

Impact of Reading Strategies On Student Achievement

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ABSTRACT-The focus of this study was to determine the impact of reading strategies and effective teaching methodologies on student achievement.. After studying previous literature and especially doing a comparative analysis of the history result amongst school students of a particular school, it was hypothesised that - “Reading strategy and effective teaching methodologies would significantly improve learning skills and student achievement”. The participants of the study were 25 senior secondary students, belonging to all streams. To conduct this research, a simple assessment test measuring five skills of students was created and given to students as pre test and post test. After result analysis, the statistics correlate with our available literature and provide convincing evidence in support of the hypothesis. There was a significant increase in students’ achievement after the use of specific teaching strategies.

IMPACT OF READING STRATEGIES ON STUDENT ACHIEVEMENT- As competition heightens, what we face is a compelling need for peripheral skills to surround the central curriculum. With the purpose of education being to nurture and propel the future generation, these skills become imperative. Reading forms one of the many communication skills that enable a student to develop and enrich their personality. It is, however, an acquired propensity. It takes conscious inculcation and inclusion of reading in one’s daily schedule to truly benefit from its effects. From imbibing discipline, to expanding creative horizons, reading bears a host of benefits. A convenient tie between history and the future, books form a rich source of knowledge to people across all ages, especially to students.

Across all academic levels, reading requires time and energy to develop reading strategies that help an individual actively maximise their

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registration, comprehension and retention from the given text. Specifically for those in the field of social sciences, be it teachers or students, reading allows for deep analysis of the author’s thought, understanding of the context, critical analysis of opinions and further deliberation. All these skills form the epicentre of social sciences and are reinforced and constantly exercised due to the habit of reading. One is able to acquire a deep understanding of historical concepts and theoretical understandings and draw inspiration from the text to explore novel ways of approaching one’s said subject or its application in the outside world.

Effective Methods of Teaching

Teaching by Visualisation

Inquiry based groups

Differentiation

Making real-life connections

Student-run classrooms

Common Teaching Techniques Between History and Psychology

Expeditionary Learning

Drill Technique

Debate Method

LITERATURE REVIEW

1. Analysis of History CBSE result of Delhi Public School, R. K. Puram-This is a comparative analysis of the History pre board and board results of 2018-2019. 43 students of the batch gave the board exams conducted in March-April, while the pre boards are conducted in December- January. Between these two months, the method of Differentiation (discussed above in introduction) is used and the batch is divided into four groups: Remedial, Average, Above Average and Enrichment. Different pedagogical methods are used for the groups. However, the focus stays on use of effective teaching methodologies that will show an increase in the Board results. The students are exposed to Project work, Guided reading to develop the skills of inference, deduction, justification, and evaluation; Information and Communication Technology (ICT), Teaching by visualisation and Inquiry based groups (discussed in introduction). Pre boards act as pre tests and after the application of these methods- the boards as post tests. An experiment similar to this has been replicated- the results of which are analysed later in the report.

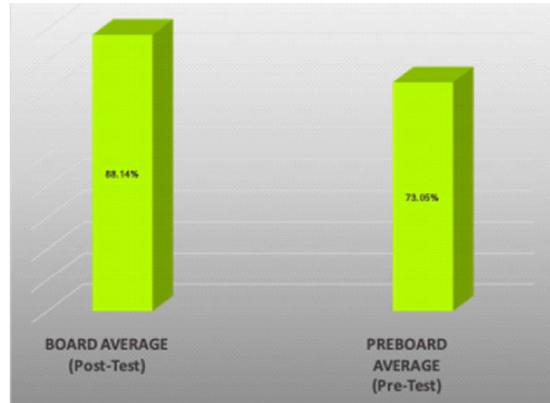


Figure 2.1

Figure 2.1 clearly shows a significant increase in grades from pre board to board. The pre board results show an average of 73.05%, while the board results show an average of 88.14%. This signifies an increase of 15.09%. This increase in score can be attributed to the use of reading strategies and effective teaching methodologies with the students in the classroom.

Standard Deviation (SD), a number used to tell how measurements for a group are spread out from the average (mean), or expected value; is lesser in the Board examination signifying accuracy of the test results. The Standard deviation of pre board examination result is 16.365 and the board examination result lowers to 10.638.



Figure 2.2

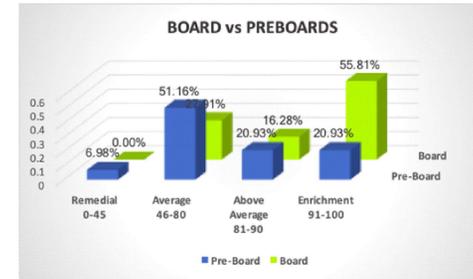


Figure 2.3

Figure 2.2 and 2.3 show empirical evidence that the teaching methodologies were effective. In the Remedial category (scores below 45%), there were 6.98% students during the pre boards which came down to 0% students in the board examination. The Enrichment category (scores above 91%) showed a huge increase from 20.93% in the pre boards to 55.81% in the board examination. The other two categories, Average category (scores between 46% and 80%) and Above Average category (scores between 81% and 90%), also show a difference of 23.25% and 4.65% respectively.

2. Reading Habits Among Students & Its Effect on Academic Performance-

The study sought to assess the reading habits among students and their effects on their academic performance. The study was conducted in Koforidua Polytechnic situated in the Eastern Region of Ghana. A questionnaire was used for the data collection. The data collected were analysed quantitatively with the use of Statistical Package for Social Science (SPSS). The study revealed that 62.5% of the respondents acknowledge the importance of reading and said reading helps them to express themselves better. However, the study also found that 81.9% had not read a novel or fiction within the two preceding semesters and only 18% said they had read a novel or fiction within the same period. The study further confirmed that 75.0% respondents engage in reading just to pass an examination. The study revealed that the majority of the respondents had the view that reading habits have an effect on academic performance and that there is a direct relationship between reading habits and academic performance.

RESEARCH METHODOLOGY-The study focused on the question: “How does the use of reading strategies affect secondary students’ understanding of social studies content?”. The aim was to study the ‘Impact of reading strategies and effective teaching methodologies on student achievement’.

The participants of the study were 25 senior secondary students, belonging to all streams. To conduct this research, a simple assessment test measuring five skills of students was created and given to students as pre test and post test (skills, methodology and comparative standard kept similar to the data in Literature review 1).

The five skills tested are:

Memory

Understanding

Applying

Analysing & evaluating

Creating

The pre-test was the first set of data collected. The data collected set a baseline for what students knew at the beginning about intelligence. After which the students were given a passage on multiple intelligence for reading. Once the reading was completed, the students were explained the concept through use of a colorful animated powerpoint presentation. Additionally a video clip was shown on multiple intelligence to aid the understanding process of the subjects. A simple mnemonic device was used to help them memorise the 8 types of intelligence as well. After the explanation, the students were given a post test.

After the completion of the assessment, the results were taken out, compiled and analysed.

RESULT ANALYSIS-The pre-test was the first set of data collected. The data collected set a baseline for what students knew at the beginning about intelligence. The pre-test findings showed many students had less prior knowledge about the topic. The comparison is majorly between pre tests and post tests. The evaluation of the data set demonstrated student improvement when being introduced to reading tactics. This comparison implies putting reading strategies and effective teaching methodologies into practice in a social studies classroom is worthwhile.

The average score of pre test comes out to be 15.82 on 25, i.e. 63.28%. This shows significant improvement in the post test results where the average comes out to be 21.28 on 25, i.e. 84.72%. Standard Deviation (SD), a number used to tell how measurements for a group are spread out from the average (mean), or expected value; is lesser in the post test signifying accuracy of the test results. The Standard deviation of pre test result is 3.483 and the post test result lowers to 1.784.

MEMORY-The students exhibited memory of previously learned material by recalling facts and basic concepts. There is a significant increase in the pre test scores and post test scores, as predicted. As

visible in Figure 4.1, in the pre test the accuracy rate among subjects came out to be 68% , and there is 32% inaccuracy. However, in the post test, we observe 100% accuracy among subjects. This can be attributed to the use of a Mnemonic device(First letter technique) to memorise the items.

UNDERSTANDING-Students were expected to demonstrate understanding of facts and ideas by organizing, comparing, interpreting, giving descriptions, and stating main ideas. In the pre test data, only 20% of subjects showed good understanding of the concept which rose up to 44% in the post test. Simultaneously, the percentage of students with average understanding of the concept came down to 32% in the post test data from 56% in the pre test- indicating a shift from average to good. We can attribute using methodologies like Information and communication technology, and Teaching by visualisation to this variation.

APPLYING-To test the application skills, students were asked to associate their pre-existing knowledge about the concept with newly acquired knowledge. They were expected to solve problems to new situations by applying acquired knowledge, facts, techniques and rules in a different way. From the data, it is observed that, in the pre test, 28% students show basic application knowledge, 56% students show average application knowledge, and only 16% of them show good application skills. However, the post data has 0% students in the basic category, and as high as 60% students show an increase and can apply the knowledge meaningfully. Only 40% of students show average application skills.

ANALYSING & EVALUATING-For testing the analysis and evaluation skills, the students were given two case studies (similar to passages in history) and were asked to make inferences and find evidence to support their generalizations. We observe that in pre test, 24% of students show inadequate knowledge and analytical skills, and 40% of them show basic skills of analysis and evaluation. However after implementing reading strategies and other teaching methodologies in the classroom, we see a significant rise. 76% of students could use average analysis skills and 24% of them exhibited good analysis and evaluation skills. They were able to evaluate the given case studies, and provide reasonable evidence to support their analysis.

CREATING-The students were expected to compile information together in a different way by combining elements in a new pattern or proposing novel solutions. For this, they were asked to create a lesson plan. Although the students were able to create the plan in both pre and post tests, we see more effective planning in the post test. Statistically

the data indicates (as can be observed in Figure 5), a rise of 44% - from 12% of students to 56% of students- showcasing good critical thinking and creative abilities. The percentage of students in the basic category has gone down from 24% to 12%. The scores in the average category show significant change from 64% in the pre test to 32% in the post test. Statistical analysis provides evidence that the teaching methodology has improved the skills among students.

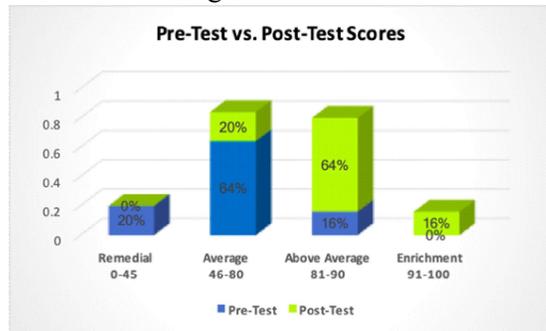


FIGURE 4.6

OVERALL PERFORMANCE -The overall result conclusion supports the hypothesis, and provides evidence that reading strategies and effective teaching methodologies impact students' achievement positively. The group of 25 subjects are put into four similar categories as the data in the history result (Refer figure 2.2). The categories are: Remedial (scores below 45%), Average (scores between 46-80%), Above Average (scores between 81-90%), and Enrichment (scores above 91%). As observed in figure 4.6, the Remedial group had 20% students based on the pre test results, and 0% in the Enrichment group. This is reversed after the use of specific teaching methodologies, where we observe that there are 0% students in the Remedial group and 16% students in the Enrichment group. We also see significant improvement in the Above average category where the percentage of students have gone from 16% in pretest to 64% in post test. Similarly in the Average category, we observe a significant decline from 64% in pre test to 20% in post test.

These statistics correlate with our available literature and provide convincing evidence in support of the hypothesis.

DISCUSSION-The focus of this study was to determine the impact of reading strategies and effective teaching methodologies on student achievement. To conduct this research, a simple assessment test measuring five skills of students was created and given to students as a pre and post test.

Result analysis shows that the average score of pre test is 15.82 on 25, i.e. 63.28%. This score shows significant improvement in the post test results where the average score is 21.28 on 25, i.e. 84.72%. In all the five skills that were assessed- Memory, Understanding, Applying, Analysing & Evaluating, and Creating- significant improvements have been seen in scores of students from pre tests to post tests. Use of mnemonics could have increased the scores on memory, and the increase in score in other skills can be attributed to methodologies like powerpoint presentation, video clippings and examples. Interestingly, it was also observed that students' achievements in knowledge based questions improved as a result of effective teaching, but there was no significant change in opinions.

The overall result conclusion supports the hypothesis, and provides evidence that reading strategies and effective teaching methodologies impact students' achievement positively.

Based on this research it can be safely concluded that educators should start/continue to implement reading strategies and find primary reading sources to aid in student understanding of social studies content. As an educator it is important to monitor what strategies are working in order to benefit students and is also essential to being an effective teacher.

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