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RESEARCH PAPER

Developing Reading Comprehension among Students through Metacognitive Instructional Strategy

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ABSTRACT

This research conducted to explore the metacognitive instructional strategy of self assessment effect on student's reading comprehension in a public school of Punjab in the context of Pakistan. The objective of the current study was to find out; the effect of metacognitive self-assessment strategy on student's reading comprehension at 7th grade. The current study used experimental design that involves the two groups (experimental and control groups) pre-test and post-test was adopted. The experimental group treatment was given by self-assessment metacognitive strategy and control group was used the traditional lecture method. The sample consisted of 58 students of a public girls' high school. Reading comprehension test for data collection was developed by the researcher and Mean, standard deviation, t-test were used for analysis. Results indicated that those students given the treatment attained higher scores compared to control group students. So, it is suggested that metacognitive instructional strategy should be adopted by instructors on a regular basis in their English language classroom.

Keywords: Metacognitive Instructional Strategy, Reading Comprehension Self-Assessment

Introduction

In the 21st century, the significance of a professional teacher and instructional strategies has increased. A teacher's role is to facilitate learning, serve as a mentor, and encourage lifelong learning. Instead than teaching students to memorize facts, one of the key objectives of education presently is to help them for developing Thinking skills. So, the instructors need to educate pupils how to obtain and analyze the information for themselves, rather than just transmitting knowledge. This implies the adoption of instructional strategies that promote teamwork, reasoning and reflective practices. Thinking abilities and techniques they will use throughout their lives. The way we learn and access information has significantly changed. Teachers must adapt their teaching methods to keep up with these changes and ensure that students receive a quality education. Teachers and teaching methodology play a crucial role in students' learning. The way teachers approach teaching and their methodology can either inspire students to learn or discourage them from learning. In order for pupils to possess the ability to teach others how to learn, a quality teaching should really be capable of demonstrating to them how to learn, how to remember, how to motivate themselves, and how to handle their own education. Because of all these factors, it is crucial to look into how teachers use metacognitive methods in their teaching as well in student's learning process. Teachers must use teaching methods that inspire curiosity; creativity and help students to develop a growth mindset. English is an international language and in Pakistan it is taught as a second language and added a compulsory subject in curriculum. So it's essential to learn for each student as well to grasp on their reading skill for academic purposes as well later life.

Reading is a fundamental means of acquiring understanding that serves as the foundation for the educational process. For reading to be meaningful, comprehension is a fundamental requirement. Better reading comprehension has been connected with a variety of reading techniques. When learners actually engage with content, reading comprehension can be improved. Reading is an essential skill for academic success. Students who develop good reading skills will not only acquire knowledge, but also improve their language skills, critical thinking skills, and writing skills, which are all important for academic success. Teachers frequently, cover a variety of reading strategies to help students in the 21st century learn reading comprehension abilities.

Yang (2006) stated that reading techniques frequently assist learners in creating as well as retaining meanings. Many strategies have been linked to improved reading comprehension, according to research. Identifying core concepts, identifying organizational relationships, asking questions, reviewing, remembering, modifying, as well as comprehending are some of these techniques. In addition, Sani, Wan & Raslee, (2011) methods like motivation, self-questioning, self-regulation, and self-evaluation are linked to improved reading and comprehension.

Another justification for its usage, Metacognition has been associated with improvements in learning outcomes for learners of all learning abilities (Shelia, 1999). Metacognitive activity involves the pupil in the educational process as well as aims to enhance their analytical reasoning, thinking, including problem-solving capacity (Ellis,1999; Lippmann,2005; & Coutinbo,2007). Only by using metacognitive instructional practices would this be possible. Metacognition is the activity of cognitively controlling and supervising various mental functions, such as observation, behavior, remembering, or thinking (Schraw, & Dennison, 1994).

It may also Ormrod,(2004) be described as the understanding of our mental abilities as well as how individuals employ these functions to acquire knowledge and recall things. A person can understand and manage his/her cognitive performance with the use of a regulatory mechanism called metacognition. Understanding about successful strategies that can be obtained in reaching particular objectives and many different kinds of mental activities are included in the category of approach metacognitive knowledge (Rahman, 2011).

As per Novak (1987), metacognitive methods are those that enable the learner to take significant control over their own learning. These are abilities which both the instructor and the pupil employ to accomplish their objectives. These techniques help the student control his thinking activities. Metacognitive methods come in a variety of forms; the precise number is unknown. Several investigators have discovered a wide variety of techniques. Think aloud; direct explanation, scaffolded teaching, intellectual modeling, as well as cooperative learning were among the strategies listed in a 1997 paper by Ashman and Conway as ways to enhance metacognition.

Self evaluation as well as self - direction are the two categories into which Rivers (2001) divides metacognitive methods. For Meaningful education, however, metacognitive strategies can be combined with other instructional strategies to enhance meaningful learning. Pupils who have been instructed metacognitive strategies in the school setting performed much better on the final assessment test than pupils who learned employing traditional lecture (Zhao, Wardeska, McGuire, & Cook ,2014).

Coutinbo (2007) stressed once more that pupils can actively engage with education using metacognition, even those who would typically "shut up" or refrain from speaking up in a traditional context. When applied properly, each metacognitive method can help pupils expand their knowledge of text, memorising fundamental information, and gaining

competencies and skills. This strategy, that causes cognitive reorganisation, increases pupils' comprehension according to Ozsoy (2008).

It is the responsibility of the instructor to implement instructional strategies that will improve performance in order to increase English proficiency. Real learning requires learners to engage in activities like conversation, object manipulation, experimentation, and creative problem solving, which are not encouraged by conventional educational techniques like lectures, repetition, as well as content study.

The pedagogical technique used was the most significant aspect that had a substantial influence on pupil achievement academic progress (Okoronka and Wada (2013). Yet, this traditional approach is still used to teach the majority in English language classes. Inquiry-based, problem-solving, cooperative or group learning, remedial language instruction, guided discussion, and the utilization of digital resources have all been advocated as successful methods of instruction in schools (Adedoyin, 2000; Ajewole, 2001).

Self assessment, in the words of Schunk (1996), is simply evaluating the standard of one's own works. It capable of being accepted the effectiveness of completed work using concrete standards and supporting data. Self-evaluation is a process that is achievement. Prior to the instructor's performance appraisal, the students must evaluate himself. A learner-centered approach to accomplishment is self assessment. It requires the pupil taking control of his or her own learning and life. By posing critical questions and employing the answers to those questions to prepare for classroom tests or exams, the learning involves self evaluation to aid in comprehension of the lesson.

In addition to helping students succeed academically, metacognitive approaches have been shown to improve attitudes towards classmates and the institution (Magno,2001). Several metacognitive tactics can be used to assist low ability children in improving achievement. These pupils have trouble succeeding in the classroom context, according to research by Kramarski et al. (2004). In general,Sheila (1999);Lippman,(2005); Coutinbo,(2007) it may be claimed that metacognitive techniques encourage the use of rational reflection, thinking, as well as real concern skills .

The topic does not appear to have been sufficiently investigated in the Pakistani context, despite the fact that reading and the Metacognitive teaching methods has been the subject of extensive research in the international context. So, the objective of the current study was to find out, effect of metacognitive self-assessment strategy on student's reading comprehension at 7th grade and it had the following hypothesis: There is no significant effect of intervention on student's reading comprehension at 7th grade.

Material and Methods

This study employed an experimental research design. Experimental research is helpful for exploring the connections between variables (Gay & Airasian ,2003). From a public girls' high school of 7th grade participants were selected and a Control group, and experimental group was chosen at random. In each group 29 girls' students were included, and Experimental group received treatment through self-assessment metacognitive strategy and control 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 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 0.92. The same reading test was administered before and after the intervention for a period of six weeks employing as the pretest and post test technique of data collection for both Groups. By employing the mean, standard deviation, and t-test data was analyzed.

Results and Discussion

Table 1
Pre-test Comparison with of Experimental& Control Groups with regard to identify the title

Research Group	N	M	SD	T	D	Sig
Control	29	1.72	.797	.169	56	.867
Experimental	29	1.69	.761			

In accordance with Table 1 (t = .169, p = .867< 0.05), there was not a statistically significant difference in the pre-test scores of students of two groups with regard to identify the title. It implies before that to treatment, both groups' levels of reading comprehension were equal.

Table2
Post-test Comparison of Experimental& Control Groups with regard to identify the title

Research Group	N	M	SD	T	D	Sig
Control	29	1.90	.557			
Experimental	29	2.76	.786	-4.818	56	.000

As explained by Table 2 (t = -4.818, p = .000) displays a significant difference between the two groups' mean results on the posttest for the entire Reading Comprehension Test with regard to identify the title. After treatment, it was discovered that the experimental group had significantly better results.

Table3
Pre-test Comparison of Experimental& Control Groups with regard to identify the main idea.

Research Group	N	M	SD	T	D	Sig
Control	29	1.55	.506	-.244	56	.808
Experimental	29	1.59	.568			

In accordance with Table 3 (t = -4.818, p = .808< 0.05), there was not a statistically significant difference in the pre-test scores of students of two groups with regard to identify the main idea. It implies before that to treatment, both groups' levels of reading comprehension were equal.

Table 4
Post-test Comparison of Experimental& Control Groups with regard to identify the main idea

Research Group	N	M	SD	T	D	Sig
Control	29	1.79	.861			
Experimental	29	2.86	1.217	-3.862	56	.000

As explained by Table 4 (t = -3.862, p = .000) displays a significant difference between the two groups' mean results on the posttest with regard to identify the main idea. After treatment, it was discovered that the experimental group had significantly better results.

Table 5
Pre-test Comparison of Experimental& Control Groups with regard to comprehending the vocabulary

Research Group	N	M	SD	T	D	Sig

Control	29	1.93	.651	-.215	56	.830
Experimental	29	1.97	.566			

In accordance with Table 5 (t = -.215, p = .830< 0.05), there was not a statistically significant difference in the pre-test scores of students of two groups with regard to comprehending the vocabulary. It implies before that to treatment, both groups' levels of reading comprehension were equal.

Table 6
Post-test Comparison of Experimental & Control Groups with regard to comprehending the vocabulary

Research Group	N	M	SD	T	D	Sig
Control	29	2.00	.598			
Experimental	29	2.97	1.017	-4.408	56	.000

As explained by Table 6 (t = -4.408, p = .000) displays a significant difference between the two groups' mean results on the posttest with regard to comprehending the vocabulary. After treatment, it was discovered that the experimental group had significantly better results.

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

Research Group	N	M	SD	T	D	Sig
Control	29	2.83	.468	.000	56	1.000
Experimental	29	2.83	.468			

In accordance with Table 7 (t = .000, p = 1.000< 0.05), there was not a statistically significant difference in the pre-test scores of students of two groups with regard to comprehending the Referential. It implies before that to treatment, both groups' levels of reading comprehension were equal.

Table 8
Post-test Comparison of Experimental& Control Groups with regard to comprehending the Referential

Research Group	N	M	SD	T	D	Sig
Control	29	2.90	.817			
Experimental	29	4.34	1.010	-6.004	56	.000

As explained by Table 8 (t = -6.004, p = 000) displays a significant difference between the two groups' mean results on the posttest with regard to comprehending the Referential. After treatment, it was discovered that the experimental group had significantly better results.

Table 9
Pre-test Comparison of Experimental& Control Groups with regard to Inferences

Research Group	N	M	SD	T	D	Sig
Control	29	6.55	2.458	.054	56	.957
Experimental	29	6.52	2.400			

In accordance with Table 9 (t = .054, p = .957< 0.05), there was not a statistically significant difference in the pre-test scores of students of two groups o with regard to

Inferences. It implies before that to treatment, both groups' levels of reading comprehension were equal.

Table 10
Post-test Comparison of Experimental& Control Groups with regard to Inferences

Research Group	N	M	SD	T	D	Sig
Control	29	6.66	2.676			
Experimental	29	9.34	1.565	-4.672	56	.000

As explained by Table 10(t = -4.672, p = 000) displays a significant difference between the two groups' mean results on the posttest with regard to Inferences. After treatment, it was discovered that the experimental group had significantly better results.

Table 11
Pre-test Comparison of Experimental& Control Groups with regard to Conclusion

Research Group	N	M	SD	T	D	Sig
Control	29	2.48	.509	-.258	56	.797
Experimental	29	2.52	.509			

In accordance with Table 11 (t = -.258, p = .797< 0.05), there was not a statistically significant difference in the pre-test scores of students of two groups with regard to Conclusion. It implies before that to treatment, both groups' levels of reading comprehension were equal.

Table 12
Post-test Comparison of Experimental& Control Groups with regard to Conclusion

Research Group	N	M	SD	T	D	Sig
Control	29	2.55	.506			
Experimental	29	3.24	.739	-4.145	56	.000

As explained by Table 12 (t = -4.145, p = 000) displays a significant difference between the two groups' mean results on the posttest with regard to Conclusion. After treatment, it was discovered that the experimental group had significantly better results.

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

Research Group	N	M	SD	T	D	Sig
Control	29	17.07	3.863	-.034	56	.973
Experimental	29	17.10	3.764			

In accordance with Table 13(t = -.034, p = .973< 0.05), there was not a statistically significant difference in the pre-test scores of students of two groups on the entire Reading Comprehension Test. It implies before that to treatment, both groups' levels of reading comprehension were equal.

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

Research Group	N	M	SD	T	D	Sig
Control	29	17.83	4.310			
Experimental	29	24.83	1.713	-6.004	56	.000

As explained by Table 14 (t = -6.004, p = 000) displays a significant difference between the two groups' mean results on the posttest for the entire Reading Comprehension Test. After treatment, it was discovered that the experimental group had significantly better results.

Discussion

The findings showed that pupils who got treatment of English teaching by employing the self-assessment method greatly outperformed their peers on the reading 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 relevance to Simtiyah's (2019) finding that students who were taught through self-assessment outperformed those who were taught using the typical lecture technique on the Reading test. Nbina and Viko (2010) found that teaching students metacognitive self assessment methods increases their academic success and sense of self-worth. According to the study, metacognitive instructional methods have a considerable impact on pupil's English skills. It is vital that English teachers use these techniques to improve students' English proficiency. Learner-centered teaching methods such as metacognitive approaches promote student engagement as well as allow learners to think logically & productively (Taylor,1999). 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)

Conclusions

Finally, it may be said that the effectiveness of teachers and instructional strategies greatly affects on student learning. Learners can be inspired and motivated to learn by teachers who are passionate about what they do, employ interesting teaching strategies, and give them effective instruction and constructive feedback about students learning. This investigation finding indicated that the implementation of metacognitive method of instruction by teachers in the context of English language teaching could greatly enhance student performance. It has been discovered that by using the self-assessment metacognitive method helps students' comprehension of reading instead of using the traditional methods; self-assessment metacognitive approache may be employed to teach English in high schools. Teachers should use metacognitive strategy when teaching English language, particularly in this era as language is taught as the art of teaching. In light of metacognitive instruction approach success, instructors must get training to develop the abilities required for using this strategy.

References

Adedoyin, F. A. (2000). Teaching Strategies in Population Education In *Perspective in population Education, Selected Readings in Population Education 2, National Education Research Development Council (NERDC)* Lagos: NERDC Press.

Ajewole, G.A. (2001). Effects of Discovery and Expository Instructional Method on the attitude of students to Biology*. J. Res. Sci Teaching 28 401-409*Ashman, A. F., & Conway, R. N. F. (1997). *An introduction to cognitive education. London:* Routledge.

Coutinbo, S.A.(2007). The relationship between goals, metacognition and academic success. *Educate*, 7(1), 39- 47.

Ellis, G. (1999). Developing metacognitive awareness-the missing dimension. *The Journal*, 10, 1-6.

Gay, L., & Airasian, P. (2003). *Educational Research Competencies for Analysis and Application* (7th ed.). Upper Saddle River, NJ Pearson International .

Kramarski, B., Mavrech, Z. R & Arami, M. (2004). The Effects of metacognitive instruction on solving mathematical authentic tasks. *Educational Studies in Mathematics*, 49, 225-250.

Lippmann, R. (2005). Analyzing students' use of metacognition during laboratory activities. *Learning Individual differences*, 14, 131-137.

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

Nbina, J. B. & Viko, B. (2010). Effect of instruction in metacognitive self-assessment strategy on Chemistry students' self-efficacy and achievement in River State, Nigeria. *Academia Arena*, 2(11), 1–10.

Novak, J.D. (1987). Metacognitive Strategies to Help Student Learn. *National Association for Research in Science Teaching Newsletter* 29 (3).

Ormrod, J.E. (2004). *Human Learning* Upper Saddle NJ: Person Prentice Hall.

Okoronka, U.A. & Wada, B.Z .(2014). Effect of Analogy Instructional Strategy Cognitive Style and Gender on Senior Secondary School Students. Achievement in Some Physics Concepts in Mubi Metropolis Nigeria *American Journal of Educational Research* 2 (9) 788 – 792

Ozsoy G (2008). Metacognition. *Turkish Educ. Sci. J*., 6 (4): 713-740.

Sani, B.B., Wan C.M., Awg, N.Y. & Reslee, N.A. (2011). The reading motivation and reading strategies used by undergraduates in university Teknologi MARA Dungun, Terengganu. *Journal of Language Teaching and Research,* 2(1): 32-39.

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

Schunk, D.H.(1996). Goal And Self- Evaluative Influences During Children's Cognitive Skill Learning*. American Educational Research Journal, 33,359* Sheila, R. (1999). *Metacognitive learning strategies for students with learning disabilities.* Educator.

Simtiyah, U.,(2019) *The Impact of Self Assessment Toward Reading Comprehension In Narrative Text (An experimental research to the tenth grade students of SMK Sultan*

Fattah Salatiga in academic year 2018/2019).(A Graduating paper). English Education Department.Teacher Training and Education Faculty. State Institute for Islamic Studies (IAIN) Salatiga.

Taylor, S. (1999). Better learning through better thinking: Developing students' metacognitive abilities", J. College Reading and Learning, 30(1), 34.

Yang, Y. (2006). Reading strategies or comprehension monitoring strategies? *Reading Psychology*, 27: 313-343.

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.