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**SMART CLASS METHOD: AN EFFECTIVE PEDAGOGY OF TEACHING SOCIAL SCIENCE AT SECONDARY LEVEL**

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**ABSTRACT**

*Social Science, one of the important subjects of school curriculum has been considered as an outdated subject in contemporary educational system. The conventional way of teaching Social Science develops a negative attitude towards the subject which can be overcome by using technology at various levels of teaching learning process. The present article focuses on the effectiveness of Smart Class Method of teaching Social Science at secondary level to create more interest and focused learning among students. The investigator experimented using smart class method on experimental group and normally practiced method on controlled group after equating them using pre-test. After experimentation, post-test was administered on both groups to study the effectiveness of smart class method and normally practiced method for comparative analysis.*

**KEYWORDS**

smart class method, normally practiced method, achievement in social science.

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**1. INTRODUCTION**

Education at secondary level focuses on achieving the highest strata of academic excellence in a specific domain and in the overall development of a child. Knowledge gets advanced when students learn all subjects with equal importance at secondary level. However, pupils have a negative perception regarding the learning of Social Science at secondary level, though it has a great importance and application in day today life. Therefore, the present education system adopts smart class method as a techno based pedagogy in the teaching of Social Science to present historical data in an interesting way, so as to enhance motivation and focused learning in secondary level. The present article focuses on the effectiveness of smart class method of teaching in terms of achievement in Social Science of the students of standard IX.

**2. CONCEPT OF SMART CLASS**

The development of technology has enormous impact on education system in India. Smart Class is one of the recent technological developments in teaching-learning method introduced by private enterprises to improve the quality of teaching and learning. Smart Class is an advanced version of multimedia approach, which enhances quality in both content and pedagogy. Smart Class method has been executed through digital instructional technologies. Gwak (2010) proposed the concept of smart learning as follows: first, it is focused on learners and content more than on devices; second, it is effective, intelligent, tailored learning based on advanced IT infrastructure. Smart class method is an information software package which brings quality of content and methodology for teaching and learning. Lee et al. (2014) proposed that the features of smart learning include formal and informal learning, social and collaborative learning, personalized and situational learning and more focus on application of content.

**3. IMPORTANCE OF THE STUDY**

The study focusses on the effectiveness of Smart Class Method on the Achievement in Social Science among the selected students of standard IX in Chennai district. The sample of the study includes two hundred students from eight schools as experimental and control groups. The need and importance of the present study is looked from two perspectives viz. one side there is a negative attitude towards the study of Social Science as outdated and boring subject as teachers use the conventional method of teaching and on the other hand, there is a demand for a technological innovation in teaching and learning of the same. Therefore, the researcher examines the effectiveness of smart class method used by some schools in teaching learning process of Social Science in comparison to the Normally Practiced Method of teaching the same.

**4. OBJECTIVES OF THE STUDY**

1. To compare the effectiveness of Smart Class method and Normally Practiced Method on the Achievement of IX standard students in Social Science.
2. To compare the effectiveness of Smart Class method on the Achievement of IX standard Boys and Girls in Social Science.

**5. HYPOTHESES**

- There is no significant difference between the effectiveness of Smart Class method and Normally Practiced Method on the Achievement of IX standard students in Social Science.
- There is no significant difference between the effectiveness of Smart Class method on the Achievement of IX standard Boys and Girls in Social Science.

**6. RESEARCH METHOD**

The present study adopted quantitative research method to analyze the effectiveness of smart class method on the academic achievement of children. By applying deductive approach, suitable research hypotheses were framed in line with the study objectives. The hypotheses were tested with the help of the quantitative data collected using quantitative instruments for the same. The data collected were subjected to statistical analyses and meaningful inferences were drawn from the results.

**SAMPLING PROCEDURE**

The researcher adopted purposive sampling method for the study. The sample consists of selected one hundred students each from both groups studying in class IX in Chennai district who follow samacheerkalvi syllabus. In the present study, the researcher selected the students who secured average score as equated groups in Social Science from the schools selected to be under experimental and control groups.

**TOOLS USED FOR THE STUDY**

- Achievement Tests in Social Science
- Lesson Transcripts for Smart Class Method
- Lesson Plans for Normally Practiced Method
- Socio Economical Status Scale.

**STATISTICAL TECHNIQUE USED**

The statistical technique used for the present study are a) Socio-Economic status of the participants is analyzed with the help of *Descriptive Statistics*, b) the psychometric properties, i.e. the reliability and validity of the questionnaire were tested using Split Half Method by Spearman Brown, *Cronbach's Alpha* and *Exploratory Factor Analysis* (EFA), c) Normality assumptions were carried out using *Kolmogorov-Smirnov Test* and *Shapiro-Wilk Test* as the sample size is 100 for each group and d) based on the results of the normality tests, non-parametric test, *Wilcoxon Signed Rank test* and *Mann-Whitney U Test* were carried out to compare the groups (pre-test and post-test groups / normally practiced method and smart class method groups).

**7. ANALYSIS AND RESULTS**

**H1: There is no significant difference between the effectiveness of Smart Class method and Normally Practiced Method on the achievement of IX standard students in Social Science.**

In order to determine, whether the pre and post test scores varied based on the type of teaching method adopted (SCM or NPM), *Mann Whitney U test* was conducted. This test was adopted as the dependent variable, i.e. the pre- and post-test scores, was measured on a continuous scale and the independent variable has two groups, Smart Class Method and Normally Practiced Method. It is observed from the results that the pre-test scores of IX standard students who were taught using the NPM (Mean Rank=101.34) was higher than those taught using the SCM (Mean Rank=99.66). However, the pre-test scores of the NPM group were not found to be statistically significantly higher ( $p>0.05$ ) than those of the SCM group.

**TABLE 1: COMPARISON BETWEEN NPM AND SCM IN PRE-TEST AND NPM AND SCM IN POST TEST**

Group		N	Mean Rank	Sum of Ranks	Mann-Whitney U	Sig.
Pre Test	NPM	100	101.34	10134.00	4916.000	0.836
	SCM	100	99.66	9966.00		
Post Test	NPM	100	50.51	5051.00	1.000	0.000
	SCM	100	150.49	15049.00		

Mann-Whitney U test on the post-test scores of IX standard students show that the post-test scores of the SCM group (Mean Rank=150.49) was higher than the post-test scores of the NPM group (Mean Rank=50.51). It can be concluded from the data that the post-test score of SCM group is statistically significantly higher ( $p<0.05$ ) than the post-test scores of NPM group.

Thus, from the above analysis, it can be inferred that both the methods NPM and SCM produced significant changes in the mean pre- and post-scores. However, the post-test scores of SCM group were found to be significantly higher than that of the NPM group. Therefore, H1 has been rejected and the alternate hypothesis "There exists a significant difference between the effectiveness of Smart Class Method and Normally Practiced Method on the achievement of IX standard students in Social Science" has been accepted.

**H2. There is no significant difference in the effectiveness of Smart Class method on the Achievement of IX standard Boys and Girls in Social Science**

In order to determine, whether the pre and post test scores of those in the SCM group varied based on their gender (Boys and Girls), *Mann Whitney U test* was conducted. This test was adopted as the dependent variable, i.e. the pre- and post-test scores, was measured on a continuous scale and the independent variable has two groups, Boys and Girls. The Table 2 depicts that the pre-test scores of IX standard Boys who were taught using the SCM (Mean Rank=54.21) was higher than those of the IX standard girls (Mean Rank=46.79). However, the pre-test scores of the Boys were found not significantly higher ( $p>0.05$ ) than those of the Girls.

**TABLE 2: COMPARISON BETWEEN THE PRETEST SCORE OF BOYS AND GIRLS AND POST TEST SCORE OF BOYS AND GIRLS IN SOCIAL SCIENCE**

Gender		N	Mean Rank	Sum of Ranks	Mann-Whitney U	Sig.
Smart Class-Pre-Test	Girls	50	46.79	2339.50	1064.500	0.197
	Boys	50	54.21	2710.50		
Smart Class-Post Test	Girls	50	52.75	2637.50	1137.500	0.432
	Boys	50	48.25	2412.50		

Mann-Whitney U test on the post-test scores of the SCM group show that the post-test scores of the Girls (Mean Rank=52.75) was higher than the post-test scores of the Boys (Mean Rank=48.25). However, the post-test scores of the Girls were not found to be significantly higher ( $p>0.05$ ) than those of the Boys. Thus, it can be inferred from the above analysis that the effectiveness of Smart Class Method did not vary between the IX standard boys and girls. Therefore, the hypothesis, H2 has been accepted.

**8. MAJOR FINDINGS**

- The post-test scores of IX standard social science students taught using the NPM had a mean rank of 50.51, while the post-test scores of IX standard students taught using the SCM had a mean rank of 150.49, indicating that the post-test score of the SCM was higher than the NPM, found to be significant ( $0.00 < 0.05$ ). Therefore, it is interpreted as *there is a significant difference between the effectiveness of Smart Class Method and Normally Practiced Method on the achievement of IX standard students in Social Science*
- The post-test SCM scores of the IX standard girls in social science was non-significantly higher than the IX standard boys in social science ( $34.84 \pm 2.02$  and mean rank of 52.72;  $34.48 \pm 1.96$  and mean rank of 48.25;  $0.43 > 0.05$ ). Therefore, the result indicated that the smart class method is effective to enhance the achievement in social science but did not differ between the boys and girls of IX standard pursuing Social Science.

**9. RECOMMENDATIONS**

The study emphasizes that teachers dealing Social Studies need to develop multimedia learning skills for uplifting the all-round excellence of students. The study propose that teachers can incorporate techno based strategic approach to increase their performance. The present work implemented a pre and post achievement test which is highly informative to the students, teachers, parents and to the members formulating the educational policies in terms of focused learning. The study adds a definite educational message in India, where the usual chalkboard teaching method is followed. The benefits clearly necessitate the attention of the policymakers to incorporate a greater number of smart class method in school curriculum to create an optimistic atmosphere of learning.

**10. CONCLUSIONS**

The present study reflects the competence of the digital classroom teaching of social science at school level. The outcome of the study indicates that smart class method enhances the rationalizing power of the students, improve their application skills and minimizing the educational stress. The present study depicted a significant achievement of students through the smart class instructional technique by using the interactive elements of digital boards and virtual reality in the smart classes, to make the learning process as student centric. Thus, the smart class method adopted in the current study is concept-oriented, interactive, informative and conducive to the students to enhance the achievements in Social Science.

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