Effect of readymade memory techniques on academic performance

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ABSTRACT

Effect of memory techniques on academic performance was examined in this study. The participants of the groups were slow learners from a school studying at 9th grade level with a mean age of 14. All the participants were boys. A specific mnemonic technique called coding and decoding method, and acronym method were taught. This particular method can be used in equations, formulas and remembering more words. It has been found that the above mentioned memory techniques significantly increased the academic performance of the slow learners at 0.05 level.

Key words: Memory techniques, academic performance, slow learners.

INTRODUCTION

Underachievement in India is a well prevailing problem because of the increased teacher to student ratio. This is the primary problem from which many disadvantages emerges, such as unable to perform formative assessment, literally nil individualized education programs, unable to implement efficient pedagogies, etc. Considering the practical situation, there is need to separate psychology professionals to deal with this issue and also, as an attempt to improvise more innovative practices need to be developed. Literally, there are only very few studies that show increased academic marks among students using some intervention in order to achieve improvement; however, such schools have to exceed what could be termed “normal” efforts. Members of staff have to be more committed and work harder than their peers elsewhere (Mortimore and Whitty, 2003).

LITERATURE REVIEW

There are numerous objectives of the study, at the face value, it may appear obvious but the real cost of underachievement when researched is beyond our expectation. For instance, Parsons et al. (2001) found that there was a significant association between offending and poor attendance at school. Research by Conlon (2001) examined the relationship between qualifications and the likelihood of being employed. He found a clear relationship between individuals with qualifications and the likelihood of being employed, although he notes that there is no necessarily a strictly increasing relationship between increasing qualifications and the likelihood of being employed. Maguin and Loeber (1996) found that poor school performance was related to the frequency of delinquent offending, the seriousness of offenses, and persistence in delinquency offending. Findings from this study highlight the importance of examining the effect of poor educational performance on delinquency over time—to think of a child’s development on a trajectory with multiple transition points (e.g., childhood to adolescence) along which key events occur. According to Ekatha (2017), as a part of Indian juveniles rehabilitation, each child when put under foster care cost 2000 for every three month. Moreover, there is a 47% increase in the admission of juvenile admission homes in India (Devanik, 2015). Actually, the literature that shows the relationship between nations cost and educational underachievement is very vast and it is beyond the scope of the paper to cover everything. Underachievement is a highly broader concept. Hence, Sparkes (1999) in her review of schools, education and social exclusion highlighted a number of background
variables that are associated with educational attainment. The factors shown in Table 1 are very much related to the context of education, especially school educational underachievement.

METHODOLOGY

Participants
A total of 20 underachievers from 9th grade of St. Joseph school were involved in the research. The mean age of the sample was 14. No female student participated. As mentioned earlier, the definition for underachievers is vague, selection of samples (underachievers) was done based on the definition provided by department of education UK, as mentioned above.

Criteria for selection of underachievers
The criteria for underachievers are as follows:
- Consistent failure in 3 subjects.
- With no exceptional performance on any other subject.
- Among the three failures at least 2 must be in core subject.
- Failure in Tamil is not taken into account due to more than average number of failures. It is attributed to the school curriculum system where exposure to Tamil is minimized.

Sampling
A non-probability convenient sampling was used. Further, the participants were segregated into 3 sub-categories:

b) Under – achievers with moderate behavior problem - 5.
c) Underachievers with positive behavior feedback – 8.

Control group
In the same classes, similar underachievers in the same above mentioned proportion were taken and they were in the usual special class session regularly conducted by schools. This involved a matched pair design where subjects were allotted to each group randomly.

Randomization
It was done through computerized randomization method.

Measures
Coding - decoding method and acronym method were employed in the research.

Procedure
The training sessions were done for 30 days. Every session lasted for 1 h. Participants received instructions on the coding-decoding method and acronym method during the first 5 days. Thereafter, they were made to learn similar to their traditional special classes under the supervision of a teacher. But along with that, researcher trained them on the previously taught memory techniques and motivated them to apply what they have been studied. The researcher also guides them in finding the appropriate topics where the memory techniques can be applied. This training and learning session went on for 25 days. Meanwhile, the control group received traditional training at the same time as experimental group.

The dependent variables were measures of academic performance. Post intervention academic performance was calculated obviously through marks.

RESULTS

Result 1
It was proven that this particular memory training program had increased significantly the academic performance of the students. The analysis was conducted using Wilcoxon rank sum test. The result is shown as:

A Wilcoxon signed rank test indicates that the median post ranks, Mdn=58.5 is statistically significantly higher than the pre-test ranks, Mdn=26, Z= 83, P<0.0001.

Null hypothesis is rejected in the experimental group, since the test statistics=38 is lesser than the critical value, which is 58.

Result 2
No significant difference was observed in the control group which received the regular coaching:

A Wilcoxon signed rank test indicates that the median post ranks, Mdn=25.5 is not statistically significantly higher than the pre-test ranks, Mdn=21, Z= 83, P<0.0001.

The null hypothesis is accepted in control group as the test statistics, T=83 is greater than the critical value, which is 58.

DISCUSSION
The study showed that the particular program of coaching
students with readymade memory techniques had a significant positive effect on student’s academic performance. However, this study faces issues of generalizing. The program also suffers from inter-rater reliability, as only one trainer was handling all the sessions. His personality might have influenced the academic performance of the students positively or negatively. Hence, to get a clearer picture, computer assisted self learning version of the program can also be tested to eliminate the influence of the trainer. Also in this study, all the classes were conducted in the evening. The effect of this program in the morning hours should also be determined. Apart from facilitating memorization, these types of program will also enhance the perception of classes and the teacher, which will also have an impact on the academic commitment over time, it is asserted that the kind of perception a student has about his teacher tends to influence his self-concept towards this teacher and the subject(s) he teaches (Geoff, 2004). This eventually affects his academic performance at large. The significance of this finding lies on the fact that when multiple agencies start developing a package of memory techniques, competitiveness will increase which in turn give birth to more effective memory friendly ways of studying, and it can be incorporated into the schools for the benefit of students.

**Conclusion**

The above finding suggests that this particular memory training program has a significant positive effect on 9th grade student academic achievement. This finding cannot be generalized to hyperactive or special children. However, there is no question of further generalization over other topics and students, as this is a tailor made program for Tamilnadu 9th grade syllabus. This is a supporting evidence for the effect of memory techniques on academic performance. This cannot also be generalized with teaching memory techniques in general because this research is the applied version of memory techniques on the syllabus taught.

The finding implies the need for incorporating various creative measures in helping to memorize subjects. Also this has introduced the need for active involvement of competitive players into introducing the own version of memory techniques, which will lead to creatively more superior form of programs.

**REFERENCES**


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**Table 1:** Factors related to the context of education.

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