EFFECT OF METACOGNITIVE THINK ALOUD STRATEGY ON READING COMPREHENSION OF STUDENTS AT ELEMENTARY LEVEL IN LAHORE

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Abstract

This research conducted to explore the metacognitive Think aloud strategy effect on reading comprehension of 7th grade students in the context of Pakistan in a public school of Punjab. The experimental design was adopted in this study which involves the two groups (experimental and control groups) pretest and posttest design. The sample consisted of 64 students of a public girls' high school. Reading comprehension test for data collection was developed by the researcher and Mean, standard deviation and independent t-test were applied for data analysis. Results indicated that those students given the treatment attained higher scores compared to control. Therefore, it is suggested that teachers should be used metacognitive Think aloud strategy for teaching of English on a regular basis in real classroom.

INTRODUCTION

The backbone of any educational system is its teachers. They are essential in influencing how the brains and futures of the younger generation are shaped. Effective teaching methodologies are essential for creating a conducive learning environment and fostering intellectual, emotional, and social growth in students. Teachers are not just conveyors of information; they are facilitators of learning (Noor & Siddique, 2023). Through their expertise, they help students grasp complex concepts and subject matter. Teachers possess the ability to break down challenging topics into understandable components, making learning accessible and engaging for their students. Effective teachers recognize that each student is unique, with different learning styles, strengths, and weaknesses. They employ various teaching methodologies to cater to the diverse needs of their students (Noor & Siddique, 2023)

Reading is crucial skill among four language skills it is also plays a significant role for academically and career success, (Dorkchandra, 2010). For English language learners, reading is crucial because it can broaden their comprehension, the vocabulary, as well as ideas. Learners are able to read something due to reading. Because of this need, reading comprehension is seen as a fundamental and lifelong skills so the objective is to construct meaning from written words in text (Bhatti, 2016; Küçükolu,2013; Koda , 2007). Reading is regarded as a process of self-discovery and interaction. In order to learn new information and to find new meaning, someone reads the text using both cognitive and metacognitive processes Kucan et al., (2010) and Hellyer et al., (2001). Reading is a necessary ability that is integrally connected to academic performance (Scott & Saaiman, 2016). On the other hand, when readers have finished reading, comprehension manifests itself as a mental representation of the text's content (Duke & Pearson, 2002). To grasp the material, readers must possess a certain set of skills and talents. The abilities include first is capacity for cognition based on children's memory, concentration, critical thinking skills, and implying and visualisation abilities, secondly is motivation (a reason for studying the material), and thirdly is diverse kind of knowledge as well as an understanding regarding particular comprehension strategies. According to Papatga and Ersoy (2016) comprehension is one of fundamental and required skill which have to be instructed to students in early period of elementary level. May and Rizzardi (2002) stated that reading is all about understanding and grasping distinct viewpoints and subject matter that the

author is attempting to make clear to the audience. Students should be taught reading techniques as well as encouraged and provide different kind of tasks to practice for reading so its improve their understanding (Muliawati, 2017). Because subject of English is a required from the elementary through the postgraduate level, the majority of textbooks are available in English, because the different webpages provide content that is written in English, English reading comprehension is a crucial skill for Pakistani students. In addition, the majority of research papers published abroad and in Pakistan are written in English, as are a large number of national and international publications and media. Making Pakistani pupils aware of the importance of reading abilities for both their educational and professional lives is vital. According to Boakye (2012) the majority of Pakistani students read fiction and book summaries, which causes them to struggle with comprehension of reading at higher levels of their education. Being conscious of one's own thoughts and then learning are both components of metacognition(Schraw & Dennison, 1994). The participants reflect on their own thought processes and outcomes (Flavell, 1976). It is also described as the organizing, observing, and assessing of people's cognitive processes (Cubukcu, 2009).

Readers are encouraged to become more aware of their own mental processes while they read through metacognitive education. Gamma (2004) classified metacognitive methods into seven categories, including graphic organizers, think aloud and self- explanations, self -assessment, modelling, and reflective questions as well as prompts. When reading a material, teachers actively teach their students how to use metacognitive techniques (Pearson, 2009). Additionally, in order for students to use the metacognitive method, the metacognitive training must be gradually transferred or "released" from the teacher to the students (Pearson, 2009). when solving problems. Students need to think deeply and express what they have been taught by thinking aloud. Instructors can express their own ideas by calling attention to the crucial details for learners who have limitations in their capacity to comprehend while reading aloud because research shows that kids learn best from strong models (Duke & Pearson, 2002). By reading aloud, educators in this technique allow their minds to grow. Students are attentive listeners in the meantime as they concentrate on their instructors' explanations. They gain an understanding of the strategy's application and how understanding works in this fashion. Students are urged to express their thoughts (goals, strategies, techniques to be utilized, etc.) while clarifying their choices as part of the thinking aloud metacognitive strategy. Students are encouraged to assess their existing thinking by using the think aloud technique. For example, they can ask themselves, "What do I already know about this topic that could guide my learning?" Is there a connection between this subject matter and the other knowledge I have? How should I approach this issue if it comes up on my test or final exam? Thinking aloud allows the reader to verbally communicate their comprehension of the text's meaning as well as the steps they took to understand it. It has gained popularity recently as a way to distinguish readers' reading-related cognitive processes. Thinking Aloud has served as a test to identify and gauge covert cognitive processes.

Thinking aloud strategy can be utilized not only as a model but also to make readers' thinking observable (Walker, 2005) Therefore, thinking aloud can help students better monitor their reading and grasp what they are reading, which will make it easier for them to comprehend the textbook. Metacognitive Think aloud strategy is utilized to simulate cognitive procedures like formulating choice of words, conjuring up mental images, connecting textual material to existing knowledge, assessing comprehension, and getting over word recognition or comprehension barriers. To improve student collaboration and cooperative learning, think aloud exercises can be finished in pairs.

One person approaches a problem and verbalizes their thought process; the other person listens and questions the issue solver to help them explain their reasoning. The listener merely asks questions regarding the problem-solving processes; they do not offer any assistance. According to Pate and Miller (2011) study, they found that there was a noticeable difference between students who were taught think-aloud tactics and those who weren't in secondary level technical education courses when it came to performance.
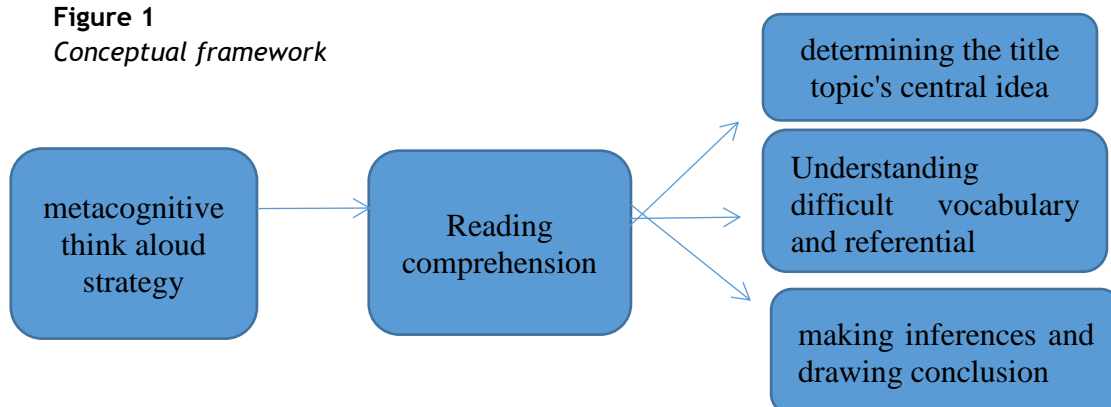
Jeon et al., (2005) in their study on the usefulness of thinking-aloud pair problem solving in enhancing high school chemistry students' problem-solving abilities, In terms of remembering the relevant law and mathematical execution, they discovered that students in the experimental group performed better in terms of conceptual knowledge. Henjes (2007) found in their study of the application of thinking aloud in subject of mathematics, that students' problem-solving behaviors, particularly their grasp of the problem, had significantly improved. The study found that students who used the TAPPS procedure fared better while employing talking aloud pair problem solving to improve student performance in their course. According to Kymes (2005) research the think-aloud strategy is a method by which an individual voices their thoughts while performing a task. Students' outbursts of thought are precisely what they appear to be. The teachers share their knowledge about the methods they employ to help students understand. When students learn how to apply the thinking aloud technique, they are told to express all of their feelings as well understandings regarding the material. The instructor would provide the pupils instructions on how to explain their objective, associate with their previous experience, choice of words, ask questions, assess the textual matter and take into account what they have learnt verify assumptions and forecasts. Some experts, like Pressley (2000), and Kymes (2005) have analyzed the think Aloud. According to earlier research, think aloud can be used to mimic various aspects of comprehension, including formulating predictions, visualizing information, connecting it to various types of previous information, checking for understanding, and tackling issues with word identification or comprehension. The validity of the thoughtful technique for teaching was verified by Wang and an in 2017. Additionally, according to Raihan (2011), this tactic might support classroom conversation. According to earlier research (Alzu'bi, 2019; Davey, 1983, Ys et al., 2018), think-aloud reading has a favorable impact on learners' enthusiasm for and involvement in the process of learning and reading. Using this method, students' attitudes towards reading and how they saw themselves as readers improved. Additionally, according to Walker (2005) this approach improves students' application of strategies, fosters self-esteem, and raises engagement levels. Thui and Vein (2022) conducted the study on think aloud strategy on EFL students reading comprehension they concluded its effect for reading comprehension teaching. Chin and Ghani (2021) conducted a study in Malaysia on use of think aloud strategy on primary students reading comprehensions and found that Think-aloud support metacognition; therefore, the use of this strategy could build on learners' thinking processes as well as self-regulation as a reader.

Another finding by Zhao et al., (2014) was that students who were taught metacognition in the classroom outperformed those who were taught through traditional meaningful learning on the last exam. In order to teach English reading comprehension, this paper aims to use thinking aloud as metacognitive method.

Considering the fact that reading and the Metacognitive teaching approaches have been the subject of substantial research in the worldwide context, the topic seems to not have been thoroughly examined in the Pakistani context, particularly at elementary level of 7th grade students Accordingly, the objective of this research was to determine the effect of metacognitive think aloud strategy on reading comprehension of students at elementary level and it was the following hypothesis: There is no significant effect of metacognitive think aloud strategy on reading comprehension of students at elementary level.

Figure 1
Conceptual framework

metacognitive think aloud strategy → Reading comprehension → determining the title topic's central idea; Understanding difficult vocabulary and referential; making inferences and drawing conclusion

The metacognitive think-aloud approach is the independent variable according to the conceptual framework in Figure 1 above. The dependent variable is reading comprehension which is consisted on more factors which are related to first is determining the title and main idea second is understanding the difficult vocabulary and referential, making inferences and drawing conclusion from the paragraphs. The goal of this study was to determine how the think-aloud technique affects students' reading comprehension skills.

METHODS

The nature of study was quantitative. Therefore, this study employed experimental research with a pre & posttest design. Experimental research is helpful for exploring connection between variables (Gay et al., 2012). The participants from a public Girls' High School of 7th grade students were selected randomly and a Controlled group, and experimental group was chosen at random from two groups. In each group 32 girls' students were included. So, the girls' students were 64 and Experimental group received treatment through think aloud metacognitive strategy and controlled group was used the traditional lecture method. English Reading Comprehension Test was used as the data collection tool (ERCT) which created by the researcher based on the curriculum's learning objectives. The 50-items of English Reading Comprehension Test were validated by Field of Experts. One hundred and twenty students who were not involved in the study were given the ERCT for pilot testing. Kudar-Richardson was used to assess the test instrument's reliability, and the result was an index of 0.91. The same reading test was administered before and after the intervention for a period of eight weeks employing as the pretest and posttest technique of data collection from both Groups. By employing the mean, standard deviation, as well t-test data were analyzed.

Figure 2

Interventionn Procedure of Study
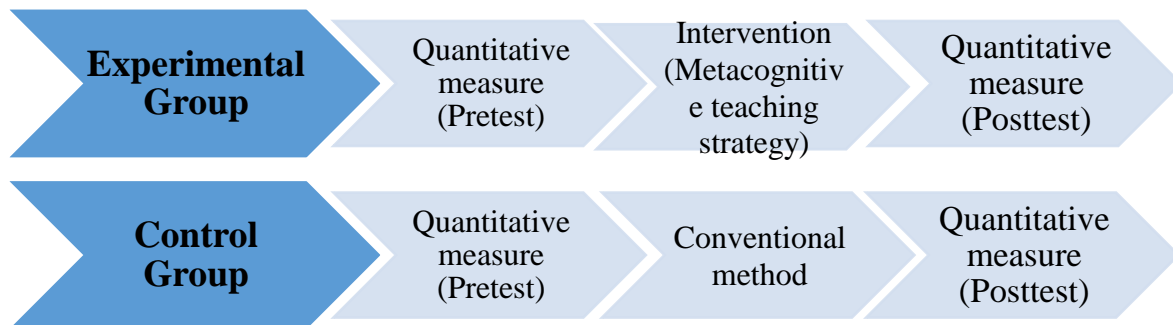
Results

Table 1 : Comparison of Pre-test scores of Experimental and Control Groups with reference to identify the title

Research Group	N	M	SD	t	d	Sig
Control	32	1.78	.792	.161	62	.873
Experimental	32	1.75	.762			

Above Table 1 showed that (t = .161, p = .873 > .001), there was no significant difference in the pre-test of students' scores between two groups with respect to identify the title. It inferred before treatment, both group students' levels of reading comprehension were equal with respect to identify the title.

Table2: Comparison of Post-test of Experimental and Control Groups with respect to identify the title

Research Group	N	M	SD	t	d	Sig
Control	32	1.94	.564			

Research Group	N	M	SD	t	d	Sig
Experimental	32	2.76	.786	-5.205	62	.001

As Table 2 (*t* = -5.205, *p* <.001) found a significant difference between the mean of two groups' outcomes on the posttest for the Reading Comprehension Test with respect to identify the title. After treatment, it was revealed that the experimental group had significantly better outcomes.

Table3: Comparison of Pre-test scores of Experimental and Control Groups with respect to identify the main idea.

Research Group	N	M	SD	t	d	Sig
Control	32	1.59	.499	-.273	62	.813
Experimental	32	1.63	.554			

As Table 3 (*t* = -.273, *p* = .813 > .001), there was no statistically difference in the pre-test of students' scores of two groups with respect to identify the main idea. It indicated that before the treatment, both groups students' levels of reading comprehension were equal. with respect to identify the main idea.

Table 4: Comparison of Post-test of Experimental and Control Groups with respect to identify the main idea

Research Group	N	M	SD	t	d	Sig
Control	32	1.59	.499			
Experimental	32	1.63	.554	-4.320	62	.001

As Table 4 (*t* = -4.320, *p* = .001) demonstrated a significant difference between the mean of two groups' results on the posttest with respect to identify the main idea. After treatment, it was exposed that the experimental group had significantly better outcomes.

Table 5: Comparison of Pre-test scores of Experimental and Control Groups with respect to understanding the vocabulary

Research Group	N	M	SD	t	d	Sig
Control	32	2.03	.695	-.215	62	.844
Experimental	32	2.00	.568			

Above Table 5 showed that (*t* = .215, *p* = .844 > .001), there was no significant difference in the pre-test of students' scores between two groups with respect to understanding the vocabulary. It inferred before treatment, both group students' levels of reading comprehension were equal with respect to understanding the vocabulary.

Table 6: Comparison of Post-test of Experimental and Control Groups with respect to understanding the vocabulary

Research Group	N	M	SD	t	d	Sig
Control	32	2.03	.695			
Experimental	32	2.00	.568	-6.641	62	.001

As Table 4 (*t* = -6.641, *p* = .001) demonstrated a significant difference between the mean of two groups' results on the posttest with respect to understanding the vocabulary. After treatment, it was revealed that the experimental group had significantly better outcomes.

Table 7: Comparison of Pre-test scores of Experimental and Control Groups with regard to comprehending the Referential

Research Group	N	M	SD	t	d	Sig
Control	29	2.88	.492	.000	62	1.000
Experimental	29	2.88	.492			

Above Table 7 showed that (t = .000, p = 1.000), there was no significant difference in the pre-test of students' scores between two groups with respect to understanding the Referential. It inferred before treatment, both group students' levels of reading comprehension were equal with respect to understanding the Referential.

Table 8: Comparison of Post-test of Experimental and Control Groups with respect to comprehending the Referential

Research Group	N	M	SD	t	d	Sig
Control	32	2.88	.492			
Experimental	32	2.88	.492	-6.035	62	.001

As Table 8 (t = -6.035, p < .001) demonstrated a significant difference between the mean of two groups' results on the posttest with respect to understanding the Referential After treatment, it was revealed that the experimental group had significantly better outcomes.

Table 9: Comparison of Pre-test scores of Experimental and Control Groups with regard to Inferences

Research Group	N	M	SD	T	d	Sig
Control	32	6.78	2.498	.102	62	.919
Experimental	32	6.72	2.399			

Above Table 9 showed that (t = .102, p = .919 > .001), there was no significant difference in the pre-test of students' scores between two groups with respect to inferences. It inferred before treatment, both group students' levels of reading comprehension were equal with respect to Inferences.

Table 10: Comparison of Post-test of Experimental and Control Groups with respect to Inferences

Research Group	N	M	SD	t	d	Sig
Control	32	6.78	2.498			
Experimental	32	6.72	2.399	-3.446	62	.001

As Table 10 (t = -3.446, p < .001) demonstrated a significant difference between the mean of two groups' results on the posttest with respect to Inferences After treatment, it was revealed that the experimental group had significantly better outcomes.

Table 11: Comparison of Pre-test scores of Experimental and Control Groups with respect to Conclusion

Research Group	N	M	SD	t	d	Sig
Control	32	2.50	.508	-.258	56	.797
Experimental	32	2.53	.507			

Above Table 11 showed that (t = -.258, p = .797 > .001), there was no significant difference in the pre-test of students' scores between two groups with respect to Conclusion. It inferred before

treatment, both group students' levels of reading comprehension were equal with respect to Conclusion.

Table 12: Comparison of Post-test of Experimental and Control Groups with respect to Conclusion

Research Group	N	M	SD	t	d	Sig
Control	32	2.50	.508			
Experimental	32	2.53	.507	-3.773	62	.001

As Table 12 (*t* = -3.446, *p* < .001) demonstrated a significant difference between the mean of two groups' results on the posttest with respect to Conclusion. After treatment, it was revealed that the experimental group had significantly better outcomes.

Table 13: Comparison of Two Groups an entire Reading Comprehension Test with respect to Pre-test

Research Group	N	M	SD	t	d	Sig
Control	32	17.56	4.040	.064	62	.950
Experimental	32	17.50	3.827			

Above Table 13 showed that (*t* = .064, *p* = .950 > .001), there was no significant difference in the pre-test of students' scores between two groups for the entire Reading Comprehension Test. It inferred before treatment, both group students' levels of reading comprehension were equal.

Table 14: Comparison Two Groups of an entire Reading Comprehension Test with regard to Post-test

Research Group	N	M	SD	t	d	Sig
Control	32	18.50	4.621			
Experimental	32	24.83	1.713	-7.284	62	.000

As Table 14 (*t* = -7.284, *p* < .001) demonstrated a significant difference between the mean of two groups' results on the posttest for the entire Reading Comprehension Test. After treatment, it was revealed that the experimental group had significantly better outcomes.

Figure 3
Students Pre & Posttest Reading Scores

STUDENTS PRE & POST READING SCORES
Control Group   Experimental Group
Pretest Scores: 17.56, 17.5
Posttest Scores: 18.5, 24.84
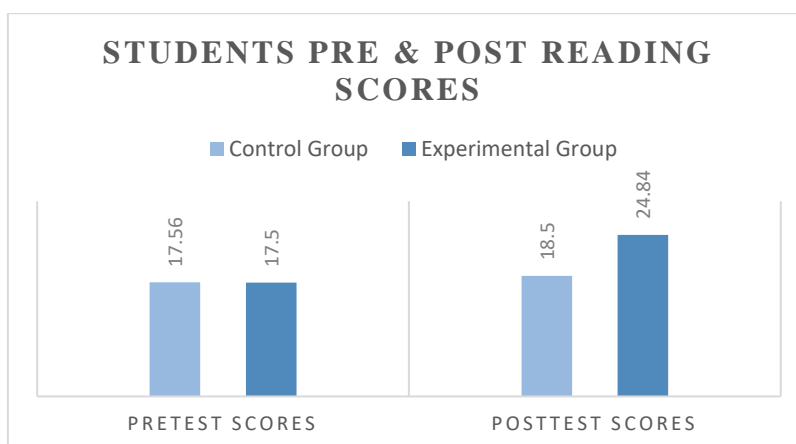
DISCUSSION

The findings showed that pupils who got treatment of English teaching by employing the think aloud method performed better than their peers on the reading comprehension test. This would be due to

the fact that learners have the chance to examine their performance; shortcomings are fixed contributing to an improvement in performance at the teacher's evaluation. The research has similar results to Thui and Vein (2022) finding that students who were taught through think aloud strategy performed better those who were taught using the typical lecture technique on the Reading Test. Chin and Ghani (2010) found that teaching students through metacognitive think aloud strategy performed better then those who were taught using the conventional method. According to the study, metacognitive instructional methods have a considerable impact on pupil's English skills. It is vital that English teachers use think aloud strategy to improve students' English reading. Learner-centered teaching methods such as metacognitive approaches promote student engagement as well as allow learners to think logically & productively. Metacognitive practices are thought to involve pupils in the educational process as well as work to develop their critical reasoning, logic, & issue abilities if done appropriately & attentively (Coutinbo,2007; Magno, 2010; Taylor,1999)

CONCLUSIONS

In conclusion, the value of teachers and effective teaching methodologies cannot be overstated. They are essential components of a successful educational system, shaping the minds and inspiring students to become lifelong learners. So, there is need to investing in teachers and continuously improving teaching methodologies is crucial for the progress and development of students. This research finding revealed that the execution of metacognitive think aloud instruction by teachers in the context of real classroom at elementary level among 7th grade students that English reading comprehension teaching can enhance student performance. It determined that by using the think aloud metacognitive method helps students' reading comprehension g instead of using the conventional methods; so there is need to use metacognitive think aloud approach to teach English in high schools. Teachers should use metacognitive strategy particularly in this era as language is taught as the art of teaching when teaching English language. In light of metacognitive instruction approach success, preservice and in-service instructors must get training to develop the abilities required for using this strategy.

REFERENCES

[1] Alzu'bi, M. (2013a). Using mobile educational technologies in vocabularies acquisition. Journal for Research and Studies in Humanities 13 (2), 285-92.
[2] Bhatti. (2016). Teaching Reading Skills through Comprehension at BS Level. The Global Journal of English Studies , 2 (1), 3-12.
[3] Boakye, N.A., (2017). Extensive reading in a tertiary reading programme: Students accounts of affective and cognitive benefits', Reading & Writing, 8(1),
[4] https://doi. org/10.4102/rw. v8i1.153.
[5] Chin, A. S. W., & Ghani, K. A. (2021). The Use of Think-Aloud in Assisting Reading Comprehension among Primary School Students. Journal of Cognitive Sciences and Human Development, 7(1), 11-32. https://doi.org/10.33736/jcshd.2456.2021
[6] Coutinbo, S.A.(2007). The relationship between goals, metacognition and academic success. Educate, 7(1), 39- 47.
[7] Cubukcu, F. (2009). Metacognition in the classroom. Procedia - Social and Behavioral Sciences, 1(1), 559-563. https://doi.org/10.1016/j.sbspro.2009.01.101.
[8] Davey, B. (1983). Think-aloud – Modeling the cognitive processes of reading comprehension. Journal of Reading, 27(1), pp. 44-47.
[9] Dorkchandra. (2010). Enhancing English Reading Comprehension Through A Text Structure Reading Strategy Call Program (Doctoral thesis) Suranaree University of Technology.
[10] Duke, N. K., and Pearson, P. D. (2002). Effective practices for developing reading comprehension. What Research has to Say about Instruction, 2, 205-210. Newark, DE: International Reading Association. DOI: 10.1598/0872071774.10.

[11] Duke,N.K.,Pearson,P.(2002).Effective practices for developing reading comprehension. (Ed. A. E. Farstrup, S. Samuels). What research has to say about reading instruction. International Reading Association, Newark, DE, 205-242.

[12] Flavell, J.H. (1976) Metacognitive aspects of problem solving, in: L.B. Resnick (Ed.) The Nature of Intelligence. Hillsdale, NJ: Lawrence Erlbaum

[13] Gamma, C. (2004). Integrating Metacognition into Interactive Learning Environment. Unpublished Ph.D Dissertation University of Sussex Brighton.

[14] Gay, L.R., Mills, G.E. and Airasian, P.W. (2012). Educational Research Competencies for Analysis and Application. 10th Edition, Pearson, Upper Saddle River.

[15] Hellyer, R., Robinson, C., & Sherwood, P. (2001). Study skills for learning power (2nd Ed.). Boston: Houghton Mifflin Company.

[16] Henjes, L., A . (2007). The Use of Think-Aloud Str The Use of Think-Aloud Strategies to Solve Word Problems (unpuplished Masters thesis) University of Nebraska – Lincoln.

[17] Jeon, K., Huffman, D. & Noh, T. (2005). The effects of thinking aloud pair problem solving on high school students' chemistry problem-solving performance and verbal interaction. Journal of Chemical Education, 85(10), 1558-1564.

[18] Koda, K. (2007). Reading and Language Learning: Cross linguistic Constraints on Second Language Reading Development. Language Learning. Open Journal of Modern Linguistics, 4, 1-44. http://dx.doi.org/10.1111/0023-8333.101997010-i1.

[19] Kucan, Linda & Isabel L. Beck. (2010). Thinking aloud and reading comprehension research: Inquiry, instruction, and social interaction. Review of Educational Research. 80 (3)

[20] Küçükoğlu, H. (2013). Improving reading skills through effective reading strategies. Procedia - Social and Behavioral Science, 70, 709 – 714. https://doi.org/10.1016/j.sbspro.2013.01.113.

[21] Kymes,A. (2005)Teaching Online Comprehension Strategies Using Think-Alouds abilities. . College Reading and Learning, 30(1), 34.

[22] Magno, C. (2010). The role of metacognitive skills in developing critical thinking. Learning, Memory, and Cognition, 36(1), 255-262.

[23] May F. B. & Rizzardi, L. (2002). Reading as communication (6th Ed.). USA: Prentice Hall.

[24] Muliawati.I. (2017). Reading Comprehension Achievement: A Comparative Study between Science and Social Science Students. Studies in English Language and Education, 4(1), 92-104,

[25] Noor, M., Siddiqui, G. K., & Khan, A. M. (2023). Developing Reading Comprehension among Students through Metacognitive Instructional Strategy. Annals of Human and Social Sciences, 4(2), 133-141. https://doi.org/10.35484/ahss.

[26] Papatga, E., & Ersoy, A. (2016).Improving reading comprehension skills through the

[27] scratch program. International Electronic Journal of Elementary Education, 9, 124-150.

[28] Pate, M.L., & Miller, G. (2011). Effects of Think-Aloud Pair Problem Solving on Secondary-Level Students' Performance in Career and Technical Education Courses. Journal of Agricultural Education, 52, 120-131.

[29] Pearson, P. D. (2009). The roots of reading comprehension instruction. In S. E. Israel and G. G. Duffy (Eds.), Handbook of Research on Reading Comprehension (pp. 3-31). New York: Routledge.

[30] Pressley, M. (2000). What should comprehension instruction be the instruction of? In M. L. Kamil, P. B. Mosenthal, P. D. Pearson, & R. Barr (Eds.), Handbook of reading research, Vol. 3, pp. 545-561). Lawrence Erlbaum Associates Publishers.

[31] Raihan, M.A. (2011). 'Think-aloud' Techniques used in Metacognition to Enhance Self-regulated Learning. Journal of Educational Research, 25(2),125-160.

[32] Schraw, G., & Dennison, R.S. (1994). Assessing metacognitive awareness. Contemporary EducationalPsychology, 19, 460-475.

[33] Scott, L. & Saaiman, E., 2016, Promoting reading skills or wasting time? Students' perceived benefits of reading in an intermediary programme at the Vaal University of Technology, Reading & Writing,7(1), 1-11. https://doi.org/10.4102/rw.v7i1.82

[34] Taylor, S. (1999). Better learning through better thinking: Developing students' metacognitive

[35] Thui,L.M.,& Vien, T.(2022).The effects of think-aloud strategy on efl young learners' reading skill practice. European Journal English Language Teaching 7(3)137-164

[36] Walker, B.J., (2005). Thinking aloud: Struggling readers often require more than a model. International Reading Association, 58(7), 688-692.

[37] Wang, Z. & Han, F. (2017). Metacognitive knowledge and metacognitive control of writing strategy between high and low-performing Chinese EFL writers. Theory and Practice in Language Studies, 7(7), 523-532.

[38] Ys, S.B., Nasir, C., & Rohiman, C.L.N. (2018). Using the Think-Aloud Method in Teaching Reading Comprehension. Studies in English Language and Education, 5(1),148-158.

[39] Zhao, N., Wardeska, J.A; McGuire,S.Y. &Cook, E. (2014). Metacognition an Effective Tool to Promote Success in College Science Learning. Journal of College Science Teaching 43 (4) 48-54.