Reading Comprehension in Elementary Levels: A Systematic Literature Review

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Abstract: *Reading comprehension is currently crucial to children's knowledge acquisition. As a result, several study have been conducted to improve their reading comprehension skills. Furthermore, the purpose of this research is to investigate how it is enhanced in primary schools and ditermine current trends in the field. This is a systematic literature review that employed ERIC, PubMed, and Science Direct as databases. It gathered articles published in 2023. Article filtration method employed PRISMA stages. Out of 162 articles retrieved, 9 articles were considered relevant. The results stated that instructors use a variety of approaches, strategies, and school programs to increase students' reading comprehension. Strategies and media still remains dominant in this field and they preferably integrate technology into the teachig and learning process.*

Keywords: primary school; reading comprehension; review

Introduction

Reading is a dynamic activity in which the reader and author interact in order to make meaning of what is read (Isik 2022). It is a process in which past knowledge and information from the text are merged and re-interpreted. It is composed of numerous processes using our eyes, ears, and brain, such as observing conveying, interpreting, and organizing in our thoughts.

Reading is an essential part of life. Reading has several advantages, including improved brain performance, increased knowledge, and memory sharpening. Experts believe that reading is necessary and has a positive influence on people. It gives significant contribution to ones' academic performances even their life success (Snow et al. 2007). Indeed, history demonstrates that the nation's thinkers were born within a reading-rich atmosphere. This is due to the fact that starting reading as an elementary-aged child stimulates a part of the brain that promotes them to interpret language better. Students who do not have adequate reading experience during their elementary school years are bound to encounter many difficulties in their academic careers, even in their adulthood (Eloranta et al. 2019; McLaughlin, Speirs, and Shenassa 2014).

Reading at an early age can assist enhance speaking abilities, social skills, and linguistic abilities. It could be influenced by several factors, for instance parental treatment (Khanolainen et al. 2020), the way they acquire language (Dong et al. 2020), learning environment (Khanolainen et al. 2020), and their motivations. There are many ways to introduce letters to children. Nowadays, they can be accessible via computers, cellphones, and tablets via basic e-books or more advanced literacy programs. Digital tales are especially promising for promoting early language and literacy in children with special needs, reading challenges, or a lack of reading experience at home (Korat and Falk 2019).

Reading comprehension is a skill of reading which enables people to read and understand the main idea, important details, and overall meaning. It is a complex cognitive process essential for academic success and lifelong learning. It involves the ability to understand, interpret, and engage with written texts.It has a significant impact to people in terms of personal development and effective communication (Rico-Juan, Peña-Acuña, and Navarro-Martinez 2024). It also affects people's development of problem solving and critical thinking skills. So the better people has reading comprehension, the more they will get benefit of reading (Oo and Habók 2022). While reading comprehension enables individuals to assess the credibility and relevance of information, which is crucial in an age of information overload. Critical reading skills are necessary for distinguishing between credible sources and misinformation, making well-informed decisions in personal and professional contexts (McNamara n.d.).

A number of studies on the issue of reading comprehension investigate the use of teaching approaches at various levels of education (Coggins 2023; Connolly et al. 2023; Schurer, Opitz, and Schubert 2023; Serrano-Mendizábal et al. 2023). Considering the aforementioned, it is necessary to examine its implementation. Meanwhile, limited studies have been conducted, particularly at the primary school levels. Thus, the purpose of this study is to investigate the approaches used in teaching reading comprehension. The focuses of this study are on the strategies utilized and the factors which impact the reading comprehension skills in primary schools. It is attempted to answer questions, (1) How is reading comprehension improved in primary schools? And (2) What trends of reading comprehension do people preferably conduct for research.

Method

A Systematic Literature Review was conducted for this study. As the goal was to explain reading comprehension learning, it provided a systematic examination of the articles gathered as data. It examined articles in relation to reading comprehension, in particular for elementary school. They were obtained from reputable electronic journals published in 2023.

To gather the data, it employe ScienceDirect, PubMed, and ERIC as databases. Then keywords were determined using PICO (Problems, Interventions, Comparisons, and Outcomes). Insearching the articles, it included specific terms, such as "reading AND elementary", "(reading comprehension) AND elementary", "(reading comprehension) AND strategy AND elementary), and "reading OR (reading comprehension) AND elementary".

The Preferred Reporting Items for Systematic Reviews and Meta-Analyses (PRISMA) phases employed in this study included identification, screening, eligibility, and inclusion to filter the data.

Identification is the first stage of PRISMA. This is the beginning phase when conducting an article search by exploring selected databases such as ScienceDirect, PubMed, and ERIC. To begin, keywords are input, including "reading AND elementary", "(reading comprehension) AND elementary", "(reading comprehension) AND strategy AND elementary" and "reading OR (reading comprehension) AND elementary".

To increase the novelty rate of this research, the data obtained must be the most up-to-date data, therefore the articles obtained were published in 2023. A variety of limitations were also imposed, such as the data being research publications rather than book chapters, review papers, reports, or mass media. After searching using keywords, 162 articles were obtained from the three databases, namely 113 articles from ScienceDirect, 15 articles from PubMed, and 34 from ERIC. The detailed explanation is presented in Table 1.

Table 1. Article Search in Identification Phase

Databases	Keywords	Quantity
ScienceDirect	reading AND elementary	113
	"reading comprehension" AND elementary	
	"reading comprehension" AND strategy AND elementary	
	reading OR (reading comprehension) AND elementary	
PubMed	reading AND elementary	15
	(reading comprehension) AND elementary	
	(reading comprehension) AND strategy AND elementary	
	reading OR (reading comprehension) AND elementary	
ERIC	reading AND elementary	34
	reading comprehension AND elementary	
	reading comprehension AND strategy AND elementary	

The second stage is Screening. It is conceivable that the articles gained from the three databases are identical. As a consequence, they are reassessed based on their similarities. Mendeley is utilized in this screening procedure in order to search for duplicated articles. As a result, there were no duplicates, enabling 162 articles to be examined in the following stage.

The aim of SLR is to evaluate articles depending on the determined research problems. As a result, the data gathered must be in following along with the requirements. This is a critical step in SLR as the article content is being examined. Articles which do not meet the requirements will be excluded. After the evaluation of 162 articles, only 23 articles were included. Hence, 139 items were eliminated. Table 2 shows detail numbers of excluded articles and the criteria.

Table 2. Exclusion Results of Eligibility Phase

Number of Articles	Exclusion Criteria
5	Review Article
34	Other language skills
21	Not research article
79	Not relate to reading comprehension

Table 3. Exclusion Results of Exclusion Phase

Number of Articles	Exclusion Criteria
5	The topics/ issues do not match the requirements: Mathematics, business, and health issues
4	Reading comprehension is not clearly mentioned

According to table 3 during the exclusion phase, data were sorted according to inclusion and exclusion criteria. Some excluded articles do not fit the requirements, such as issues that fall beyond the scope. These articles investigate health, mathematics, and business issues. Moreover, reading comprehension is not discussed explicitly in other various papers. Then the filtered data willbe analyzed descriptive quantitatively to answer the research questions.

Result and Discussion

The results of the review indicate that teachers apply a number of methods, strategies, and school programmes to improve students' reading ability. The majority of such methods are combined using technology in their application. related to with trends, the integration of methods in interventions towards student reading comprehension is still dominating. The following sections discuss the findings of the study.

Several components of the paper were discussed in the following session, including the learning methods used, study findings, and factors that impact basic reading abilities. Some papers, however, do not specifically mention the use of a method in teaching reading comprehension. As a result, Table 4 contains information on the themes covered in the data. The classifications also differ, such as tests, method, media, and others.

Table 4 Extraction Table

Author	Method	Results	Factor	Topic classification
(Connolly et al. 2023)	Book-gifting programs	The trial revealed no indication of program effectiveness, which is ascribed to both the program's potential ineffectiveness and/or the confounding effects of Covid-19 countrywide lockdowns and other limitations imposed on foster homes during the trial period.		Method
(Alami et al. 2023)	Deep Question Answering System	The system is made up of three basic parts: 1) The duplicate question detection component searches for and returns answers to duplicate input questions; 2) the retriever component retrieves relevant passages to input questions; and 3) the reader component extracts response span from relevant passages.		Media
(Brüggemann et al. 2023)		The study compares the cognitive load encountered by fourth grade children during and after a reading comprehension test using three distinct test formats (PPT, CBT, and CAT). The rise in cognitive load during the test supports the theory that working memory is a finite resource that is exhausted during task execution. Reading comprehension test scores and cognitive stress were shown to be inversely related.		Test
(Serrano-Mendizábal et al. 2023)	task-oriented reading strategy	Reading comprehension may be improved by practicing question-answering with corrected feedback.		Method

Author	Method	Results	Factor	Topic classification
	instruction (TuinLECweb)			
(Starling-Alves, Hirata, and Oliveira 2023)		COVID-19 school closures were connected with gaps in reading comprehension and fluency but not with losses. Furthermore, negative consequences were more severe for kids who had not gained literacy prior to school closures.		Other
(Hu and Zhang 2023)		L2 students did not employ activated L1 knowledge mechanically. This is due to the fact that good lexical inference combines students' abilities to strategically employ contextual information and integrate word meanings to update the context. Using k-means clustering, the individuals were further divided into two groups. L1-L2 translation was connected to both lexical inference and text comprehension among the less experienced individuals. However, lexical inference was not shown to be substantially associated to text comprehension. Only after school, grade to begin English learning, and L1-L2 translation were adjusted for in the more proficient group of individuals did lexical inference predict text comprehension.	Translation and lexical inference	Other
(Cockerill, Thurston, and O'Keeffe 2023)	Fluency and Comprehension Instruction	On two distinct standardized, independently created Reading tests, positive impact sizes on overall reading scores were seen across the board for Grades 2 and 3 pupils.		Method
(Yigit and Durukan 2023)	Peer-Assisted and Learning Together Techniques	Peer assisted learning had a strong impact on 6th grade female students' reading comprehension accomplishment, while studying together had a moderate impact. However, present methods in Turkish courses did not make a substantial difference in reading comprehension achievement. Learning together and present methods were shown to be successful in maintaining students' reading comprehension outcomes, however peer supported learning was not. There was no significant difference identified between the effects of the research approaches on the students' reading comprehension successes or the persistence of their reading comprehension abilities.		Method
(Martins-Reis et al. 2023)		Reading fluency and literal comprehension improved across the exams, but inferential comprehension did not.	Reading fluency	Other
(Feng and Wang 2023)	Human-AI robot interaction and paper books	students in the AI class demonstrated significant enhancements in bilingual reading motivation, reading		Method

Author	Method	Results	Factor	Topic classification
		amount, reading comprehension, independent learning ability, pronunciation proficiency, and test scores compared to their peers in the paper book class.		
(Mohammed et al. n.d.)		The most difficult attribute is lexico-grammatical knowledge, while the easiest is forming an inference.		test
(Alzahrani 2023)	iPad graphic organizer app	There was strong evidence of a functional association between the usage of the graphic organizer (GO) on the iPad and an increase in the student's accurate independent replies.		Media

First research question requires answers on how reading comprehesion is improved in primary school level. There are 5 articles from Table 4 which explain the strategies, methods and media used by teachers to improve students' reading comprehension (Cockerill et al. 2023; Connolly et al. 2023; Feng and Wang 2023; Serrano-Mendizabal et al. 2023; Yigit and Durukan 2023). Three of them enlist the assistance of peers and family to assist pupils in achieving particular objectives. The other articles state that the use of technology may help students in promoting their learning. Table 4 also shows that there are two articles that investigate the use of digital apps in learning (Alami et al. 2023; Alzahrani 2023).

Two studies investigate reading comprehension tests (Brüggemann et al. 2023; Mohammed et al. n.d.). Then three examine at how COVID-19 affects students' reading skills (Starling-Alves et al. 2023), investigates particularly reading comprehension and reading fluency (Hu and Zhang 2023), and discuss the impact of reading fluency, translation, and lexical inference on pupils' reading comprehension abilities (Martins-Reis et al. 2023).

Conclusion

This study seeks to determine to what degree previous research examines the practical application of strategies, impediments, and other aspects of reading comprehension in primary schools. There have been several articles written about this topic. the bulk of research methods, strategy, and media utilized in educational settings. Despite the presence of various outside themes such as obstacle studies, reading comprehension assessments, and study of factors influencing reading comprehension, the use of technology in intervention continues to dominate. Despite its dominance, research on reading comprehension remains limited. Future researchers are likely to be able to dig deeper into the usage of media or ways that instructors might employ to increase reading comprehension abilities.

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