

Literature Review on Trends of Comprehension Instruction for Elementary School Students

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Abstract: The objective of this article is to construct evidence-based arguments on what comprehension is and what are various instructional approaches to improve comprehension post the National Reading Panel's (NRP) report (2000). The NRP (2000) reported seven text comprehension instructions that have scientific evidences in improving reading comprehension. Those instructions are: (1) comprehension monitoring, (2) cooperative learning, (3) graphic and semantic organizers, (4) question answering, (5) question generation, (6) summarization, and (7) multiple strategies. It has been more than 20 years since the NRP reviewed empirical evidences of those text comprehension instructions. What have we learnt since then? Having reviewed 29 studies on comprehension instruction published in the past twenty years, we found top three comprehension instructions that are used in elementary classroom. They are: (1) differentiated/individualized reading instruction, (2) vocabulary-based reading instruction, and (3) transactional approach. These findings informed us that further research on elementary reading comprehension instruction needed. Also, the NRP categorization of comprehension instruction (2000) needs modification.

Keywords: comprehension instruction; reading; literacy; elementary classroom

Abstrak: Artikel ini menyajikan argument berbasis riset tentang pemahaman bacaan dan berbagai pendekatan pembelajaran untuk meningkatkan pemahaman bacaan pasca dirilisnya laporan National Reading Panel (NRP) (2000). NRP (2000) melaporkan tujuh jenis pembelajaran pemahaman bacaan yang berbasis bukti ilmiah dalam meningkatkan pemahaman bacaan. Ketujuh jenis pembelajaran tersebut adalah: (1) monitoring pemahaman bacaan, (2) pembelajaran kooperatif, (3) pengorganisasian grafik dan semantik, (4) penjawaban pertanyaan, (5) pembuatan pertanyaan, (6) peringkasan, dan (7) strategi ganda. Sekarang sudah lebih dari 20 tahun sejak NRP meninjau bukti empiris dari berbagai jenis pembelajaran pemahaman bacaan tersebut. Apa yang telah kita pelajari sejak saat itu? Setelah melakukan reviu terhadap 29 studi tentang pembelajaran pemahaman bacaan yang diterbitkan dalam dua puluh tahun terakhir, kami menemukan tiga jenis pembelajaran pemahaman bacaan yang terbanyak digunakan di tingkat pendidikan dasar. Jenis-jenis pembelajaran tersebut adalah: (1) pembelajaran membaca yang dibedakan/disesuaikan dengan individu siswa, (2) pembelajaran membaca berbasis kosakata, dan (3) pendekatan transaksional. Temuan ini mengindikasikan bahwa penelitian lebih lanjut tentang pembelajaran pemahaman bacaan di sekolah tingkat dasar diperlukan. Kemudian, kategorisasi NRP tentang pembelajaran pemahaman bacaan (2000) perlu dimodifikasi.

Kata kunci: instruksi pemahaman; membaca; melek huruf; ruang kelas dasar

INTRODUCTION

In the vast literature of reading research, comprehension has become an essential component of reading both in its instruction and assessment (see e.g. Adams, 1990; National Reading Panel, 2000; Paris & Stahl, 2005; Snow, Burns, & Griffin, 1998). It solidifies the idea that the goal of reading is to understand information on texts, which involves interactive process between the reader, the text, and the context. Good readers engage deeply with those processes, monitor and evaluate what they read, and take advantage from what they read for their lives. Therefore,

teaching students to become good readers is a difficult and challenging task that requires specific comprehension instructions (Block, Gambrell & Pressley, 2002; Kennedy & Chinokul, 2020).

Focusing on reading instruction, National Reading Panel (NRP) (2000) reported two different categories of instructional practices to improve comprehension: vocabulary instructions and text comprehension instructions. NRP is a panel of researchers established in the U.S whose main duty was to synthesize studies on reading. First, they argue that “(r)eading comprehension is a cognitive process that integrates complex skills and cannot be understood without examining the critical role of vocabulary learning and instruction, and its development” (p. 4-1). Second, NRP underlines that comprehension can also be improved by teaching students explicitly to use specific cognitive strategies or text comprehension instructions when facing difficulties in comprehending the text.

Based on the statement above, the present review focuses on text comprehension instructions post the NRP report (2000). This does not mean to neglect the importance of vocabulary instructions in comprehending a text, but it is attributed to the view that reading is a meaning making process that involves reader’s interaction to a text situated in a particular instructional context, which is not necessarily started from separate vocabulary training (Fox & Alexander, 2009). In this view, reading is seen as an integrated activity between different level of representations and across multiple modalities that each component, such as vocabulary and text level, is not necessarily separated from one another. Additionally, responding to the NRP report, Pressley (2006) argues that focusing reading only in one component like phonemic awareness, phonic, fluency, vocabulary, or comprehension strategies might create gap between skills and conceptual knowledge. Thus, he suggests that all components of reading should be taken all together as a unit of strategies. That means effective readers should engage directly to the text to make predictions based on prior knowledge, make inferential connections to ideas in text based on prior knowledge, construct mental images representing the ideas in text, ask questions and seek answers, reread and attempt to clarify when confused, and construct imperative summaries of what they have read (Pressley & Afflerbach, 1995).

According to NRP (2000), there are seven text comprehension instructions that have scientific evidences in improving reading comprehension. Those strategies are: (1) comprehension monitoring, (2) cooperative learning, (3) graphic and semantic organizers, (4) question answering, (5) question generation, (6) summarization, and (7) multiple strategies. It has been 20 years since NRP reviewed empirical evidences of those text comprehension instructions. What have we learnt since then?

This review, therefore, aims to answer questions; what is comprehension? And what are various instructional approaches to improve reading comprehension in elementary classroom post-NRP (2000)? To answer these questions, in the following sections, we explain the methodology in reviewing the literatures including the inclusion criteria. Then moving on to the results of the review started by a brief overview of the definition of comprehension, and then the instructional approach of comprehension that we divide into two themes; seven approaches identified by NRP and three recent supports. Finally, we conclude the review by discussing relevant issues and implication for research and teaching.

METHODS

We collected a corpus of studies through systematic databases search, i.e. ERIC, Taylor & Francis Online, Wiley Online Library, and PsycINFO and the report of the National Reading Panel (2000) as exemplars. The systematic databases search used the subject identifier “reading comprehension” and the keywords “teaching” and “instruction”. We limited the search to empirical studies that have been published in peer-reviewed journals after 2000 in the United States. To be included for analysis, a study should carry out a topic on the teaching of comprehension and should involve elementary students learning English. Additionally, the study should be conducted in the U.S. We excluded studies on students with learning disabilities. The search resulted 29 studies. Then we categorized those studies based on its instructional approach used to teach comprehension as listed in Table 1. Each study is analyzed descriptively by looking at its importance, finding, and limitation.

RESULTS AND DISCUSSION

The main goal of this literature review is to investigate various instructional approaches that have been used to teach reading comprehension after the NRP report (2000). The systematic databases search resulted in 29 studies included in the analysis. Those studies are categorized into nine types of instruction: (1) comprehension monitoring, (2) wide reading, (3) Concept Oriented Reading Instruction (CORI), (4) question answering, (5) question generation, (6) explicit read aloud, (7) vocabulary-based instruction, (8) individualized/differentiated instruction, and (9) transactional approach. List of those studies is presented in Table 1. Among those nine instructions, we only discuss top three of instructions. Before moving on to the instructional approach of reading comprehension, first it is important to look at the definition of comprehension as it guides the standpoint of how comprehension instruction should be.

Defining Comprehension: Interaction or Transaction

According to Durkin (1993) comprehension is meaning-making process that is happening through the interaction between text and reader. Comprehension involves text, problem solving, thinking process, reader's prior knowledge and experiences to demonstrate understanding of what is read. This definition yields an understanding that in order to achieve meaningful reading, readers should connect cohesive ties of each word and sentence that composed the text (Dewitz, Jones, & Leahy, 2009). Then it will allow readers to build mental image of the text derived from relevant sources of what readers know (Ness, 2011).

For example, in comprehending a sentence: Marty opened her umbrella just in time and held it tightly, readers might want to know the meaning of each word. By connecting each word of the sentence, readers are able to create mental images that make up understanding of the sentence. The mental images enable readers to make inferences that Marty is outdoors, and the rain began suddenly. Without repeating the word umbrella, readers would know that what Marty holds is the handle of the umbrella although no words "handle" provided. Readers would also make inference that the day is windy as well as rainy that Marty might be caught in a rainstorm so she holds the umbrella tightly. Readers' prior knowledge and experience of rainy weather will allow them to expand their comprehension of the text about people carry umbrella when necessary and may wear raincoat, hat, and boot (Durkin, 1993). All of these inferences are made in relation to the text contributing to meaningful understanding of the text.

The above definition is supported by NRP (2000) that reading comprehension is interactive meaning-making process where "Meaning resides in the intentional, problem-solving, thinking processes of the reader that occur during an interchange with a text" (p. 4-5). This strengthen the essence of reading is to understand a text by constructing representations of the text stored in reader's memory. These mental representations are for readers' posterior use of what is read and understood either to learn or to be entertained (Pilonieta, 2010). In addition, text by its nature can be difficult or easy for some readers depending on their knowledge and abilities when interacting with it, such as vocabulary load, linguistic structure, discourse style and genre, and problem-solving strategies (Block, Gambrell, & Pressley, 2002). That is why comprehension may vary between one reader and the other.

Another definition of comprehension is that it is a dynamic process that is not only about an interaction between reader and text, but also an interaction with a situation at a particular time and space in which each element conditions the other (Rosenblatt, 1994). This definition views reading comprehension as a transactional process in which reading is occurring at a particular time in a particular context. Rosenblatt (2005) mentioned that "The meaning does not reside ready-made in the text or in the reader but happens or comes into being during the transaction between reader and text" (p. 7). It can be seen that in constructing and extracting meaning from text, a reader not only acts on the text or text acts on the reader, but also transacts each other in which aspects of total situation conditioned by and conditioning the other. To this view, the term interaction refers to a linear relationship between reader and text. In contrast, transaction refers to a blending component of both reader and text underlying metaphor of organic activity and reciprocity

(Rosenblatt, 2005). The term transaction in this definition expands the term interaction in the preceding definition, which further informs different implication for teaching comprehension.

In addition to the definition of comprehension as a transactional process between reader and text in particular context, it involves both past experiences and present state of the readers that made possible different interpretation of text with different readers. Block, Gambrell, and Pressley (2002) confirm that comprehension require three interrelated elements of reading, i.e. reader, text, and activity which is happening in dynamic ways within broad sociocultural context. That is why on different event of reading, reader's interpretation of a text may come with extremely different understanding. Thus, effective comprehension instruction then needs to take into account the knowledge about reader, text, purposeful activity, and context that advance student's ability in reading.

Instructional Approach

The second objective of this literature review is to identify various instructional approaches used to teach comprehension in elementary classroom. It is an effort to bring current reading research so that we can continue dialogue on what we know and what we need to know about comprehension instruction post NRP report (2000). In this section, we explain seven comprehension instructions identified by NRP and present top three recent comprehension instructions derived from my analysis of the literatures post 2000.

Comprehension instructions by National Reading Panel (NRP)

There are seven comprehension instructions identified by NRP (2000), i.e. comprehension monitoring, cooperative learning, graphic organizers, question answering, question generation, summarization, and multiple strategy instruction. First, comprehension monitoring refers to the concept that readers are aware of what they are reading and the process of making sense when making meaning. This instruction includes monitoring or listening to self and others, which is a cognitive process so readers recognize their problems in comprehending particular text. NRP reported 20 studies on this instruction. Second, cooperative learning or collaborative learning is an approach to reading instruction that allow students to work together with partners or small groups on a given task. As readers work together to understand text, this approach is effective to mix higher achiever with lower achiever in small groups. There were 10 studies included in NRP analysis.

Third is graphic organizer in which teachers incorporate the use of graphs or making graphs to help students understand the concept of what they read. NRP (2000) reported 11 studies that employed this instruction and most of them were to teach expository texts or content areas. Fourth, questions answering instruction is an approach that helps readers answer questions given by teachers so that they attain to better comprehension of the text. 17 studies were analyzed by NRP on this instruction suggesting many researchers have focused on this instruction to see its effectiveness on improving reading comprehension.

Fifth is question generation instruction. Unlike question answering, NRP (2000) mentioned 27 studies included in their analysis, and that the goal of this approach is to teach students strategies of questioning on what they have read. This approach can lead students to construct better memory representations by self-questions while reading so they can have better memory and understanding of the text. Sixth, summarization approach of instruction is to teach students to create summary of what they read. Students should be able to identify the main ideas of each paragraph of a text, so they are aware of how the text is structured and how ideas are related. NRP included 18 studies in their analysis of this instruction.

Lastly, multiple strategy instruction refers to an approach that students are taught to use more than one strategy when reading and interacting with the teacher over the text. NRP (2000) mentioned that multiple strategy instruction may include, for instance, teaching students to “predict along with clarification of a word's meaning, activation of knowledge about a story schema, and summarization of the main idea, and all are with awareness of problems that are encountered during the reading” (p. 4-77). There were 38 studies on this approach included in NRP's analysis, and 27 of them were subcategorized as reciprocal teaching.

Top three recent comprehension instructions post NPR report (2000)

Among the 29 studies included in this analysis, we discuss the top three of comprehension instructions, which we labeled as differentiated/individualized instruction, vocabulary-based comprehension instruction, and transactional strategies. A complete list of the findings is in Table 1 below.

Table 1. Recent Categories of Comprehension Instruction

Type of Instruction	Reference	Why instruct?
Cognitive profiles & metacognition	Allen, K. D., & Hancock, T. E. (2008). Reading comprehension improvement with individualized cognitive profiles and metacognition. <i>Literacy Research and Instruction</i> , 47(2), 124-139. doi:10.1080/19388070801938320	Successful text comprehension involves metacognition to accurately monitor text comprehension
Wide reading / repeated reading	Schwanenflugel, P. J., Kuhn, M. R., Morris, R. D., Morrow, L. M., Meisinger, E. B., Woo, D. G., . . . Sevcik, R. (2009). Insights into fluency instruction: Short- and long-term effects of two reading programs. <i>Literacy Research and Instruction</i> , 48(4), 318-336. doi:10.1080/19388070802422415	Wide reading has potential to positively impact students' reading motivation and reading skills.
CORI	Guthrie, J. T., & Klauda, S. L. (2014). Effects of classroom practices on reading comprehension, engagement, and motivations for adolescents. <i>Reading Research Quarterly</i> , 49(4), 387-416. Guthrie, J. T., Wigfield, A., Barbosa, P., Perencevich, K. C., Taboada, A., Davis, M. H., . . . Tonks, S. (2004). Increasing reading comprehension and engagement through concept-oriented reading instruction. <i>Journal of Educational Psychology</i> , 96(3), 403-423. doi:10.1037/0022-0663.96.3.403	CORI improves students' reading motivation and engagement. Engaged readers are also strategic to use self-monitoring and inferencing to understand text. Engaged readers are also wide and frequent in reading.
Question answering	Dewitz, P., Jones, J., & Leahy, S. (2009). Comprehension strategy instruction in core reading programs. <i>Reading Research Quarterly</i> , 44(2), 102-126. doi:10.1598/RRQ.44.2.1 McKeown, M., Beck, I.L., & Blake, R.G.K. (2009). Rethinking reading comprehension instruction: A comparison of instruction for strategies and content approaches. <i>Reading Research Quarterly</i> , 44(3), 218-253. dx.doi.org/10.1598/RRQ.44.3.1 Ness, M. (2011). Explicit reading comprehension instruction in elementary classrooms: Teacher use of reading comprehension strategies. <i>Journal of</i>	Comprehension involves recalling information from texts. Questioning as scaffolding to check students' understanding that guide students to be independent readers.

Type of Instruction	Reference	Why instruct?
	Research in Childhood Education, 25(1), 98-117. doi:10.1080/02568543.2010.531076	
Question generation	Humphries, J., & Ness, M. (2015). Beyond who, what, where, when, why, and how: Preparing students to generate questions in the age of common core standards. <i>Journal of Research in Childhood Education</i> , 29(4), 551-564. doi:10.1080/02568543.2015.1073199 Pilonieta, P. (2010). Instruction of research-based comprehension strategies in basal reading programs. <i>Reading Psychology</i> , 31(2), 150-175. doi:10.1080/02702710902754119	Question generation aids students with memory, recall, and identification and integration of main ideas through summarization. Students who generate their own questions related to texts show improvement in their reading scores.
Explicit Read Aloud	Baker, S. K., Santoro, L. E., Chard, D. J., Fien, H., Park, Y., & Otterstedt, J. (2013). An evaluation of an explicit read aloud intervention taught in whole-classroom formats in first grade. <i>The Elementary School Journal</i> , 113(3), 331-358. doi:10.1086/668503 Poppewell, S. R., & Doty, D. E. (2001). Classroom instruction and reading comprehension: A comparison of one basal reader approach and the four-blocks framework. <i>Reading Psychology</i> , 22(2), 83-94. doi:10.1080/027027101300213065 Smolkin, L. B., & Donovan, C. A. (2001). The contexts of comprehension: The information book read aloud, comprehension acquisition, and comprehension instruction in a first-grade classroom. <i>The Elementary School Journal</i> , 102(2), 97-122. doi:10.1086/499695	Classroom teachers are very influential in helping children's comprehension. Explicit read aloud is scaffolding that aids students with strategies, context, and decision-making process in reading.
Vocabulary-comprehension relationship	Carlo, M. S., August, D., McLaughlin, B., Snow, C. E., Dressler, C., Lippman, D. N., . . . White, C. E. (2004). Closing the gap: Addressing the vocabulary needs of english language learners in bilingual and mainstream classrooms. <i>Reading Research Quarterly</i> , 39(2), 188-215. doi:10.1598/RRQ.39.2.3 Foorman, B. R., & Petscher, Y. (2010). Development of spelling and differential relations to text reading in grades 3-12. <i>Assessment for Effective Intervention</i> , 36(1), 7-20. doi:10.1177/1534508410379844	Reading comprehension skills require adequate vocabulary development, especially to be success in content and academic areas. It includes the knowledge of letters-sound relationship.

Type of Instruction	Reference	Why instruct?
	<p>Goodwin, A.P. & Cho, S.J. (2016). Unraveling vocabulary learning: Reader and item-level predictors of vocabulary learning within comprehension instruction for fifth and sixth graders. <i>Scientific Studies of Reading</i>, 20(6), 490-514. DOI: 10.1080/10888438.2016.1245734</p> <p>Kucer, S. B. (2016). Accuracy, miscues, and the comprehension of complex literary and scientific texts. <i>Reading Psychology</i>, 37(7), 1076-1095. doi:10.1080/02702711.2016.1159632</p> <p>Stahl, K.A.D. (2009) Synthesized comprehension instruction in primary classrooms: A story of successes and challenges. <i>Reading & Writing Quarterly: Overcoming Learning Difficulties</i>, 25(4), 334-355. DOI: 10.1080/10573560903123643</p> <p>Taboada, A., & Rutherford, V. (2011). Developing reading comprehension and academic vocabulary for english language learners through science content: A formative experiment. <i>Reading Psychology</i>, 32(2), 113-157. doi:10.1080/02702711003604468</p>	
Individualized/differentiated instruction	<p>Block, C. C., Parris, S. R., Reed, K. L., Whiteley, C. S., & Cleveland, M. D. (2009). Instructional approaches that significantly increase reading comprehension. <i>Journal of Educational Psychology</i>, 101(2), 262-281. doi:10.1037/a0014319</p> <p>Connor, C. M., Jakobsons, L. J., Crowe, E. C., & Meadows, J. G. (2009). Instruction, student engagement, and reading skill growth in reading first classrooms. <i>The Elementary School Journal</i>, 109(3), 221-250. doi:10.1086/592305</p> <p>Connor, C. M., Piasta, S. B., Fishman, B., Glasney, S., Schatschneider, C., Crowe, E., . . . Morrison, F. J. (2009). Individualizing student instruction precisely: Effects of child × instruction interactions on first graders' literacy development. <i>Child Development</i>, 80(1), 77-100. doi:10.1111/j.1467-8624.2008.01247.x</p>	Heterogeneous classroom and individual difference require differentiated instruction and content to meet students' needs. This approach enables teachers to provide personalized scaffolds for each or group of students.

Type of Instruction	Reference	Why instruct?
	<p>Connor, C. M., Spencer, M., Day, S. L., Giuliani, S., Ingebrand, S. W., McLean, L., & Morrison, F. J. (2014). Capturing the complexity: Content, type, and amount of instruction and quality of the classroom learning environment synergistically predict third graders' vocabulary and reading comprehension outcomes. <i>Journal of Educational Psychology</i>, 106(3), 762-778. doi:10.1037/a0035921</p> <p>Firmender, J. M., Reis, S. M., & Sweeny, S. M. (2013). Reading comprehension and fluency levels ranges across diverse classrooms: The need for differentiated reading instruction and content. <i>Gifted Child Quarterly</i>, 57(1), 3-14. doi:10.1177/0016986212460084</p> <p>Thames, D. G., Reeves, C., Kazelskis, R., York, K., Boling, C., Newell, K., & Wang, Y. (2008). Reading comprehension: Effects of individualized, integrated language arts as a reading approach with struggling readers. <i>Reading Psychology</i>, 29(1), 86-115. doi:10.1080/02702710701853625</p>	
<p>Meaning-focused/ dialogic/ transactional approach</p>	<p>Adomat, D. S. (2012). Drama's potential for deepening young children's understandings of stories. <i>Early Childhood Education Journal</i>, 40(6), 343-350. doi:10.1007/s10643-012-0519-8</p> <p>Connor, C. M., Jakobsons, L. J., Crowe, E. C., & Meadows, J. G. (2009). Instruction, student engagement, and reading skill growth in reading first classrooms. <i>The Elementary School Journal</i>, 109(3), 221-250. doi:10.1086/592305</p> <p>Koskinen, P. S., Blum, I. H., Bisson, S. A., Phillips, S. M., Creamer, T. S., & Baker, T. K. (2000). Book access, shared reading, and audio models: The effects of supporting the literacy learning of linguistically diverse students in school and at home. <i>Journal of Educational Psychology</i>, 92(1), 23-36. doi:10.1037/0022-0663.92.1.23</p> <p>McIntyre, E., Jones, D., Powers, S., Newsome, F., Petrosko, J., Powell, R., & Bright, K. (2005). Supplemental</p>	<p>Collaborative interaction between students and teachers to text comprehension is important. Teachers and students engage in a dialogue where the teacher models an interaction, focusing on supporting students to deepen their understanding of text.</p>

Type of Instruction	Reference	Why instruct?
	instruction in early reading: Does it matter for struggling readers? <i>The Journal of Educational Research</i> , 99(2), 99-107. doi:10.3200/JOER.99.2.99-108	
	Schaps, E., & Brunn, P. (2008). They taste with their feet? A week in the life of ms. tonge's fourth grade reading class. <i>Journal of Research in Character Education</i> , 6(1), 67-72.	
	Wolf, M. K., Crosson, A. C., & Resnick, L. B. (2005). Classroom talk for rigorous reading comprehension instruction. <i>Reading Psychology</i> , 26(1), 27-53. doi:10.1080/02702710490897518	

The analysis showed three current comprehension instructions that have been central for research in the last two decades. First, we found six studies that focus on the idea of differentiated/individualized comprehension instruction. The underlying notion is that teachers need to differentiate reading instruction within a classroom since students are diverse in terms of reading skills, fluency, comprehension and needs for reading (Firmender, Reis, & Sweeny, 2013). The differentiation can be in both content and instruction to address different achievement levels of a heterogeneous classroom. Studying effective instructional approaches to teach comprehension, Block, Parris, Reed, et al. (2009) reported that individualized reading instruction gain significant highest reading score ($M = 2.53$, $SD = 0.61$), especially for second and third graders ($M = 2.41$ and 2.33 , $SD = 0.62$ and 0.63 , respectively), and is significantly higher scores than all other treatments ($M = 2.85$, $SD = 0.73$, $p < .05$). However, differentiated reading instruction is greatly dependent on teachers' pedagogical skills and knowledge on how to access student level of reading and match reading content and instruction to meet student's needs (Firmender, Reis, Sweeny, 2013).

In similar vein, Thames, Reeves, Kazelskis, et al. (2008) confirmed that individualized reading approach statistically significant on the students reading comprehension scores of struggling readers ($p < .001$). However, they underlined that students' attitude toward reading could have influenced their performance suggesting the needs for further research. Challenge in implementing this approach is also dependent on teachers' ability to well organize the instruction, which warrants the need of long-term teachers' professional development.

Second, we found six studies on vocabulary-based comprehension instruction. This approach is based on the effort to help students understand meanings of unfamiliar words during reading, and promotes knowledge of words for text comprehension (Kucer, 2016; Taboada & Rutherford, 2011). Being framed with the importance of vocabulary instruction for reading comprehension, Carlo, August, McLaughlin, et al. (2004) suggested that "Teachers should introduce novel words in the context of engaging text, design many activities such as Charades that allow learners to manipulate and analyze word meaning..." (p. 203). In addition, Foorman and Petscher (2010) studying connection between spelling and reading reported that growth in spelling of 875,040 students in grades 3-12 at 840 Florida schools was evident in elementary grades, but stagnant above grade 7. They asserted that "Knowledge of words' spelling is clearly relevant to successful text reading efficiency and reading comprehension" (p. 18).

Third, there were six studies on the use of transactional approach to teach reading comprehension. Although none of them mentioned explicitly the term "transactional", they incorporate the notion of transactions between readers and text, transactions among students and teacher, and joint construction of understanding (see e.g. Adomat, 2012; Koskinen, Blum, Bisson, et al. 2000). This approach is employed in a collaborative process where teachers and students

co-construct meaning from the text. Wolf, Crosson, and Resnick (2005) explained that “Teachers and students engage in a dialogue where the teacher models an interaction, focusing on supporting students to deepen their understanding of text” (p. 28). In addition, Schaps and Brunn (2008) confirmed by their study on fourth grade reading class that reading comprehension as a meaning making process places emphasis on classroom interaction and reflection. Students were taught within the context of a content-rich curriculum with a small repertoire of strategies that typically include visualizing, summarizing, and making inference.

Taken together, the 29 studies provide evidences on comprehension instructions that focus in different components: diverse students’ reading ability and individual differences, relationship between vocabulary and reading comprehension, and role of interaction or context that affect reading comprehension, including supplemental instruction for struggling readers. Many of those studies also strengthen the main aspect of reading comprehension that being skilled readers is to be motivated and actively engaged with the instruction and the text.

Implication for Teaching and Research

Given attention to the findings of this literature review, some implications are made for both teachers and future researchers. First, teachers need to clarify their point of view of reading comprehension. Which definition of comprehension would they hold? This fundamental understanding of comprehension can help teachers to decide appropriate reading instructions for their classroom. Teachers should focus on five literacy components suggested by NRP (2000) in a whole process of reading. Instead of implementing single strategy, teachers can consider differentiated/individualized reading instruction, vocabulary-based reading instruction, and transactional approach. These three comprehension instructions are currently used in elementary classroom as found in the literature of research although it is still possible to also consider comprehension instructions reported by NRP.

Second, implication for research is made based on limitation of this literature review and suggestion from the analysis. Future researchers might want to expand the search terms in their selection criteria to extend the coverage of studies in another literature review of this topic. The analysis of this literature review is limited on the scope of the importance of the instruction, not its effect size. Therefore, future researchers can conduct a meta-analysis to better provide researchers, teachers, and policy makers the effectiveness of comprehension instructions. Since we found limited number of studies on comprehension instruction post NRP (2000), it is appropriate to conclude that more research needed in this topic, particularly research on differentiated/individualized reading comprehension, vocabulary-based reading instruction, and transactional approach. Future researchers might also want to focus on the assessment of reading comprehension in relation to the use of comprehension instructions to show its effectiveness on students’ outcome of reading.

CONCLUSIONS

This systematic literature review aims to answer questions on what is comprehension? And what are various strategies to teach comprehension post the NRP report (2000). In the following, we discuss relevant issues of the findings on definition of comprehension and various approaches of comprehension instruction, particularly in response to the NRP.

Concerning the definition of comprehension, two definitions of comprehension mostly used in the literatures are comprehension as an interaction (Durkin, 1993) and comprehension as a transaction (Rosenblatt, 1994). It seems that the 29 studies included in this review do not specifically define comprehension in a proper way. They asserted one or two sentences that fall into the two definitions of comprehension as we construct in this review. For example, Allen and Hancock (2008) highlight that text comprehension is “the active engagement of meaning creation through a process of mediation between reader, text, and context factor”, (p.125). Smolkin and Donovan (2001), in contrast, view comprehension as transaction process where teacher and student act together over text to make meaning of what is read. Relatively few research, if any,

have formulated the definition of comprehension that further guide the research. We argue that defining comprehension is crucial as it directs the research and instruction in certain ways.

Prater (2009) mentioned that criteria of how comprehension instruction has been researched depends on how researchers define comprehension. They can view reading as behavior in which comprehension is an objective outcome. In the other hand, reading can be seen as contextualized social practice in which situation and background experience of the readers are more important for comprehension. As such, it is crucial in its very nature to define comprehension in such view before conducting further research on comprehension, implementing effective comprehension instruction, or assessing reading comprehension.

Furthermore, there is a tendency that the definition of comprehension both as interaction and transaction process is used interchangeably. NRP (2000), for example, defines reading comprehension as an interaction between text and reader that involves intention, problem solving, and thinking process. By this definition they incorporate a number of studies on comprehension instruction that have evidence in improving comprehension, including multiple strategies. However, multiple strategies in its philosophy see comprehension from transactional point of view. This blurred boundary between comprehension as an interaction and comprehension as a transaction process, has gained caution since early 1980s. Rossenblatt (2005) mentions that “I cannot accept blurring distinctions between, in the one hand, transaction, transactional, and transactional theory, on the other, information-processing, interactive processing, and interaction” (p. 39). She further explained that the two definition of comprehension are grounded in their distinct paradigm and history of the word.

Moving on from the definition of comprehension into comprehension instructions that have been used in elementary classroom post NRP (2000), there are nine comprehension instructions obtained from 29 studies. They are comprehension monitoring, wide reading, Concept Oriented Reading Instruction (CORI), question answering, question generation, explicit read aloud, vocabulary-based instruction, differentiated/individualized instruction, and transactional approach. Of the nine instructions, three were discussed specifically in this review since they gain more in term of quantity. The three instructions are: differentiated/individualized instruction (6 studies), vocabulary-based instruction (4 studies), and transactional approach (6 studies).

Unlike NRP (2000), our findings showed that research have been focusing more on how to differentiate content and instruction for reading comprehension suggesting, to some extent, the use of multiple strategies. Secondly, it is in line with NRP that research still paying attention to vocabulary learning and instruction that contribute to better reading comprehension. NRP, however, differentiate vocabulary instruction in their analysis as a separate aspect of instruction, and did not report vocabulary and comprehension relationship as text comprehension instruction because there was not enough evidence from the literatures. Thirdly, our findings showed the use of transactional approach to comprehension instruction, which is not mentioned specifically in the NRP. Of the 29 studies, however, we argue that there is no enough evidence to conclude that the three strategies are the most effective comprehension instructions recently used in elementary classroom post the NRP report.

Concerning the notion of what comprehension instruction should be used in elementary classroom, first caution raised by Pressley (2000) was that “Comprehension instructions should stimulate students to process text as good readers do” (p. 545). Having said that, comprehension to his view involves lower-order and higher-order processes that its instruction and assessment should carry out those aspects all together. NRP (2000), on the other hand, categorized comprehension instructions as a single strategy based on five components of reading: phonemic awareness, fluency, phonic, comprehension, and vocabulary. Pressley (2006) argues that all of these components should not be treated separately. Instead, those can be taken all together by teaching students multiple strategies that grounded on the view of comprehension as transaction. Three comprehension instructions in this review confirmed this caution to implement differentiated/individualized instruction, vocabulary-based instruction, and transactional approach.

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REFERENCES

- Adams, M. (1990). *Beginning to read: Thinking and learning about print*. Cambridge, MA: The Massachusetts Institute of Technology Press.
- Adomat, D. S. 2012. Drama's potential for deepening young children's understandings of stories. *Early Childhood Education Journal*, (Online), 40(6), 343-350, (<https://doi.org/10.1007/s10643-012-0519-8>, accessed December 08, 2020).
- Allen, K. D., & Hancock, T. E. 2008. Reading comprehension improvement with individualized cognitive profiles and metacognition. *Literacy Research and Instruction*, 47(2), 124-139, (<https://doi.org/10.1080/19388070801938320>, accessed December 09 2020).
- Block, C. C., Gambrell, L. B., & Pressley, M (Eds.). (2002). *Improving comprehension instruction: Rethinking research, theory, and classroom practice*. Jossey-Bass.
- Block, C. C., Parris, S. R., Reed, K. L., Whiteley, C. S., & Cleveland, M. D. 2009. Instructional approaches that significantly increase reading comprehension. *Journal of Educational Psychology*, 101(2), 262-281, (<https://doi.org/10.1037/a0014319>, accessed December 07 2020).
- Carlo, M. S., August, D., McLaughlin, B., Snow, C. E., Dressler, C., Lippman, D. N., . . . White, C. E. (2004). Closing the gap: Addressing the vocabulary needs of english language learners in bilingual and mainstream classrooms. *Reading Research Quarterly*, 39(2), 188-215, (<https://doi.org/10.1598/RRQ.39.2.3>, accessed December 10 2020).
- Dewitz, P., Jones, J., & Leahy, S. (2009). Comprehension strategy instruction in core reading programs. *Reading Research Quarterly*, 44(2), 102-126, (<https://doi.org/10.1598/RRQ.44.2.1>, accessed December 15 2020).
- Durkin, D. (1993). *Teaching them to read* (6th edition). Boston: Allyn and Bacon.
- Firmender, J. M., Reis, S. M., & Sweeny, S. M. (2013). Reading comprehension and fluency levels ranges across diverse classrooms: The need for differentiated reading instruction and content. *Gifted Child Quarterly*, 57(1), 3-14, (<https://doi.org/10.1177/0016986212460084>, accessed December 14, 2020).
- Foorman, B. R., & Petscher, Y. (2010). Development of spelling and differential relations to text reading in grades 3-12. *Assessment for Effective Intervention*, 36(1), 7-20, (<https://doi.org/10.1177/1534508410379844>, accessed December 13, 2020).
- Fox, E., & Alexander, P. (2009). Text comprehension: A retrospective, perspective, and prospective. In Israel, S., & Duff, G. (Eds.), *Handbook of research on reading comprehension*. Routledge.
- Goodwin, A.P. & Cho, S.J. (2016). Unraveling vocabulary learning: Reader and item-level predictors of vocabulary learning within comprehension instruction for fifth and sixth graders. *Scientific Studies of Reading*, 20(6), 490-514, (<https://doi.org/10.1080/10888438.2016.1245734>, accessed December 14, 2020).
- Kennedy, U., & Chinokul, S. (2020). Effect of the scaffolded reading experience using graphic novel on the English reading comprehension and reading motivation of the Thai EFL students. *LEARN Journal: Language, Education, and Acquisition Research Network*, 13(2), 158-175, (<https://so04.tci-thaijo.org/index.php/LEARN/article/view/243701>, accessed December 15, 2020).
- Kucer, S. B. (2016). Accuracy, miscues, and the comprehension of complex literary and scientific texts. *Reading Psychology*, 37(7), 1076-1095, (<https://doi.org/10.1080/02702711.2016.1159632>, accessed December 17, 2020).
- McKeown, M., Beck, I.L., & Blake, R.G.K. (2009). Rethinking reading comprehension instruction: A comparison of instruction for strategies and content approaches. *Reading Research Quarterly*, 44(3), 218-253, (<https://doi.org/10.1598/RRQ.44.3.1>, accessed December 21, 2020).

- National Institute of Child Health and Human Development (NICHD). (2000). Report of the national reading panel. Teaching children to read: An evidence-based assessment of the scientific research literature on reading and its implications for reading instruction. (NIH Publication No. 00-4769). U.S: Government Printing Office.
- Ness, M. (2011). Explicit reading comprehension instruction in elementary classrooms: Teacher use of reading comprehension strategies. *Journal of Research in Childhood Education*, 25(1), 98-117, (<https://doi.org/10.1080/02568543.2010.531076>, accessed December 22, 2020).
- Paris, S., & Stahl, S. (Eds.). (2005). *Children's reading comprehension and assessment*. Lawrence Erlbaum Associates.
- Pilonieta, P. (2010). Instruction of research-based comprehension strategies in basal reading programs. *Reading Psychology*, 31(2), 150-175, (<https://doi.org/10.1080/02702710902754119>, accessed December 21, 2020).
- Prater, K. (2009). Reading comprehension and English language learners. In Israel, S., & Duffy, G. (Eds.), *Handbook of research on reading comprehension*. Routledge.
- Pressley, M. (2000). What should comprehension instruction be the instruction of? In Pearson, P. D., Barr, R., & Kamil, M. (Eds.), *Handbook of reading research volume III*. Routledge.
- Pressley, M. (2006). What the future of reading research could be. Paper session presented at the International Reading Association's Reading Research, Chicago, IL.
- Pressley, M., & Afflerbach, P. (1995). *Verbal protocols of reading: The nature of constructively responsive reading*. NJ: Lawrence Erlbaum Associates.
- Rosenblatt, L. (1994). *The reader, the text, the poem: The transactional theory of the literary work*. Southern Illinois University.
- Rosenblatt, L. (2005). *Making meaning with texts: Selected essays of Louise Rosenblatt*. Portsmouth, NH: Heinemann.
- Schaps, E., & Brunn, P. (2008). They taste with their feet? A week in the life of ms. tonge's fourth grade reading class. *Journal of Research in Character Education*, 6(1), 67-72, (<https://www.collaborativeclassroom.org>, accessed December 28, 2020).
- Smolkin, L. B., & Donovan, C. A. (2001). The contexts of comprehension: The information book read aloud, comprehension acquisition, and comprehension instruction in a first-grade classroom. *The Elementary School Journal*, 102(2), (<https://doi.org/97-122.10.1086/499695>, accessed December 25, 2020).
- Snow, C., Burns, M., & Griffin, P. (Eds.). (1998). *Preventing reading difficulties in young children*. Washington, DC: National Academy Press.
- Stahl, K.A.D. (2009) Synthesized comprehension instruction in primary classrooms: A story of successes and challenges. *Reading & Writing Quarterly: Overcoming Learning Difficulties*, 25(4), 334-355, (<https://doi.org/10.1080/10573560903123643>, accessed December 25, 2020).
- Taboada, A., & Rutherford, V. (2011). Developing reading comprehension and academic vocabulary for english language learners through science content: A formative experiment. *Reading Psychology*, 32(2), 113-157, (<https://doi.org/10.1080/02702711003604468>, accessed December 30, 2020).
- Thames, D. G., Reeves, C., Kazelskis, R., York, K., Boling, C., Newell, K., & Wang, Y. (2008). Reading comprehension: Effects of individualized, integrated language arts as a reading approach with struggling readers. *Reading Psychology*, 29(1), 86-115, (<https://doi.org/10.1080/02702710701853625>, accessed December 25, 2020).
- Wolf, M. K., Crosson, A. C., & Resnick, L. B. (2005). Classroom talk for rigorous reading comprehension instruction. *Reading Psychology*, 26(1), 27-53, (<https://doi.org/10.1080/02702710490897518>, accessed December 28, 2020).