P-ISSN 2708-6453	Pakistan Languages and Humanities Review	April-June 2025, Vol. 9, No. 2
O-ISSN 2708-6461	https://doi.org/10.47205/plhr.2025(9-II)04	[42-52]

Pakistan Languages and Humanities Review
www.plhr.org.pk

RESEARCH PAPER

Metacognitive Awareness and Its Effect on Reading Comprehension among Intermediate ESL Students

[1]Sajida Nazar* and [2]Dr Haroon-ur-Rashid

1. PhD Scholar, Department of English, University of Azad Jammu & Kashmir, Muzaffarabad, AJ&K, Pakistan
2. Professor, Department of English, University of Azad Jammu & Kashmir, Muzaffarabad, AJ&K, Pakistan

***Corresponding Author** | sajidanzr@gmail.com

ABSTRACT

The aim of this study is to provide a detailed analysis of the effectiveness of metacognitive strategies on reading comprehension skills among intermediate students. Reading comprehension plays pivotal role in academic achievements; however, many students face challenges like; extracting relevant information, summarizing text, and vocabulary issues. In order to access these issues a quasi-experimental research approach is adopted, which involves pre and post-tests assessments of control and experimental groups. In the intervention phase, the control groups were taught through traditional method, while the experimental groups were taught using metacognitive strategies. T-test was used to find the differences among both the groups through statistical means. The results show that after the intervention phase, experimental group showed significant improvement. Hence, it was devised from the results that metacognitive strategies should be applied to improve reading comprehension skills, instead of teaching traditionally. English language teachers should include metacognitive strategies in their lesson plans to improve reading comprehension skills.

KEYWORDS: Reading Comprehension, Metacognitive Strategies, Summarizing, Vocabulary

Introduction

Reading comprehension skills not only help students in improving their academic performance, but also help them in a long run in practical life. It is of great importance, but students still face numerous challenges in comprehension especially intermediate-level students. They face difficulty in understanding, analysing, and interpreting text. These challenges grow into the main reasons of drop in students' potential in academics and developing critical thinking skills, both of which are an integral part of higher education and professional success.

A number of educational researches have discussed the effectiveness of metacognitive strategies. Metacognitive strategies enable students to become more active and effective readers through planning, monitoring, and evaluation of one's reading process, which are the characteristic features of metacognitive strategies. While these strategies have been widely discussed and implemented in various educational contexts, there is limited research focusing on their application in regions like Bagh, Azad Jammu and Kashmir (AJK), as most of the teachers and institutions are still following traditional ways of teaching without innovation.

This educational research is aimed at addressing this gap by proper investigation of challenges encountered by intermediate students in Bagh, AJK, and evaluating the

effectiveness of incorporating metacognitive strategies while teaching reading comprehension.

Literature Review

The literature on reading comprehension explores existing studies on reading comprehension challenges and the role of metacognitive strategies in improving reading skills. It examines key concepts, such as Flavell's metacognitive framework, and their relevance to intermediate students. This review establishes the foundation for investigating the impact of metacognitive strategy instruction in the context of Bagh, AJK.

The Importance of Reading Comprehension

Reading comprehension is a cornerstone of academic success and personal development. It goes beyond the simple decoding of words, requiring readers to derive meaning, analyze, and critically evaluate texts. According to Duke and Pearson (2002), comprehension is an interactive process involving the integration of prior knowledge, vocabulary, and the ability to make inferences. However, research shows that many learners, particularly second-language learners, face significant challenges in achieving higher levels of comprehension (Nation, 2001).

Azad Jammu and Kashmir is an under-developed region, where traditional ways of teaching are still followed, innovative methods have not reached there. This creates a big hindrance for reading comprehension, as systemic issues rise from it, including outdated curricula, insufficient teacher training, and a lack of access to appropriate learning resources (Farrell, 2009). These barriers point at the necessity for introduction of effective teaching methods and strategies to address students' reading challenges and improve their learning outcomes.

Challenges in Reading Comprehension

There are various factors that are responsible for reading comprehension difficulties that students face. Linguistic barriers like limitation of vocabulary, and lack of proficiency in the target language are among some important factors (Perfetti, Landi, & Oakhill, 2005). For bilingual and multilingual students, these challenges are coupled with insufficient exposure to second language outside the classroom (Grabe & Stoller, 2011).

Students with cognitive limitations, like; weak memory and difficulty in inference, also struggle to comprehend. (Cain et al., 2004). For example, students may find it hard to connect the ideas across a sentence or passage, making it hard for them to grasp the meaning completely (Guthrie & Wigfield, 2000). Pedagogical practices are another factor that contribute to comprehension difficulties. Traditionally, teacher-centred approaches were used, which emphasized on rote memorization over critical thinking. These approaches fail to develop students' higher order reading skills. (Richards, 2015). Researches have found that such methods often overlook the teaching of strategies that enable students to engage with texts in more active ways, such as; predicting, summarising, and questioning (Mokhtari & Reichard, 2002).

Metacognitive Strategies in Reading Comprehension

Metacognitive strategies, such as; planning, monitoring, and evaluating one's reading process, are widely acceptable as a powerful tool for improving comprehension. According to Flavell (1979), metacognition refers to be aware of and to be able to control one's cognitive processes. This means, recognising when you are having a trouble in

understanding, choosing right strategies to address the trouble, and looking for the outcomes.

Researchers suggest and support the use of metacognitive strategies, especially for second language learners to improve their reading comprehension. O'Malley and Chamot (1990) showed that strategies like self-questioning, summarizing, and visualization effectively help students in comprehension and retaining information. This approach encourages the students to read actively and become more independent and strategic.

A study by Zhang and Seepho (2013) suggested that metacognitive strategies also improve confidence and motivate the students to engage with texts not only their reading. Similarly, Tavakoli and Koosha (2016) found that Iranian EFL students who were provided with instructions in metacognitive strategies showed great improvement in their ability to understand and analyse the text.

Benefits of Strategy Instruction

Clear and systemic instructions should be made a part of classroom teaching, as they have shown effectiveness in case of metacognitive strategies. According to Paris and Winograd (1990), students should be taught how to use different kind of strategies such as prediction, summarization, and question generation. This increases their focus span as well as production in comparison with traditional boring reading. Furthermore, through systemic strategies students can fill the gap between normal and proficient readers.

Scaffolding has been another effective strategy in this regards, where teachers provide temporary support to students and continue on decreasing with time when students become mor confident in what they are doing. Teachers provide students with guided practices of different kinds of metacognitive strategies, so that they can slowly to work independantly (Palincsar & Brown, 1984). This approach is particularly effective for intermediate-level learners, as they are in transition phase from basic to advanced level of learning. Effectiveness of metacognitive strategies have been central to the works of many researchers, but they have not discussed their applications in specific contexts, in educational contexts of Bagh, AJK. Most of the existing studies have been conducted in urban settings, where access to trained teachers and learning materials is relatively high (Ahmed, 2019). Their lies a gap, there is no educational research aimed specifically at the unique challenges faced by students in under-resourced areas. These areas have teachers with limited to no access to their professional development and students are lacking access to relevant reading material for the context.

This study is focused on filling this specific unexplored gap by using Flavell's metacognitive framework which investigates the effect of metacognitive strategy instruction on reading comprehension among intermediate students in Bagh, AJK. By focusing on the specific population from the very specific area of Bagh, the research aims to provide practical insights for improving reading comprehension skills in similar educational contexts, like other under-developed areas where innovative and effective methods have still not reached.

Material and Methods

The study uses a quantitative approach with a quasi-experimental design. It includes pre-test and post-test phases, involving one hundred and twenty intermediate students from three colleges of district Bagh of AJK. A total of forty students are selected from each college making it one hundred and twenty as a whole. The students are then

divided into experimental and control groups. It is made sure that each group is comprised of twenty students from each college, making it easy to compare the results.

Data Collection

Pre-tests and post-tests were taken from the students of intermediate level from different colleges of Bagh, AJK, and their data is collected for further analysis. Initially, a pre-test is taken from both the experimental and control groups to assess their basic knowledge regarding reading comprehension. Right after the pre-test, six weeks long experimentation phase gets started, during which the experimental group is taught through different kinds of metacognitive strategies specifically designed to introduce various impactful activities to enhance their reading comprehension abilities. On the other hand, the control group is taught using their traditional methods of instruction without any exposure to metacognitive strategies.

Various targeted activities, such as self-monitoring, summarizing, predicting, and questioning techniques, which are well-documented as effective methods to improve comprehension by enhancing active engagement and deeper understanding of the texts, were taught to experimental group during that period of time (Flavell, 1979; Pressley, 2002). These strategies are implemented in a specific order to help students become aware of their thinking processes while reading, complementing the principles of metacognition process, which again emphasizes on planning, monitoring, and evaluating comprehension.

After the conclusion of the experimental phase, a post-test is carefully designed and then taken from both the experimental and control groups. The main purpose of the post-test is the comparison between the performances of the two groups, analysing whether the implementation of metacognitive strategies results in any significant improvement in the experimental group as compared to the control group. The findings from these tests are then passed through the process of analysis to draw conclusions regarding the effectiveness of metacognitive strategies in enhancing reading comprehension skills among intermediate students.

Results and Discussion

This section consists of the data collected from intermediate students of three different colleges of Bagh, AJK. The data consists of statistical analysis of pre and post-tests conducted in all three colleges. The main purpose of evaluation of data collected through pre-and post-tests is to identify the challenges faced by the students and to check their effects on reading comprehension. Both the pre-and post-tests were comprised of five questions. The first question was about comprehension passage, in which a passage was given and students were asked to find and write down the answers from the passage. The second question was about writing summary, third comprised of cloze test, the fourth consisted of mcqs and the fifth was about vocabulary analysis.

Pre-test Data Analysis

In order to compare the two groups; control and experimental, the data is analysed using an independent sample t-test. This test examines the statistically significant mean differences of the groups. A p-value below 0.05 indicates a significant difference, while a value above 0.05 indicates no-significance. The detailed results of each college are presented in the following tables.

Table 1

Independent sample t-test for control and experimental group (Pre-Test) of Government Post Graduate College

Questions	Groups	t-value	Df	P-value	Interpretation
Q1	(Control vs Experimental)	0.4140	38	0.6812	Non-significant
Q2	(Control vs Experimental)	0.1167	38	0.9077	Non-significant
Q3	(Control vs Experimental)	0.8568	38	0.3969	Non-significant
Q4	(Control vs Experimental)	0.2123	38	0.8330	Non-significant
Q5	(Control vs Experimental)	0.2668	38	0.7911	Non-significant

The above table shows that there is no significant difference between the pre-test of control and experimental groups. It depicts that level of understanding of reading comprehension of both the groups is equal before the intervention phase.

Table 2
Independent sample t-test for control and experimental group (Pre-Test) of Nariyola College

Questions	Groups	t-value	Df	P-value	Interpretation
Q1	(Control vs Experimental)	0.4316	38	0.6685	Non-significant
Q2	(Control vs Experimental)	0.9873	38	0.3298	Non-significant
Q3	(Control vs Experimental)	0.7419	38	0.4627	Non-significant
Q4	(Control vs Experimental)	0.2887	38	0.7743	Non-significant
Q5	(Control vs Experimental)	0.7496	38	0.4581	Non-significant

The above table shows that there is no significant different between the groups in pre-test. This is mainly due to the similar baseline knowledge of reading comprehension of both the groups.

Table 3
Independent sample t-test for control and experimental group (Pre-Test) of Springfield College

Questions	Groups	t-value	Df	P-value	Interpretation
Q1	(Control vs Experimental)	0.3684	38	0.7146	Non-significant
Q2	(Control vs Experimental)	1.106	38	0.2758	Non-significant
Q3	(Control vs Experimental)	0.2549	38	0.8001	Non-significant
Q4	(Control vs Experimental)	0.9750	38	0.3357	Non-significant
Q5	(Control vs Experimental)	0.09059	38	0.9283	Non-significant

The above table again shows non-significant result for each question, which is due to the similar baseline knowledge of the students of both groups.

Post-Test Data Analysis

The post-test data has been analysed using independent sample t-test in order to find out the mean differences between control and experimental groups. The experimental group of each college has undergone intervention phase, in which they are taught different metacognitive strategies. While on the other hand control group has been taught through traditional way of teaching.

Table 4
Independent sample t-test for control and experimental group (Post-Test) of Government Post Graduate College

Questions	Groups	t-value	Df	P-value	Interpretation
Q1	(Control vs Experimental)	4.199	38	0.0002	*** Significant
Q2	(Control vs Experimental)	4.988	38	0.0001	***Significant
Q3	(Control vs Experimental)	1.476	38	0.1482	Non-significant
Q4	(Control vs Experimental)	0.6182	38	0.5401	Non-significant

Q5	(Control vs Experimental)	2.960	38	0.0053	**Significant

The above table shows that there is a significant difference between the post test of control and experimental group. Q1, Q2 and Q5 show highly significant difference in the results. Q3 and Q4 show non-significant results. Students of both the groups found these two questions easy as they were related to cloze test and Mcqs. While Q1 was related to finding the relevant answers from the passage, Q2 was about writing summary and Q5 was about vocabulary analysis, control group students found these questions challenging as they were not familiar with metacognitive strategies, as they were taught using traditional way.

Table 5
Independent sample t-test for control and experimental group (Post-Test) of Nariyola College

Questions	Groups	t-value	Df	P-value	Interpretation
Q1	(Control vs Experimental)	5.741	38	0.0001	***Significant
Q2	(Control vs Experimental)	4.297	38	0.0001	***Significant
Q3	(Control vs Experimental)	0.5945	38	0.5557	Non-significant
Q4	(Control vs Experimental)	2.234	38	0.0314	*Significant
Q5	(Control vs Experimental)	3.069	38	0.0040	**Significant

The above table shows significant difference between the post-test of control and experimental groups in Q1, Q2, Q3 and Q5. The students of control group found it challenging to extract the relevant information from the passage, writing summary, mcqs and vocabulary analysis, as they did not undergo intervention phase. While experimental group, after intervention phase improved a lot.

Table 6
Independent sample t-test for control and experimental group (Post-Test) of Springfield College

Questions	Groups	t-value	df	P-value	Interpretation
Q1	(Control vs Experimental)	3.376	38	0.0017	**Significant
Q2	(Control vs Experimental)	4.764	38	0.0001	***Significant
Q3	(Control vs Experimental)	1.622	38	0.1131	Non-significant
Q4	(Control vs Experimental)	1.223	38	0.2290	Non-significant
Q5	(Control vs Experimental)	9.455	38	0.0001	***Significant

The above table shows that there is a significant difference between the post-test results of both the groups. Metacognitive strategies helped students of experimental group to overcome the challenges. While control group struggled with Q1, Q2 and Q5.

Comparative Analysis of Pre-and Post-Test

In order to find out the differences between pre and post-test of control and experimental groups, comparative analysis was conducted using paired sample t-test. In this analysis the pre-test result of control group was compared to the post-test results of control group and the pre-test results of experimental group with the post-test results of experimental group. This comparison was done to assess the advantages of intervention phase.

4Government Post Graduate College

The first comparison is made between the groups of Government Post Graduate College.

Table 7
Comparative Analysis of Data Using Paired Sample t-test (Pre and Post-Tests of Control Group)

Questions	Groups	t-value	Df	P-value	Interpretation
Q1	(Control Pre vs Control Post)	0.3954	19	0.6969	Non-significant
Q2	(Control Pre vs Control Post)	0.1209	19	0.9050	Non-significant
Q3	(Control Pre vs Control Post)	0.3838	19	0.7054	Non-significant
Q4	(Control Pre vs Control Post)	9.419	19	0.0001	Significant
Q5	(Control Pre vs Control Post)	0.4437	19	0.6623	Non-significant

The data has been analysed using paired sample t-test. The p-values of each question indicates that there is no significant difference between both groups. This is due to the similar baseline knowledge of students of control and experimental groups before the intervention phase.

Table 8
Comparative Analysis of Data Using Paired Sample t-test (Pre and Post-Tests of Experimental Group)

Questions	Groups	t-value	Df	P-value	Interpretation
Q1	(Experimental Pre vs Experimental Post)	4.781	19	0.0001	***
Q2	(Experimental Pre vs Experimental Post)	8.312	19	0.0001	***
Q3	(Experimental Pre vs Experimental Post)	4.615	19	0.0002	***
Q4	(Experimental Pre vs Experimental Post)	10.28	19	0.0001	***
Q5	(Experimental Pre vs Experimental Post)	2.477	19	0.0228	*

The p-values in the above table indicates that each question shows significant results. it means that metacognitive strategies helped them to improve their reading comprehension.

Nariyola

The second comparison is made between the groups of inter College Nariyola.

Table 9
Comparative Analysis of Data Using Paired Sample t-test (Pre and Post-Tests of Control Group)

Questions	Groups	t-value	Df	P-value	Interpretation
Q1	(Control Pre vs Control Post)	1.141	19	2.581	Non-significant
Q2	(Control Pre vs Control Post)	0.9412	19	0.3584	Non-significant
Q3	(Control Pre vs Control Post)	0.7454	19	0.4652	Non-significant
Q4	(Control Pre vs Control Post)	0.9857	19	0.3367	Non-significant
Q5	(Control Pre vs Control Post)	0.3484	19	0.7313	Non-significant

The above table shows that there is no significant difference between the groups. This is particularly due to the traditional way of teaching as these students were not taught metacognitive strategies

Table 10
Comparative Analysis of Data Using Paired Sample t-test (Pre and Post-Tests of Experimental Group)

Questions	Groups	t-value	Df	P-value	Interpretation
Q1	(Experimental Pre vs Experimental Post)	3.816	19	0.0012	**
Q2	(Experimental Pre vs Experimental Post)	4.156	19	0.0005	***
Q3	(Experimental Pre vs Experimental Post)	0.6571	19	0.5190	Ns
Q4	(Experimental Pre vs Experimental Post)	1.371	19	0.1864	Ns
Q5	(Experimental Pre vs Experimental Post)	4.541	19	0.0002	***

The findings in the above table shows that the students find Q1, Q2 and Q5 challenging because after the intervention phase the post-test results shows significant improvement. While Q3 and Q4 were less challenging.

Springfield

The third comparison is made between the groups of Springfield College.Table: Comparative Analysis of Data Using Paired Sample t-test (Pre and Post-Tests of Control Group)

Table 11
Comparative Analysis of Data Using Paired Sample t-test (Pre and Post-Tests of Control Group)

Questions	Groups	t-value	Df	P-value	Interpretation
Q1	(Control Pre vs Control Post)	1.055	19	0.3044	Non-significant
Q2	(Control Pre vs Control Post)	0.8582	19	0.4015	Non-significant
Q3	(Control Pre vs Control Post)	1.162	19	0.2595	Non-significant

Q4	(Control Pre vs Control Post)	0.5125	19	0.6142	Non-significant
Q5	(Control Pre vs Control Post)	0.3838	19	0.7054	Non-significant

The above table shows that there is no statistically significant difference in mean scores, which indicates the control group shows no meaningful improvement in reading comprehension, mainly due to the lack of knowledge of using strategies.

Table 12
Comparative Analysis of Data Using Paired Sample t-test (Pre and Post-Tests of Experimental Group)

Questions	Groups	t-value	Df	P-value	Interpretation
Q1	(Experimental Pre vs Experimental Post)	2.123	19	0.0471	*
Q2	(Experimental Pre vs Experimental Post)	5.596	19	0.0001	***
Q3	(Experimental Pre vs Experimental Post)	2.734	19	0.132	*
Q4	(Experimental Pre vs Experimental Post)	0.0000	19	1.0000	Non-significant
Q5	(Experimental Pre vs Experimental Post)	9.647	19	0.0001	***

The above table indicates a notable improvement in the analysis of experimental pre and post-test results. metacognitive strategies helped them to enhance their reading comprehension skills.

Conclusion

This study investigated the challenges faced by intermediate students in reading comprehension and to examine how metacognitive strategies help to overcome these challenges. The analysis of pre-test data shows that students face difficulty in extracting relevant answers of the questions from the passage as they make several mistakes like grammatical errors, irrelevant answers and incomplete sentences. They also face challenges in writing summary and also face vocabulary issues. The current study also examines whether metacognitive strategies help students to overcome these challenges or not. For this purpose, pre and post-test data analysis has been done to see the differences in the scores before and after applying metacognitive strategies. The results show that students make significant improvement in their post test results by applying different strategies.

Recommendations

After intervention phase, experimental group shows significant improvement which depicts the effectiveness of metacognitive strategies in reading comprehension. These strategies enhance students' ability to better comprehend the text. Therefore, English language teachers should adopt these strategies as part of their reading comprehension

instruction. Different teachers training programs and seminars should be organized to effectively implement these strategies in the classroom.

References

Ahmed, A. (2019). Challenges in education: Addressing literacy in under-resourced areas. *Journal of Educational Development, 10*(2), 45–58.

Cain, K., Oakhill, J., & Bryant, P. (2004). Children's reading comprehension ability: Concurrent prediction by working memory, verbal ability, and component skills. *Journal of Educational Psychology, 96*(1), 31–42.

Duke, N. K., & Pearson, P. D. (2002). Effective practices for developing reading comprehension. In A. Farstrup & S. Samuels (Eds.), *What research has to say about reading instruction* (pp. 205–242). Newark, DE: International Reading Association.

Farrell, T. S. C. (2009). *Teaching reading to English language learners: A reflective guide*. Corwin Press.

Flavell, J. H. (1979). Metacognition and cognitive monitoring: A new area of cognitive-developmental inquiry. *American Psychologist, 34*(10), 906–911.

Grabe, W., & Stoller, F. L. (2011). *Teaching and researching reading* (2nd ed.). Pearson

Guthrie, J. T., & Wigfield, A. (2000). Engagement and motivation in reading. In M. Kamil, P. Mosenthal, P. D. Pearson, & R. Barr (Eds.), *Handbook of reading research* (Vol. 3, pp. 403–422). Mahwah, NJ: Lawrence Erlbaum.

Mokhtari, K., & Reichard, C. A. (2002). Assessing students' metacognitive awareness of reading strategies. *Journal of Educational Psychology, 94*(2), 249–259.

Nation, I. S. P. (2001). *Learning vocabulary in another language*. Cambridge University Press.

O'Malley, J. M., & Chamot, A. U. (1990). *Learning strategies in second language acquisition*. Cambridge University Press.

Palincsar, A. S., & Brown, A. L. (1984). Reciprocal teaching of comprehension-fostering and comprehension-monitoring activities. *Cognition and Instruction, 1*(2), 117–175.

Paris, S. G., & Winograd, P. (1990). How metacognition can promote academic learning and instruction. In B. F. Jones & L. Idol (Eds.), *Dimensions of thinking and cognitive instruction* (pp. 15–51). Hillsdale, NJ: Erlbaum.

Perfetti, C., Landi, N., & Oakhill, J. (2005). The acquisition of reading comprehension skill. In M. J. Snowling & C. Hulme (Eds.), *The science of reading: A handbook* Blackwell.

Pressley, M. (2002). *Comprehension instruction: Research-based best practices*. Guilford Press.

Richards, J. C. (2015). *Key issues in language teaching*. Cambridge University Press.

Tavakoli, M., & Koosha, M. (2016). The effect of metacognitive strategy training on reading comprehension and reading strategy awareness of EFL learners. *Theory and Practice in Language Studies, 6*(8), 1748–1755.

Zhang, L., & Seepho, S. (2013). Metacognitive strategy training: Effects on EFL learners' reading comprehension, self-efficacy, and motivation. *The Journal of Asia TEFL, 10*(1), 67–97.