluency with the intervention group scoring higher in prosody such as rate, intonation, stress, and pausing (Jefferson et al., 2017). Rasinski (2012) along with other researchers have linked improved skills with increases in prosodic skills. However, there was no statistically significant increase in fluency or comprehension skills for the targeted Tier I intervention group in Jefferson et al.'s studies, but both the intervention and control groups made improvement over the 5- month study period (Jefferson et al., 2017). Because of the short duration of the intervention, a lack of significant differences between the students, and the small number of participants, a between-groups difference was difficult to detect. Their study supports the idea that students who work on fluency with paired reading, echo reading, and choral reading will improve their fluency or prosodic skills, but this alone will not necessarily improve their comprehension.

The studies in comprehension instruction in the classroom suggest that comprehension instruction is considered to be important to some teachers but not all. These studies also further emphasize that comprehension instruction continues to be absent from most elementary classrooms and that teachers are still unclear as to the difference between teaching comprehension (predicting, making inferences, questioning, and making connections) and assessing comprehension. Teachers appear to be aware of comprehension strategies but continue to question and assess rather than teach the strategies researchers have identified (predicting, questioning, inferencing, summarizing) as necessary for students to read and understand what they read (Duffy, Lanier, & Roehler, 1980; durkin, 1978; Pressley, Wharton-McDonald, Hampston, & Echevarria, 1998; Taylor, Pearson, Clark, & Walpole, 1999).

Further research emphasized the need to differentiate instruction so students could be provided with the scaffolding that would allow them to be successful (Gilson et al., 2014). Each student's readiness, learning preferences, and interests could be identified, and instruction could be tailored to individual students based on their reading behaviors, strengths, and needs. Teaching reading fluency simultaneously with comprehension skills has been suggested as beneficial to students with an increase in prosody for the intervention groups in Jefferson et al.'s 2017 quasi-experimental study on maintaining a balance between reading fluency and comprehension strategy instruction.

In the second point, (metacognitive instruction), Observation of comprehension in the classroom can be difficult since comprehension takes place within the reader's head and outside of the observer's sight. Learning about what is going on inside the successful reader's head can help literacy teachers teach struggling readers how to read actively and think as they go through the reading process. Harvey and Goudvis (2000) stated that strategies are adapted by proficient readers to meet their purposes for reading: "But matching strategies to one's purpose requires metacognitive knowledge__an awareness and understanding of how one thinks and uses strategies during reading". Metacognition is a key component in reading and comprehending because students need to interact with the text as they read. This skill also helps students attend to the text, note when they do not comprehend text, and apply fix-up strategies in order to comprehend. In order to investigate this, McTavish (2008) conducted a qualitative case study to determine what a third-grade female student was thinking while reading narrative and informational texts. The study took place over a 2-month period at both the girl's home in a middle-class suburban neighborhood in Western Canada and her public school nearby (McTavish, 2008).

Students need metacognitive knowledge to apply the appropriate comprehension strategy and to manage their comprehension while reading (Dermitzaki, Andreou, & Paraskeva, 2008), but students with reading difficulties have problems with cognitive and metacognitive strategies (DeBoy, 1991; Gersten, Fuchs, Williams, & Baker, 2001). Studies by Ellis and Graves (1990) and Klingner and Vaughn (2004) showed that strategy instruction for students with learning disabilities was effective in increasing their reading comprehension. To identify a specific strategy of instruction for an increase in metacognitive knowledge, Bilgi and Ozmen (2014) conducted a qualitative case study to determine the impact of Modified Multi-component Cognitive Strategy Instruction (CSI) on the declarative and procedural metacognitive knowledge used during the comprehension process for students with learning disabilities

(LD). Three LD students attending fifth and seventh grades were participants in their study. Instruction of this strategy was implemented in four phases: text structure instruction, modeling strategy usage, guided practices, and independent practices. Individual interviews of the students determined their metacognitive declarative and procedural knowledge before and after CSI. The interviews were recorded and transcribed (Bilgi & Ozmen, 2014).

Interviews before instruction indicated inadequate metacognitive knowledge with no fix-up strategies identified for comprehension (Bilgi & Ozmen, 2014). After instruction, those students who participated had acquired before, during, and after reading strategy knowledge. Participants demonstrated predicting, setting goals for reading, monitoring their comprehension, underlining important ideas while reading, and writing summaries after reading (Bilgi & Ozmen, 2014). If students can become aware of what they are doing as they read and be metacognitive, then teaching comprehension strategies to students and having them self-regulate should assist in increased comprehension. This was the assumption Souvignier and Mokhlesgerami (2006) maintained in their study designed to determine if certain models of self-regulated learning would prove to be a useful framework for implementing strategy instruction in the classroom.

In order to determine if teaching strategies combined with cognitive skills and motivational aspects of self-regulation would improve reading comprehension, Souvignier and Mokhlesgerami (2006) conducted a quantitative study using 20 classes, comprising 593 fifth grade students from five grammar schools in Germany. Three programs were used to examine if self-regulated learning can advance reading skills. The first program taught cognitive and metacognitive reading strategies. The second program integrated cognitive regulation into the cognitive and metacognitive reading strategies taught in the first program. The third program had all three aspects of self-regulated learning: cognitive, metacognitive, and self-regulation, along with motivational principles. The results of these three programs were then compared to other classes that were not provided with this instruction (Souvignier & Mokhlesgerami, 2006).

Strategy instruction and teachers' beliefs in student success can have a positive effect on student engagement and success in literacy learning according to Bock and Erickson (2015). In order to investigate this belief, two teachers were observed implementing a comprehensive literacy program using "MEville to WEville Start-to-Finish Literacy Starters" in classrooms serving students with severe disabilities. Their study was conducted with two elementary special education classrooms in North

Carolina. Both classroom teachers held certification in special education and had two or three para-educators assisting in their self-contained classrooms. The first classroom had all students spending 100% of their day in a separate setting from peers without disabilities. The second classroom had students that spent 10% to 20% of their school day in nonacademic settings with peers without disabilities. Both classrooms were in the MEville to WEville intervention condition and were selected to look at teacher and student change over time (Bock & Erickson, 2015).

Students need to be metacognitive and aware of the strategic behaviors, which will aid in reading and comprehending texts (McTavish, 2008; Souvignier & Mokhlesgerami, 2006). Strategies should be adjusted with the varying reading purposes. All students can be taught metacognition and reading strategies even students with disabilities (Bilgi & Ozmen, 2014). Teachers and their beliefs in student success play a strong role in a student's ability to read well. Strategy use and the manipulation of these strategies throughout the reading process are key components in comprehending text (Bock & Erickson, 2015).

In the third point, (effective student behaviors aligned with reading comprehension), what strategic behaviors do high and low readers use when they read, and what relationship does this have to their reading comprehension performance? This is a question that was studied through a mixed methods study by Dermitzaki et al. (2008). General or task-related strategic behaviors are often identified as self-regulator components that are related to performance in cognitive situations (Zimmerman, 1999). The authors wanted to determine any patterns or relationships between the different strategic behaviors and student performance on a reading comprehension task for high and low achievers (Dermitzaki et al., 2008).

The results from the Dermitzaki et al., (2008) study suggested that all moderate to high readers employed strategic behaviors with high achievers showing the most significant predominance for using strategic behaviors. Low achievers were rated low in their use of metacognitive and cognitive components of strategic behaviors. The metacognitive behaviors were planning, awareness of errors, and adjustment of aims in choosing between main and trivial information. All students persisted, even when the task was difficult, and maintained interest in the activities throughout this study (Dermitzaki et al., 2008).

Moreover, skills, habits, and behaviors of good and struggling readers can be evaluated using think-aloud tasks to monitor how students progress through texts moment-by-moment. In one study conducted by Seipel, Carlson, and Clinton (2017), the question of when and how good

and poor reader groups differed was examined. In an attempt to answer these questions, a standard think-aloud task was administered to 138 midwest students in third, fourth, and fifth grade from a large metropolitan area (Seipel et al., 2017).

Seipel et al. (2017) showed that students were asked to read a text, one sentence at a time, and say whatever they were thinking. Researchers then coded the participants' comments indicating what type of comprehension process was used. Think-aloud codes were used for associations, connective inferences that required the reader to connect one sentence to the previous sentence, and reinstatement inferences that required the reader to connect the sentence to any of the previous sentences, valid and invalid elaborations, emotional and metacognitive responses, paraphrases, valid and invalid predictions, questions, and repetition of text (Seipel et al., 2017).

Percentages of cognitive processes for two narrative texts were plotted, and overall patterns were determined to be similar for both the good and poor readers (Seipel et al., 2017). There were a few differences with good readers making more validThere were a few differences with good readers making more valid predictive inferences and using more cognitive processes than poor readers. Although, once good readers found a pathway to comprehension, they used fewer processes than poor readers used. These differences were subtle, but the researchers stated that the moment-by-moment analysis can help inform when and what type of reading comprehension interventions will aid in helping the poor reader process text (Seipel et al., 2017). This supports the idea of Keene and Zimmerman in Mosaic of thought (1997) when listing keys ideas for using teaching metacognition: "Many readers must learn how to pause, consider the meaning of text, reflect on their understandings, and use different strategies to enhance understanding".

Reading comprehension is an active process and requires the use of cognitive and metacognitive strategies carefully coordinated before, during, and after reading (RAND Reading Study Group, 2002). Davis and Nietzel (2010) conducted a mixed methods study in order to examine a connection between students' beliefs about successful reading and their use of comprehension strategies. In order to do this, 71 students from middle schools in central Tennessee were selected to participate in an observational study of academic self-regulation. Both schools had high percentages of students participating in free and reduced-price meals and were in the fifth or sixth grades (Davis & Nietzel, 2010).

Students were randomly assigned to groups of three students (Davis & Nietzel, 2010). Each group was given eight minutes to read and check

their comprehension of four paragraph-long vignettes. Each vignette described the reading habits and abilities of a fictitious student, and each vignette described one exceptional reading characteristic. After reading and discussing the vignette collaboratively, students independently ranked the four fictitious readers from the vignettes as most successful reader (1) to the least successful reader (4). The students then explained their rankings to the members of their group. Students were then assigned to one of four reading orientation clusters based on their rankings of the four fictitious students described in those vignettes. Those four reading characteristics were (a) how much a student reads on his or her own, (b) does the student use strategies and how to increase comprehension while reading, (c) how well the student reads aloud, and (d) how well the student does on standardized reading tests (Davis & Nietzel, 2010).

After viewing the tape-recorded sessions in which the groups read and discussed the vignettes, researchers concluded that experience with reading was ranked the most highly (Davis & Nietzel, 2010). Standardized test performance was the attribute least valued by the participants. The researchers also found a relationship between chosen reading orientations in the vignettes and the students' strategic activity (Davis & Nietzel, 2010). Reading orientations of second graders was examined in a mixed methods self-study completed by Ben Byrd (2015). In their study, the researcher also was the classroom teacher of the second-grade participants. Byrd was curious about his students' reading orientations and how they related to his teaching. As a result, the researcher conducted his study in the urban public charter elementary school in California in which the researcher taught. Six focal students were selected and represented a wide range of reading and language abilities (Byrd, 2015).

Qualitative data were collected through observations, questions about purposes of reading, self-assessment, and specific reading skills or behaviors (Byrd, 2015). The researcher used a journal to record anecdotal observations and comments as well as reflections. During the second phase of the research, quantitative data were collected to analyze reading behaviors and patterns that emerged through observations and interviews. Similar to the study by Davis and Nietzel (2010), students were provided vignettes about reading behaviors. They were asked to read the vignettes, rank those reading behaviors and then align themselves with one of the vignettes. Students' reading levels were also included in the data identifying those levels through the Developmental Reading Assessment (DRA) (Byrd, 2015).

The researcher discovered that four of the six focus students selected the vignette in which the student was reading every word correctly (Byrd,

2015). Students also referred to the importance of understanding or knowing the story. When asked why they read, the students centered their responses on reading for learning and repeated phrases that had been mentioned in class. The data in his study suggested that the second-grade focal students focused on reading words and phrases accurately instead of reading to comprehend. The researcher concluded that perhaps he needed to change the way the researcher taught in order to change the students' orientation to reading (Byrd, 2015).

These studies all revealed that there is a relationship between the strategies of good readers and their success with comprehending text (Davis & Neitzel, 2010; Dermitzaki et al., 2008; Seipel et al., 2017). The differences between the strategies that good and poor readers used were investigated in hopes of determining how to help students who struggle with comprehension. In two of the qualitative studies (Byrd, 2015; Davis & Neitzel, 2010), the student participants were asked about the reading orientations of a successful reader. Middle school students from Davis and Neitzel's study (2010) ranked experience with reading as the most important characteristic of a successful reader, while most of the second-grade students in Byrd's study (2015) identified students that can read all words correctly as the most important characteristic of a successful reader.

Also, researchers have found that reading comprehension is based on both a learner's linguistic knowledge and general world knowledge, this includes both native and non-native English speakers (Trapman, Gelderen, Steensel, Schooten, & Hulstijn, 2014; Treiman, 2018). General world knowledge is comprised of three components: (a) prior knowledge in a text's content area, (b) prior knowledge about a particular content area within a text, and (c) the extent of the relationship between lexical items and the text content area. For native English speakers, all three components play a significant role in reading comprehension (Edele, & Stanat, 2016). This is not true for non-native English speakers who are unaware of the text's difficulty level (Edele, & Stanat, 2016; Trapman et al., 2014).

Reading comprehension is an ongoing cognitive process (Barton & Woolley, 2016). This cognitive process includes both concept-driven and data-driven processes, which contribute to an individual's development of mental or visual models of text (Barton & Wooley, 2016). Further, these processes integrate students' constructed mental models of text with their prior knowledge using references that enable reading comprehension. Barton and Woolley (2016) also addressed factors that negatively affect students' reading comprehension asserting that reading comprehension difficulties can be attributed to multiple factors including biological,

cognitive, and behavioral issues. Some researchers indicated other factors might be involved that contribute to reading comprehension difficulties (Kendeou, McMaster, & Christ, 2016).

Reading comprehension strategies are effective in shaping a person's ability to read and understand text (Roit, 2017; Sari, A. A., 2015). A person's use of different reading comprehension strategies such as activating background knowledge, summarizing, predicting, checking predictions, clarifying, asking questions, and finding answers are effective strategy approaches (Roit, 2017). Reading comprehension strategies should be implemented with active objective-based, and self-regulated reading (Roit, 2017). Similar studies confirmed that implementation of reading comprehension assessment and instructional strategies assist readers identify problem areas and help prevent issues that occur while reading (Kendeou, McMaster & Christ, 2016; Sawangsamutchal & Rattanavich, 2016). A proactive intervention strategy provides readers with tools to use while they are reading.

Some researchers are concerned about teachers' improper implementation of instructional reading strategies that can create situations in which students remain unaware of their specific reading problems (Roit, 2017). This unawareness may occur when the student struggles to understand what he or she are reading by focusing so intensely on reading the words that he or she cannot connect with the words' meanings (Roit, 2017). Due to diminished comprehension, the student may remain unaware that there are effective intervention strategies than can help resolve their reading problems (Roit, 2017).

In the fourth point, (challenges with instruction using complex and expository text), what are the effective reading behaviors of a student living in an age where reading more complex texts and using technology to read are necessary? More research is being completed on teaching reading through the content areas and the use of technology to decrease the achievement gap between readers. On the subject of reading nonfiction Nell Duke (2000) asserted, "In this Information Age the importance of being able to read and write informational texts cannot be overstated" (Duke, 2000). Concerned about whether informational texts were being used in the primary grades, Duke completed an observational study of 20 first-grade classrooms: 10 first-grade classrooms from the six highest socioeconomic status (SES) districts and 10 first-grade classrooms from four of the lowest SES districts in the greater Boston metropolitan area. Duke's goal for this study was to describe the print environment and experiences of these students and to answer the question, "How much exposure to and experience with informational text is offered to students in their crucial first-grade year, and what kinds of

experiences are offered?" (Duke, 2000). Duke concluded through her observations that informational text was rare (9.8% on average) and that students in the 20 first-grade classrooms wrote informational text an average of 3.6 minutes per day. She further went on to explain that students needed instruction with specific genres in order to "assure transfer" and generalize "comprehension skills and strategies" (Reutzel et al., 2005).

Two approaches for teaching reading comprehension strategies with four second-grade classrooms using science information texts were evaluated by Reutzel, Smith and Fawson in 2005. In the first approach, students were taught single comprehension strategies, one-at-a-time (SSI). A "family" of comprehension strategies was taught in the second approach using a fixed routine, which was collaborative, engaging, and interactive. The reading comprehension performance of both groups was not found to vary, but students who were taught a "set" or "family" of transacted comprehension strategies increased their acquisition and retention of science content knowledge and "significantly improved criterion or curriculum-based reading comprehension test scores" (Reutzel et al., 2005).

Sweet and snow (2003) stated that reading comprehension includes three essential elements, "within a socio-cultural context that both shapes and is shaped by the reader including such aspects as socio-economic strata, ethnicity, neighborhood, school culture, and instruction group" (Reutzel et al., 2005). The reader and the text are the first two essential elements with the final element identified as the "activity" (Sweet & Snow, 2003). One such activity, which has seen an increase in use, is reading using technology. Some researchers are calling for an increased use of technology to address the achievement gaps in reading (Jimenez, 2003) and provide a Universal Literacy Environment (ULE). Proctor, Dalton, and Grisham (2007) completed a 4-week study of English reading comprehension with 30 fourth-grade struggling readers, including some readers who were Spanish-speaking English Language Learners (ELLs) and some English-only learners (EO), to see if comprehension-scaffolding features provided by technology would improve reading comprehension (Proctor et al., 2007). The study was designed to answer the questions, "what is the effect of working in the ULE on students' vocabulary and comprehension growth? Do reading-gain scores differ as a function of language status (ELL vs. EO)?", and "Is the use of digitally embedded vocabulary acquisition and comprehension strategy supports over the course of the intervention related to vocabulary and comprehension gains?" (Proctor et al., 2007).

The participants for this study were 30 fourth-grade students from two classrooms in the same school district in southern California (Proctor et al., 2007). A little over half of the students were Spanish-speaking ELLs and 14 were English-only (EO) students all struggling to read as noted by their scores on reading vocabulary and reading comprehension scores on the Gates-MacGinitie Reading Achievement Test. The Universal Literacy Environment (ULE) used in their study was a multi-media digital reading environment, which contained four narrative and four informational hypertexts (Proctor et al., 2007). The ULE was derived from the work of Dalton and colleagues (Dalton & Pisha, 2001; Dalton, Pisha, Eagleton, Coyne & Deysher, 2001) and was embedded with vocabulary, cognitive, and metacognitive development. Before, during, and after reading activities and supports were included to support students with scaffolding, assessment of progress, reading comprehension, and vocabulary knowledge (Proctor et al., 2007). Text-to-Script (TTS) options, which allow the students to have the text read aloud to them, were available for assistance with reading fluency as well as the option of students typing their responses. Each fiction script was paired with an informational text. Challenging texts were selected to see what digital supports students would select when difficulties were encountered in decoding, reading vocabulary, and comprehending text (Proctor et al., 2007).

Prior to the start of the intervention for this study, teachers were trained during two 3.5-hour training sessions on reciprocal teaching (Palincsar & Brown, 1984) and the comprehension strategies used with reciprocal teaching, which are, questioning, clarifying, predicting, and summarizing (Proctor et al., 2007). Teachers also were introduced to the two work storage databases, WorkLog and MyGlossary, and the Universal Literacy Environment. Students were administered the Gates-MacGinitie Reading Achievement Test in English prior to the intervention. The intervention lasted four weeks with students meeting three times per week in 45-minute sessions. Results indicated that both ELLs and struggling readers who used embedded comprehension-based and vocabulary supports made gains in comprehension of the literature, leading the researchers to believe that scaffolding digital literacy environments can improve "literacy and learning outcomes for all students" (Proctor et al., 2007).

Academic literacies, formerly known as literacy in the disciplines, are reinforced by the Common Core State Standards (CCSS; National Governors Association Center for Best Practices, Council of Chief State School Officers, 2010). The CCSS emphasizes critical-thinking, problem-solving, and analytical thinking during reading instruction and envision

that students will read complex disciplinary text closely and independently with little support from teachers. To gain a fuller understanding of how students interact with complex disciplinary texts, Stephen Kucer used two data sets from a larger research program on reader-text transactions (Kucer, 2014). Participants in the original study were two groups of proficient fourth-grade readers from two schools in the same school district. Two complex texts were used in the study with one being fiction, "Who Stole the Wizard of Oz?" and one being scientific text, "Amazing Adatations" (Kucer, 2014).

Throughout this study the researcher audiotaped students as they were asked to read one of the two stories and retell the stories one-on-one with the researcher (Kucer, 2014). Probes were provided when retellings were incomplete and were audiotaped as well. Miscue analysis was completed to process the behaviors of students and identify syntactic and semantic acceptability of miscues. Results indicated that students who made miscues that maintained the meaning of the text often used those clauses in their retellings. This indicated that those students were attempting to make sense of the text as they read in order for them to make these types of miscues. These students were also more apt to understand the "big idea" of the text. Readers of the more complex scientific text made a higher percentage of meaning related miscues (Kucer, 2014).

Expository texts are a necessary part of classroom libraries if students are to meet the demands of the 21st century. Another change needed is an exposure to screen-based reading. Screen-based reading has become a focus in recent studies with the availability of digital media for reading. Studies have revealed that students can improve their skills in emergent literacy through reading e-books (Korat, 2010; Korat & Shamir, 2012). In 2015, Huang and Liang conducted a study in an attempt to track reading rates of 43 Chinese fifth-grade students. The students' reading profiles were used along with 500 quantitative records to determine if reading rates were related to different reading behaviors and comprehension outcomes (Huang & Liang, 2015). Their study developed a reading rate technique within Interactive E-book Learning System (IELS) to track on-reading (when a student's reading ranges from 61 to 984 words per minutes [wpm]) and off-reading (when a student reads at a rate greater than 1000 wpm) behaviors. When a student started reading, the tracking system was automatically activated. The system also recorded when students turned to the next page or went back a page. An individual reading profile was developed for each student as they read within the IELS, and correlations were made between reading rates and comprehension outcomes. Class A students were asked to read the e-book orally, while Class B students were asked to read silently with the IELS

tracking the reading rates of both Class A and Class B at 5-minute intervals. After reading, students were asked to complete a 20-minute comprehension test with six single-choice items and eight short response items (Huang & Liang, 2015).

Results from their study compared oral (Class A) and silent reading (Class B) rates and found the silent reading rates averaging at a higher range (Huang & Liang, 2015). The comprehension outcomes of the oral readers and silent readers were similar and positively correlated. Oral readers increased their reading rate as they read, while silent readers read the book at their own pace with the rates relatively constant throughout reading. Silent readers (Class B) had more off-reading behaviors recorded than oral readers (Class A). The researched concluded, "Significant correlations among the reading rate, reading comprehension and language achievement were only found in the silent reading group" (Huang & Liang, 2015).

The need to read complex texts and problem-solve in a globally competitive world has become evident with the adoption of the Common Core State Standards by 42 states in the United States. Prior to the Common Core State Standards, elementary students had more exposure to fiction texts in the reading classroom (Pentimonti, Zucker, Justice, & Kaderavek, 2010). Experts (Gewertz, 2012; Goodwin & Miller, 2013) believe that students need to read more nonfiction to be college and career-ready. With these changes in curriculum, texts in the reading classroom have been selected giving both literacy and expository texts an equal status during reading instruction. This make it even more important that elementary students have opportunities to read and comprehend both fiction and nonfiction text.

Best, Floyd, and McNamara (2008) conducted a study examining the influence of decoding and world knowledge using the Woodcock-Johnson III Tests of Achievement (Woodcock, McGrew, & Mather, 2001) on third graders' comprehension of narrative and expository texts (Best et al., 2008). One model of reading comprehension that was highlighted was Kintsch's Construction-Integration (CI) model (Kintsch, 1988; Kintsch, 1998). The CI model attempts to delineate the surface code that relates to the exact wording and syntax, the propositional text base, which contains explicit propositions, and the situation model, which "goes beyond the explicit text content" (Best et al., 2008) and differs from narrative and expository text. Narrative text requires the reader to understand the characters, setting, actions, and events of the story and expository texts require an integration of the text with the reader's knowledge of the subject of that text (Best et al., 2008).

To better understand the relationship between expository text and world knowledge, Best et al., (2008) conducted a study with 61 third-grade participants from two public schools in a metropolitan school district. The sample included 62% girls and 48% boys, 57% of whom were African American, 28% were white, 7% were biracial, and 3% were Asian-Pacific Islanders. Results from the Woodcock-Johnson III (WJIII) Tests of Achievement (ACH) Passage Comprehension test (Woodcock et al., 2001) were used to screen participants and identify them as having age-appropriate reading abilities and skills (Best et al., 2008).

Each participant of this study was given a 1-hour battery of tests conducted by graduate students on Saturdays in February, March, and May 2003 (Best et al., 2008). These sessions required students to read a text for 5 minutes, complete a free recall task and a cued recall task, and then answer 12 multiple-choice questions without access to the text. Students were then given reading competency tasks to complete at the end of the session. All students were asked to do this with both narrative and expository texts. Coding recall was analyzed along with proposition-based analysis (Best et al., 2008).

Results from the Best et al., 2008 study showed that recall was low, and students could provide only a limited amount of information for both narrative and expository texts. Comprehension scores were higher for narrative text than expository text. Significant and moderate correlations were found between world knowledge and decoding skills of narrative text. Regression analysis indicated that decoding skills added to the prediction model of comprehension of narrative texts because freeing up children's working memory space with word automaticity allows for more text-based memories and inferencing (Perfetti, 1985; Seigneuric, Ehrlich, Oakhill, & Yuill, 2000). Individual differences in world knowledge were identified by Best et al., (2008) as less important because children have a stronger schemata for the story elements of narrative texts which are the settings, actions, and events, a schemata that most children know well (Cote, Goldman, & Saul, 1998). However, world knowledge was found to be more important than decoding skills when comprehending expository text. Best et al., (2008) stated in their conclusion that more research needs to be concluded on young readers during the period between third through fifth grade to examine the comprehension of expository texts since comprehending texts is associated with the genre of that text. Baker, Gersten & Grossen (2002) suggested that curricula and interventions should be based on strategies and techniques tailored to each genre for students to improve their reading comprehension.

In order to comprehend both fiction and nonfiction texts, students need to continue to use both cognitive and metacognitive strategies, but

reading comprehension strategies must differ in order for students to fully understand the text depending on whether that text is literary or expository. When reading literary and expository texts, students need to focus on and retrieve explicitly stated information, make inferences, interpret and integrate ideas and new information, and evaluate and critique content presented along with textual elements. These are the comprehension processes assessed by the 2016 Reading Framework (PIRLS framework, 2016). Studies by Mullis, Martin, Gonzalez, and Kennedy (2003) revealed that the United States had the largest gap between literacy reading and informational reading of 35 nations.

With the Common Core State Standards launched in 2009 by 48 states, two territories, and the District of Columbia, has there been an increase in comprehension scores when reading expository texts? Has the gap between literary and expository reading achievement decreased? Has there also been an increase in teaching comprehension strategies necessary to fully comprehend expository texts?. Gaps have been identified by Mullis et al. (2003) between reading achievement for literary texts and informational reading achievement for U.S. students based on results from the 2001 Progress in International Reading Literacy (PIRLS) study (Mullis et al., 2003). These achievement gaps continued to favor literary reading in the 2006 PIRLS study completed by Mullis, Martin, Kennedy, and Foy (2007). Nell Duke (2000) believes that this is because U.S. students have little exposure to expository texts in the earlier grades, based on a study she conducted in first-grade classrooms in 2000 (Duke, 2000). Based on her belief that "learners must have experience with the particular genres in question in order to fully develop the ability to read and write (in) those genres", Duke conducted an observational study of 20 first-grade classrooms in the Boston metropolitan area. Six of the highest socioeconomic status districts (SES) in the area were selected along with six of the lowest SES (Duke, 2000).

In order to conduct the study, each classroom was observed during four full days throughout the school year (Duke, 2000). Duke used those visits to record information about the print found on walls, print in the classroom library, and class activities associated with print for a total of 79 school day observations in all. A second researcher coded written language activities completed by students indicating whether or not the written text was informational. The total number of displayed texts was recorded and tallied along with the total number of books in classroom libraries. A total number of minutes spent in whole-class written activities was tallied along with total number of minutes used writing informational texts (Duke, 2000).

After observations by Duke (2000) and another researcher, results were analyzed and revealed that there was a scarcity of informational texts displayed with a mean of only 9.4% displayed on walls or other surfaces. Classroom libraries studied had a mean of 9.8% informational texts and a significant difference between the number of books in classroom libraries between the high-SES classroom libraries and the low-SES classroom libraries. Duke also noted that few informational texts were added to classroom libraries over the course of the year. During whole-class language arts time, the amount of time writing totaled 282 minutes, averaging 3.6 minutes per day. During the four days of observation of written activities during language arts instruction, 7 of the 20 classrooms observed spent no time writing informational texts. The researchers concluded that informational text was rare with narrative text continuing to be more prevalent in these first-grade classrooms. Duke and a second researcher examined literacy experiences throughout the entire day and noted that inattention to informational text occurred not only during language arts instruction but also during content area instruction. They concluded that low levels of achievement in information reading and writing could be attributed to insufficient experience with it.

Comprehension of informational texts as well as narrative texts is emphasized with the development and use of statewide tests such as the Partnership for Assessment of Readiness for College and Careers (PARCC) given in six states and the District of Columbia, national tests such as the National Assessment of Educational Progress (NAEP), and international assessments such as the Progress in International Reading Studies (PIRLS). In order for students to be successful on the literacy sections of these tests, they must be able to read and comprehend not just narratives but expository texts as well. Performances on these high-stakes tests provide information to schools to help improve instruction and can also influence decisions such as promotion and graduation of individual students.

Informational texts can be incorporated into the daily curriculum in a variety of ways. Educators can be assist elementary students in developing an understanding of expository texts by interwining informational texts into the framework of literacy instruction through read aloud, shared reading, and guided reading (Duke, 2004; Hoyt, 2002). Duke and Bennet-Armistead (2003) defined *read aloud* as an "activity in which one person, usually the teacher, reads while others, usually the students, listen and ideally discuss and question the text before, during, and after reading". Educators can use read alouds to quide students as they develop into skillful, strategic readers and can help students to understand informational texts. Educators typically include some type of

read aloud in their daily instructional activities in order to connect thematic units, review academic concepts, or expand student interest. Whatever the case may be, students take pleasure in listening to teachers read to them. Trelease (2001) proclaimed that "the single most important activity for building the knowledge required for eventual success in reading is reading aloud to children".

Utilizing informational texts during read aloud has significant effects on student academic achievement. Students are always eager to ask questions and investigate the world around them. A read aloud using an informational text can serve as a tool and provide answers to the many questions that students possess (Duke & Bennett-Armistead, 2003). Current research also suggests that students can learn both the language and content of informational texts through teacher read alouds (Duke, 2000). The language patterns revealed in informational material differs greatly from typical fictional and narrative stories. When students see and hear teachers interact with various language patterns such as, timeless verb constructions, generic noun constructions, and graphical elements, they are more apprehensive to tackle these features and become confident in engaging with such features when reading and writing informational texts independently (Duke & Bennett-Armistead, 2003; Moss, 2004).

In addition to becoming familiar with the language patterns of informational texts, students can also learn valuable content during informational read alouds. Elementary students are capable of learning about science, social studies, and other content areas through read alouds (Duke, 2000). When listening to informational books, students can transfer knowledge gained to other content areas. This strategy gives diverse learners an opportunity to enhance their knowledge in a variety of ways. Informational read alouds provide a broad range of possibilities to maximize student learning. Hoyt (2002) suggested that during informational read alouds, teachers could do the following: challenge and stretch the listening comprehension of students as they think in terms of information rather than just entertainment, make connections to science and social studies by building content knowledge, expose students to real-life issues that are outside of their current experience, model strategies for dipping in and out of an informational text rather than reading from start to finish, think aloud to demonstrate how to access information, make connections and stop occasionally to reflect and show children that reading informational text is enthusiastic, interesting, and fun.

In addition to knowing how to use information text, there is an explanation of questions' levels and student responses through this table below:

How to use information text (**Driver, 2017**)

level	Day	Sample Questions	Response
0 • Required prior knowledge only • No comprehension of text required	1	(discussion of what animals need to survive) Where do we get air?	Jacob: outside
1 • Required literal recall of information stated in the text • Asked immediately following text being read, or delayed to review important vocabulary words and concepts	1 1 2	What did we just hear are good places for roosts? Then we found out how bats use a special sense of hearing to find their prey. Do you remember what that's called Sharon? Does anyone remember another reason bats might need claws?	Sharon: a cave Kathryn: an attic Emma: tree Ava: cellar Sharon: echolocation Dominic: So they could grab food
2 • Required students to apply a skill or concept to a new situation.	1	When could you see a bat flying around at home? And why do you think that?	Brain and Ava: At night Ava: because they are nocturnal

• May have involved classification or inference	3 4	Text: Vampire bats are found in Central and South America. T: So, do vampire bats live around here? Now, we know that bats are mammals, so when we hear that she was with her mother, how does that fit with her being a mammal? Kathryn? Do we all remember that mammals drink their mother's milk? So it makes sense that babies stay with their mother.	Students: No Kathryn: Because when it's thirsty it would drink milk from its belly. Students: yeah
3 • Required students to use strategic thinking. • May have involved making hypotheses or comparisons	4	What do you think would happen if there were no bats around eating the insects? Kathryn? T: Who might?	Kathryn: um, they might hurt people Kathryn: the insects

The PIRLS database results from the 2006 administration indicated that Hong Kong Chinese students performed better than students in 45 countries in reading comprehension tests, but these tests did not identify

other factors that contributed to reading proficiency. Factors such as students' implicit beliefs about intelligence and ability, their metacognitive awareness of reading strategies, and their motivation and their relationship to reading comprehension were examined in a study conducted by Yin-Kum Law (2009). Participants in this quantitative research study were 55 Chinese boys and 65 Chinese girls in grade 5 from a Hong Kong urban area. In order to determine the relationship between the factors identified above and reading comprehension, participants were required to complete three questionnaires and two reading comprehension tests. Multiple regression analysis showed that students' beliefs and motivation along with their metacognitive awareness of reading strategies were associated with their reading comprehension (Law, 2009).

Reading achievement of U.S. fourth-grade students in comprehension to other school systems was most recently measured using the Progress in International Reading Literacy Study (PIRLS) 2016 (Warner-Griffin, Liu, Tadler, Herget, & Dalton, 2017). The PIRLS framework focuses on purposes for reading and processes of comprehension. The two purposes for reading are reading for literary experience and reading to acquire and use information. Scores on the 2016 administration of PIRLS are also reported out for the four processes of comprehension that measure the "ability to (1) focus on and retrieve, explicitly stated information, (2) make straightforward inferences, (3) interpret and integrate ideas and information, and (4) evaluate, and critique, content and textual elements" (Warner-Griffin et al., 2017).

After analyzing the 2016 PIRLS data, the International Association for the Evaluation of Educational Achievement (Mullis et al., 2016) found that the U.S. had an average reading score of 549, which was higher than the PIRLS scale center point. This overall average was higher than the averages of 30 educational systems but lower than the averages of 12 educational systems. Fifteen educational systems, which were also tested during the 2016 cycle, were not significantly different from the United States (Mullis et al., 2016).

Another finding shared by the IEA TIMMS and PIRLS International Study Center website (Mullis et al., 2016) was the percentages of fourth graders performing above advanced (625) and high (550) benchmarks in 2016. Sixteen percent of U.S. fourth graders scored at or above the advanced benchmark set at 625 while 53% scored at or above the high mark of 550. These percentages were higher than the international median. Education systems with higher percentages of fourth-grade students scoring at or above the advanced and high benchmarks were

Singapore, the Russian Federation, North Ireland-GBR, Ireland, Poland, English-GBR, and Moscow City-RUS (Mullis et al., 2016).

Other data reported were the reading subscales for the two components of reading measured on PIRLS, literary and informational text, in 2016 (Mullis et al., 2016). The U.S. average for the four subscales was 543 to 557, which was higher than the center point across all reading subscales. Those education systems scoring higher than the U.S. average were the Russian Federation, Singapore, Ireland, Northern Ireland-GBR, Poland, Finland and Moscow City-RUS (Mullis et al., 2016). U.S. females scored higher, on average, on the overall reading scale than males, with females averaging 553 and males averaging 545 (Mullis et al., 2016). White, non-Hispanic and Asian fourth graders scored higher, while Black and Hispanic fourth graders scored lower. U.S. public schools with less than 50% of students eligible for free and reduced-price lunch scored higher than schools with more than 75% of students receiving free or reduced-price lunch (Mullis et al., 2016).

When evaluating performance over time, it was found that there was no measurable change in the U.S. overall average reading scale score even though 11 other educational systems increased in their overall reading scores (Warner-Griffin et al., 2017). The overall average reading scale scores were 542 in 2001 and 549 in 2016. The overall average reading scores in 2016 was higher than the U.S. overall reading score in 2006 (540). There continues to be a difference between U.S. fourth-grade students' literacy experience average subscale scores (557) and the acquiring and using information average subscale scores (543) (Warner-Griffin et al., 2017). These scores demonstrate that U.S. students continue to struggle with reading informational text as compared to literacy text (Mullis et al., 2016).

Duke's mixed-method study (2000) was based on data from PIRLS indicating that students struggled to comprehend expository text. Duke believed this was because there was little exposure to expository texts in the elementary grades. The results from her study showed that indeed as she suspected there was a predominance of narrative instruction, narrative texts, and narrative postings in the first-grade classrooms she observed. As a result she believed that more expository text instruction and expository textbooks should be the goal of elementary classrooms as they work to close the gap between reading achievement for literacy texts and informational reading (Duke, 2000).

One study that tested Duke's theory that more exposure to reading expository text will yield higher comprehension scores of expository text was conducted by Li, Beecher, and Cho (2018). These researchers used

PIRLS 2011 data to answer the following questions: (1) How often did fourth graders in the United States read informational text in the classroom? (2) Was there a balance between the reading of informational text and the reading of literary text in U.S. fourth-grade classroom? And (3) What is the relationship between the reading of informational text and students' reading performance after controlling the reading of literary texts? In order to answer these questions, the Teacher Questionnaire from PIRLS was used to rate frequencies that students read nonfiction. Control variables were reading of literary text in the classroom, socioeconomic status, and gender. Student reading performance was determined by using the five plausible values for both informational text and literary text (Li et al., 2018). PIRLS uses Item Response Theory (IRT) scaling so that students can take just a portion of the entire assessment. With this plausible value method each student's answers on the assessment are combined with background characteristics to create a score as if that student had taken the entire test. Using this plausible value methodology allows for estimates to be made of a population's performance but does not allow precise statements to be made of those individual students who took the test (Martin, Mullis, & Kennedy, 2007).

Results from Li et al., (2018) showed that most teachers had a performance as to what type of informational text was assigned. "Nonfiction subject area books" were assigned almost every day, and "nonfiction articles" were assigned on a weekly basis. Teachers infrequently assigned longer nonfiction chapter books. This study also found an imbalance of reading of informational text and reading of literary texts supporting earlier studies by researchers (Duke, 2000; Moss, 2008) that less time is spent on reading informational text and less access to informational text (Li et al., 2018). Most importantly, their study showed no significant association between reading performance on PIRLS 2011 scores and the frequency of reading informational texts (Li et al., 2018). The most recent data from the 2016 PIRLS administration highlights that fourth-grade students in the United States continue to be stronger in reading for literary experience with an average subscale scores of 557 and need more instruction and exposure to expository text for the gap between reading achievement for literary texts and informational reading to be removed.

In order to close the gap between literacy and expository text achievement Montelongo and Hernandez (2007) stressed the importance of students learning about text structure through deliberate instruction provided by classroom teachers. Teaching students comprehension strategies through instruction will also help them become metacognitive and use those strategies to increase reading comprehension (Law, 2009).

After reviewing the data from the 2016 PIRLS administration for U.S. fourth-grade students, a gap between the reading literacy subscale scores of 557 and reading expository text scores of 543 suggests that students continue to struggle with reading and comprehending expository text. This study will identify the literacy subscales scores and expository text scores from the 2016 administration to determine if a gap continues and also examine any relationship between reading comprehension strategy instruction and expository text score achievement.

Background of the problem:

In spite of the importance of literary comprehension, there is a lack in literary comprehension skills among primary school pupils. Thus there is a need for finding an effective instructional strategies for developing literary comprehension among primary school pupils.

In order to be fully sure of the problem of this study, the researcher conducted a pilot study including some texts. It requires students to read the text and answer questions that follow it. This test has been applied to sixty of fifth year primary school pupils. The results of this pilot study confirmed the low level of the pupils in literary comprehension skills. So, it is clear that there is a great need for developing literary comprehension skills among primary school pupils. This study used informational texts based on "Pirls" for enhancing the pupils awareness of literary comprehension skills among fifth year primary school pupils.

Statement of the problem:

The problem of the present research can be defined in the fifth year primary school pupils' inefficient literary comprehension. Therefore, the present study is an attempt to investigate the effectiveness of informational texts based on "Pirls" for enhancing the pupils awareness of literary comprehension skills among fifth year primary school pupils.

Questions of the Study:

To face this problem, the present research is an attempt to answer the following questions:

1- What is the effectiveness of informational texts in developing the pupils literary comprehension skills?
2- To what extent do the informational texts enhance the pupils awareness of literary comprehension skills?

Delimitations of the Study:

The current research is limited into the following:

- Sixty fifth graders of primary school in El-Shobban Al-Muslimeen Language School in Benha at Quliobeya Governorate, Egypt.

- Some literary comprehension skills required for the fifth year primary pupils.

Hypotheses of the study:

1- There is a statistically significant difference between the mean scores of the experimental group and the control group in the post test of the literary comprehension skills.

2- There is a statistically significant difference between the mean scores of the experimental group in the pre-post test of the literary comprehension skills**.**

Instruments and materials:

To achieve the purpose of the study, two equivalent forms of literary comprehension skills test (prepared by the researcher) were used.

Participants of the study:

The participants of the present study consisted of 60 fifth year pupils from El-Shobban Al-Muslimeen Language School in Benha at Quliobeya Governorate, enrolled in the academic year (2021-2022). Two intact classes were selected for participating in the study; class 5/A (n=30) served as the experimental group and class 5/B (n=30) served as the control group.

Procedures of the study:

After the participants in the research have been selected, The participants of the study were divided into two groups, the experimental group (N=30) and the control group (N=30). The pre literary comprehension skills test was administered to the participants before the treatment. Then, the experimental group was taught using informational texts based on "Pirls" while the control group was taught using the traditional method. Then the post reading comprehension skills test was administered to both groups . Results of the study revealed that the program using informational texts based on "Pirls" was effective for enhancing the pupils awareness of literary comprehension skills among fifth year primary school pupils.

Findings of the study:

The results of the research will be presented in the light of following hypotheses:

1- Findings of the first hypothesis:

The first hypothesis stated that " There is a statistically significant difference between the mean scores of the experimental group and the control group in the post test of the literary comprehension skills".

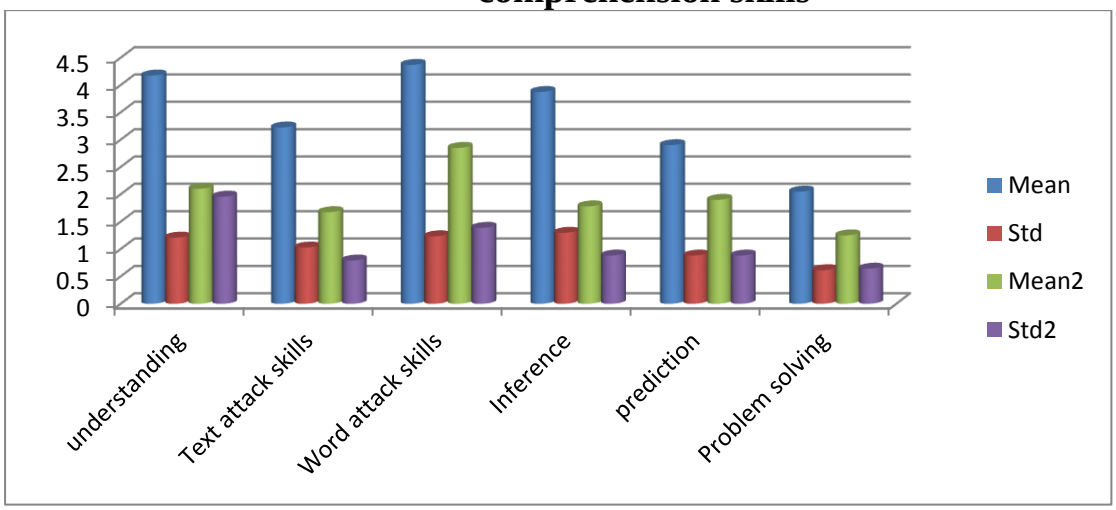
To prove the validity of the first hypothesis, t.test was used to compare the mean scores of the pupils in the overall performance in the literary comprehension test. The following table shows this:

Table (1) T.test between the mean scores of the experimental group and control group in the post test of the literary comprehension skills

Skills	Groups	No.	Mean	Std. Deviation	t-value	Sig.
understanding	Exp.	30	4.1750	1.21	6.155	0.01
	Control	30	2.1008	1.958		
Text attack skills	Exp.	30	3.2240	1.02846	6.237	0.01
	Control	30	1.6750	0.79120		
Word attack skills	Exp.	30	4.370	1.23357	7.433	0.01
	Control	30	2.8500	1.38822		
Inference	Exp.	30	3.8740	1.29757	6.863	0.01
	Control	30	1.78000	0.88228		
prediction	Exp.	30	2.9000	0.88189	8.109	0.01
	Control	30	1.900	0.88189		
Problem solving	Exp.	30	2.05000	0.61433	10.45	0.01
	Control	30	1.2500	0.64247		

It is clear from table (1) above that there is a statistically significant difference between the experimental group and control group in the post treatment of the literary comprehension skills. The difference is in favor of the experimental group. The level of significance is 0.01 which indicates the effectiveness of informational text strategy in developing the literary skills among the primary schools pupils . The following figure shows this:

Figure (1) : T.test between the mean scores of the experimental group and control group in the post test of the literary comprehension skills



2- Findings of the second hypothesis:

The second hypothesis stated that " There is a statistically significant difference between the mean scores of the experimental group in the pre-post test of the literary comprehension skills ".

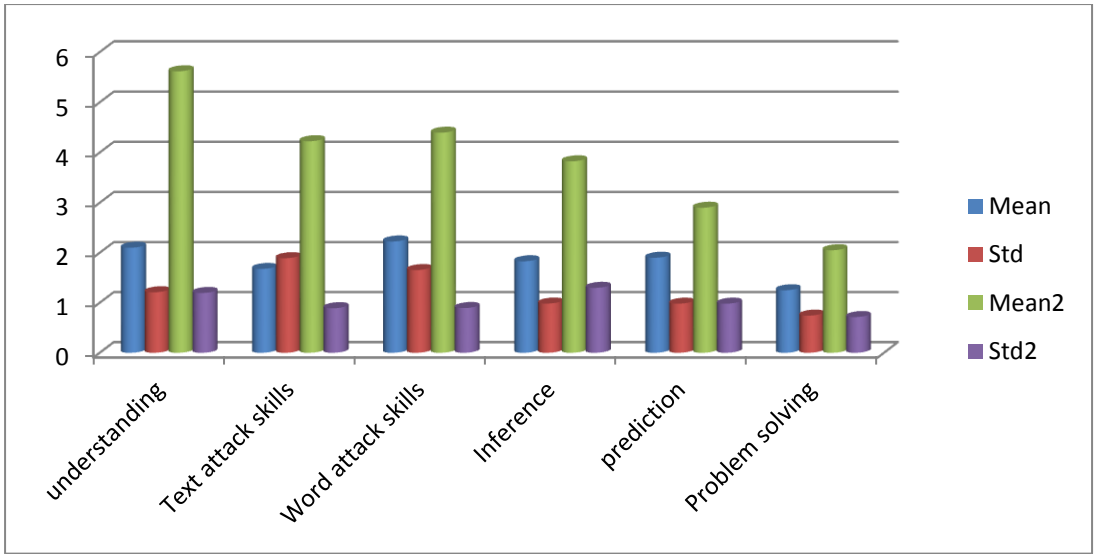
To prove the validity of the second hypothesis, t.test was used for the paired sample to compare the differences between the mean scores of the experimental group . The following table shows this:

Table (2) T.test for comparison between the experimental pre and post administration of the literary comprehension skills

Skills	Groups	No.	Mean	Std. Deviation	t-value	Sig.
understanding	Pre	30	2.1000	1.21	6.932	0.01
	Post	30	5.61790	1.19558		
Text attack skills	Pre	30	1.6759	1.89120	5.846	0.01
	Post	30	4.2250	0.89120		
Word attack skills	Pre	30	2.2250	1.65421	6.717	0.01
	Post	30	4.3950	0.89417		
Inference	Pre	30	1.82950	0.98417	6.664	0.01
	Post	30	3.8250	1.29867		
prediction	Pre	30	1.9000	0.98189	8.442	0.01
	Post	30	2.9000	0.98189		
Problem solving	Pre	30	1.2500	0.74248	10.473	0.01
	Post	30	2.0500	0.71432		
Total skills	Pre	30	14.0500	1.957106	16.476	0.01
	Post	30	25.5500	1.8189		

It is clear from table (2) above that there is a statistically significant difference between the mean scores of the experimental group in the pre-post administration of the test. The difference is in favor of the post treatment, the level of significance is 0.01 which indicates the effectiveness of the informational text strategy in developing the literary comprehension skills among the primary stage pupils. The following figure shows this:

Figure (2) : T.test for comparison between the experimental pre and post administration of the literary comprehension skills



The effect size of the informational text:

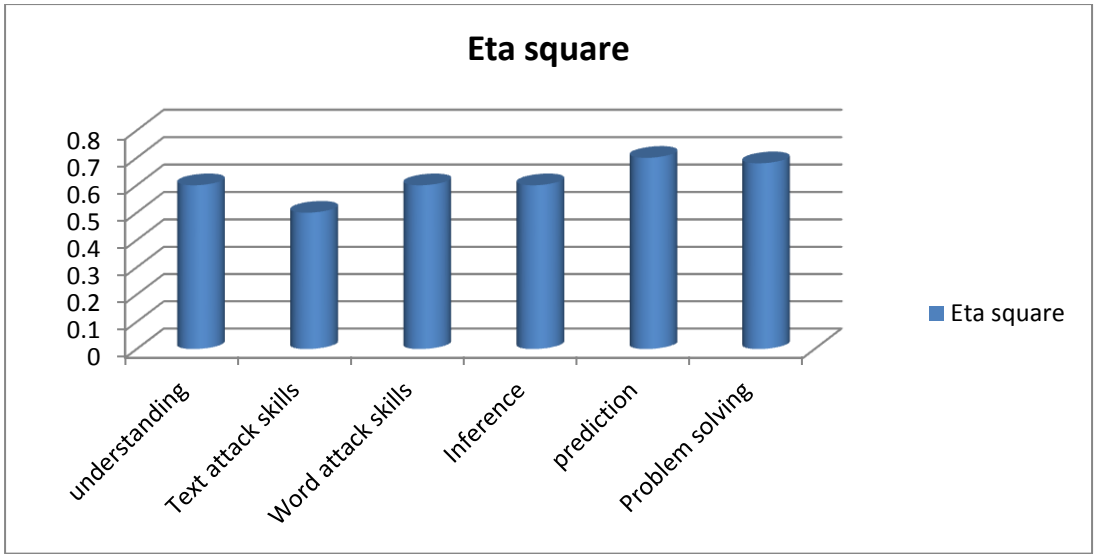
First: eta square was estimated to calculate the effect size of the proposal strategy on the pupils literary comprehension skills. Eta square was estimated after calculating t.value. The following table illustrates the effect size of the informational text. The effect size of informational text strategy on the experimental group literary comprehension skills development. The following table (3) shows this:

Table (3) The effect size of the informational text

Skills	Df	Eta square	Level of effect size
Understanding	30	0.60	High
Text attack skills	30	0.50	High
Word attack skills	30	0.60	High
Inference	30	0.60	High
Prediction	30	0.70	High
Problem solving	30	0.68	High
Total skill	30	078	High

It is clear from table (3) above that the effect size of the informational text on the literary comprehension skills was high in over all skill which indicates the effectiveness of the strategy on development of the literary comprehension skills among the primary stage pupils. The following figure shows this:

Figure (3) : The effect size of the informational text



Discussion of the results:

The results of the present study indicated the improvement of the pupils' literary comprehension skills specifically in the post treatment of the study. This improvement was in all skills of literary comprehension which may be due to the fact that informational texts frequently allows pupils to utilize background knowledge which strongly promots comprehension of other texts that may encounter during study. As a result, much texts can be used to assist teacher in developing gifted pupils. This result is consistent with Patricia (2019).

The pupils performance in all the literary comprehension skills which may be due to the fact that the teacher exposed the pupil to a variety of texts- expository, narrative, descriptive and so on by interweaving these informational texts into the framework of literary instruction through reading aloud and shared reading and guided reading practice, the case which gave the pupils the opportunity to read, understand, search for reading and solve problems. This result is consistent with Driver (2017).

The results also revealed that the pupils were able to use the information obtained from the text variety to build their own knowledge to understand and use inferences for other texts. This result may be due to the following aspects:

- The use of informational text based on constructivist theory is consistent with Vygotsky and piaget.
- The use of informational text can improve the pupils' achievement.
- The more inclusion of informational texts in pupils' practice is a likely to be an effective teaching strategy for the implementation of the instructional text that are requisite and are required for effective implementation.
- This result is consistent with Driver (2017) and Mohamed (2018).

Recommendation:

Based on the discussion of the results, it can be recommended that:

- Reading skills could receive more attention in the primary stage to build the pupil knowledge in early stage of learning.
- Reading skills should be taught using variety of text genres to help pupils acquire more information.
- The informational texts must be used through e. teaching and e. learning tools.
- The teacher must use different explicit and implicit methods for teaching informational.
- The teacher and curriculum planner must integrate informational text with reading and writing (literacy) in the early stage of learning.
- The pupils must adapt the different informational text in learning how to read.

Suggestions for further research:

In the light of the previous analysis and results, it may be concluded that:

- Using different informational text in learning the modes of writing.
- Analyzing the features of informational text to have a deep understanding of text structure.
- Applying the informational text strategies to analyze the standards needs in this early stage of learning.
- Analyzing the pupils' different learning styles and the use of informational texts.

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Appendix (A)
Literary Comprehension Skills Pre-Test

Name:.....
Class :.....

Dear pupils,

The following is a literary comprehension test, try to respond to it , the way you understand.

1- Read the following Text then answer the questions that below:

THE Princess and the Pea (Fairy tale)

Once there was a Prince who wanted to marry a Princess. Only a real one would do. So he traveled through all the world to find her, and everywhere things went wrong. There were Princesses aplenty, but how was he to know whether they were real Princesses? There was something not quite right about them all. So he came home again and was unhappy, because he did so want to have a real Princess. One evening a terrible storm blew up. It lightened and thundered and rained. It was really frightful! In the midst of it all came a knocking at the town gate. The old King went to open it

Who should be standing outside but a Princess, and what a sight she was in all that rain and wind. Water streamed from her hair down her clothes into her shoes, and ran out at the heels. Yet she claimed to be a real Princess. “We’ll soon find that out,” the old Queen thought to herself. Without saying a word about it she went to the bedchamber, stripped back the bedclothes, and put just one pea in the bottom of the bed. Then she took twenty mattresses and piled them on the pea. Then she took twenty eiderdown feather beds and piled them on the mattresses. Up on top of all these the Princess was to spend the night

”؟In the morning they asked her, “Did you sleep well

Oh!” said the Princess. “No. I scarcely slept at all. Heaven knows what’s in that bed. I lay on ” They could see she was ”.something so hard that I’m black and blue all over. It was simply terrible a real Princess and no question about it, now that she had felt one pea all the way through twenty mattresses and twenty more feather beds. Nobody but a Princess could be so delicate. So the As for the pea, they .Prince made haste to marry her, because he knew he had found a real Princess .put it in the museum. There it’s still to be seen, unless somebody has taken it

There, that’s a true story

- What are the main information in the text ?
  .....
  .....
- Identify the main idea of what you have read?

.....
.....

- Compare the main idea with the supporting details.

.....
.....

- What do you predict will happen to the princess?

.....
.....

- Based on what you have read how to make a generalization.

.....
.....

2- Read and fill in the gaps through using one of these words (draw – music – pop)

- Maha : what ……..…… are you listening to ?
- Heba : I'm listening to ……..…… music

3- Read and Match.

● I use	a- like drawing
● I'm listening	b- sign language
● They don't	c- is it ?
● What color	d- to pop music.

4- Read and choose the correct answer:

- They (is – are – am) playing sports.
- He is (collects – collect – collecting) magnets.
- I'm (taking – listening – drawing) photos.
- She is singing a (photo – song – book).
- I like playing sports (and – but – are) I like swimming.

Literary Comprehension Skills Post-Test

Name:.....

Class :.....

Dear pupils,

The following is a literary comprehension test, try to respond to it , the way you understand.

1-Read the following Text then answer the questions that below:

The Needs and Desires

Once upon a time, there lived a King who, despite his luxurious lifestyle, was neither happy nor content. One day, the King came upon a servant who was singing happily while he worked. This fascinated the King, why was he, the Supreme Ruler of the Land, unhappy and gloomy, while a lowly servant had so much joy. The King asked the servant, "Why are you so happy?" The man replied, "Your Majesty, I am nothing but a servant, but my family and I don't need too much, just a roof over our heads and warm food to fill our tummies." The king was not satisfied with that reply. Later in the day, he sought the advice of his most trusted advisor. After hearing the King's woes and the servant's story, the advisor said, "Your Majesty, I believe that the servant has not been made part of The 99 Club." "The 99 Club? And what exactly is that?" the King inquired. The advisor replied, "Your Majesty, to truly know what The 99 Club is, place 99 Gold coins in a bag and leave it at this servant's doorstep." So the King ordered to do it. When the servant saw the bag, he took it into his house. When he opened the bag, he let out a great shout of joy, So many gold coins! He began to count them. After several counts, he was at last convinced that there were 99 coins. He wondered, "What could've happened to that last gold coin? Surely, no one would leave 99 coins!" He looked everywhere he could, but that final coin was elusive. Finally, exhausted, he decided that he was going to have to work harder than ever to earn that gold coin and complete his collection. From that day, the servant's life was changed. He was overworked, horribly grumpy, and castigated his family for not helping him make that 100th gold coin. He stopped singing while he worked. Witnessing this drastic transformation, the King was puzzled. When he sought his advisor's help, the advisor said, "Your Majesty, the servant has now officially joined The 99 Club." He continued, "The 99 Club is a name given to those people who have enough to be happy but are never content, because they're always yearning and striving for that extra 1 telling to themselves, "Let me get that one final thing and then I will be happy for life. "

Moral: We can be happy, even with very little in our lives, but the minute we're given something bigger and better, we want even more! We lose our sleep, our happiness, we hurt the people around us, all these as a price for our growing needs and desires. We must learn to maintain a balance of

- What are the main information in the text ?
  ……
  ……
- Identify the main idea of what you have read?
  ……
  ……...
- Compare the main idea with the supporting details.

  ……
  ……...
- What do you predict will happen to the king?
  ……
  ……
  …
- Based on what you have read how to make a generalization.
  ……
  ……

2-Read and fill in the gaps through using one of these words (is – book – are)

- Maha : what ……..……..… you doing ?
- Heba : I'm looking for my math ……..

3-Read and Match.

● I'm looking	a- know
● I don't	b- you doing?
● Where	c- for my book
● What are	d- is it ?

4-Read and choose the correct answer:

- I'm (drawing – looking – doing) for my book.
- I can help you (watch – find – sing) your book.
- (What – Where – How) is my book ? – on the table.
- There's a (couch – bed – sandwich) in my living room.
- I like (play – playing – plays) football.