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EFFECTIVENESS OF SMART CLASS AMONG SECONDARY SCHOOL'S STUDENTS

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Introduction

Smart class is digitized classroom, which is rapidly transforming the way teachers teach and students learn in school with innovative and meaningful use of technology, powered by the world"s largest repository of digital content mapped to Indian school curriculum, smart class brings in technology right next to the blackboard for teachers in the classrooms. Debi (2003) concluded that students performed better when exposed to program teaching material perform learning material was found to be effective compare to the traditional method of teaching. Smart class room technology known as interactive whiteboard that is used by classrooms all over. The interactive white board is huge screen that is mounted to a wall of the classroom. It is brought in to class room it can serve a number of purposes. Natrajan (2004) evaluated technology enhanced learning and future of education. Smart class brings about a complete transformation is classrooms. This results in faster and accurate understanding of the concepts in class and helps improve the overall academic performance of students. Teachers are able to keep students engaged in the learning process and also get an instant and accurate assessment of learning outcomes achieved at the end of the class.

Keywords: Smart class, Room, Technology

Benefits of Smart class

1. Improves teacher's effectiveness and productivity in class:
2. Technology can play a significant role in increasing productivity at every level of the education system.
3. State programs, policies, and practices can invest in, encourage, or make room for the smart use of technology not as an add-on or to reproduce current practice, but to accelerate learning and expand access.
4. Smart use of technology is primarily about allowing each person to be more successful by reducing wasted time, energy, and money. It brings abstract and difficult curriculum concepts inside classrooms.
5. Makes learning an enjoyable experience for students.
6. Improves academic performance of students.
7. Enables instant formative assessment of learning out comes in class.
8. It also enables teachers to instantly assess and evaluate the learning achieved by their students in class

OBJECTIVES OF THE STUDY

1. To compare the effect of Educomp smart classroom and conventional classroom teaching on the retention in Social science among VIII graders.

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2. To study the effect of Educomp smart classroom and convention class teaching in Social science.
3. To compare the mean Retention scores of male and female VIII graders in Social science to be taught through Educomp Smart Classroom teaching.
4. To compare the mean Retention scores of male and female VIII graders in Social science to be taught through Conventional Classroom teaching.
5. To compare the Social science score of male and female students

METHODOLOGY

In the present study, experimental method was used. Experimental research method is an orderly procedure carried out with goal of verifying, refuting, or establishing the validity of hypothesis. Controlled experiments provide insight into cause-and-effect by demonstrating what outcome occurs when a particular factor in manipulated. Controlled experiments vary greatly in their goal and scale, but always rely on repeatable procedure and logical analysis of the results. There also exist natural experimental studies.

DESIGN

The study was an experimental study in which non randomized pre-test and post-test parallel groups were used. The sample was divided into groups i.e. one Experimental Group and other Control group. The Experimental Group was taught through Smart classroom and Control group was taught with Text-book.

TOOLS USED

1. Performance test of Intelligence developed by Ahuja (1976).
2. Achievement test of Social Science was developed and standardized by the investigator.
3. Multimedia Programme for class secondary students (developed by the investigator).

STATISTICAL ANALYSIS

Mean, S.D. and t-test were employed as statistical techniques on the present study.

RESULT

The investigator adopted the analytical approach to study the effect of Smart classroom based teaching on achievement of social science. The pre-test scores were attained to see the level of the knowledge among students related to concepts related to Social Science. The post-test scores attained after providing treatment. Both scores were analyzed. Mean difference in the post-test scores clearly indicated that Smart classroom was far better in teaching as compared to Traditional method. The results are summarized in following table no.

HYPOTHESIS 1

There is no significant difference in the effects of Educomp smart classroom and conventional classroom teaching on the retention in Social science among VIII graders.

Table No. 4.1 table showing t- Educomp smart classroom and conventional classroom teaching in terms of achievement scores (Pre-test).

GROUP-A		GROUP-B	
Sr. No.	**Pre-test Scores**	**Sr. No.**	**Pre-test Scores**
1	25	1	26

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2	22	2	29
3	20	3	28
4	30	4	29
5	28	5	22
6	25	6	23
7	30	7	25
8	31	8	21
9	29	9	28
10	26	10	27
11	29	11	26
12	23	12	25
26	27	13	26
14	24	14	27
15	22	15	26
Z X1	391	Z X2	388

Table No. 4.2: Table showing the results of the interpretation

Group	N	Mean	S.D	SEm	Df	"t-ratio"
Group-A (Control group	15	26.96	3.53	0.89	48	0.13
Group-B (Experimental group	15	26.84	2.77			

On the basis of Pre-test scores, Mean score for Control group is 26.96 & Standard deviation is 3.53. On the other hand, Mean score for Experimental group is 26.84 & Standard deviation is 2.77. T-value is 0.13 which is not significant at 0.01 levels. This shows that both groups have same achievement

So the hypothesis: "There is no significant difference in the effects of Educomp smart classroom and conventional classroom teaching on the retentionin Social science among VIII graders" stands accepted.

ANALYSIS AND INTERPRETATION OF POST-TEST SCORES OF BOTH THE GROUPS (N=30)

To analyze both groups at post-test level on basis of Achievement Test scores obtained by the students were treated in the form of mean, StandardDeviation, t-ratio were shown in table no-4.3

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HYPOTHESIS 2

There is no significant difference in the mean retention scores of male and female students in Social science to be taught through Educomp Smart Classroom teaching.

Table No. 4.3 table showing scores of male and female students in Social science to be taught through Educomp Smart Classroom teaching

GROUP-A		GROUP-B	
Sr. No.	**Post-test Scores**	**Sr. No.**	**Post-test Scores**
1	38	1	32
2	36	2	31
3	39	3	30
4	37	4	32
5	40	5	30
6	36	6	26
7	43	7	30
8	43	8	27
9	40	9	32
10	35	10	31
11	41	11	31
12	42	12	28
13	38	13	32
14	37	14	35
15	43	15	31
Z X1	588	Z X2	458

Table No. 4.4: Table showing the results of the interpretation

Group	N	Mean	S.D	SEm	Df	"t-ratio"
Group-A (Control group	15	39.64	3.42	0.81	48	9.28**
Group-B (Experimental group	15	32.12	2.17			

**Significant at 0.01 level

Table shows that Mean=39.64, 32.12 of the two groups and S.D=3.42, 2.17of the expected groups and t-ratio was found to be 9.29 which Significant at 0.01 level. Thus, our second hypothesis i.e. "There is no significant difference in the mean retention scores of male and female students in Social science to be taught through Educomp Smart Classroom

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teaching" stands rejected.

The above results show that both the group differs in achievement scores after the treatment. The Group-A was taught through Smart Classroom and Group-B was taught through Text-book. Since the mean of Group-A Significant higher than of Group-B. It may be said that Group-A (Smart classroom) achieved more than Group-B (Text-Book).

ANALYSIS AND INTERPRETATION OF GAIN SCORES OF BOTH THE GROUPS (N=30)

To analyze both groups at Gain scores level on basis of Achievement Test scores obtained by the students were treated in the form of mean, StandardDeviation, t-ratio were shown in table.

HYPOTHESIS 3

There is no significant difference in the mean retention scores of male and female students in Social science to be taught through conventional classroom teaching.

Table No. 4.5 table showing retention scores of male and female students in Social science in terms of achievement scores (Gain score)

GROUP-A		GROUP-B	
Sr. No.	**Gain Scores (X1)**	**Sr. No.**	**Gain Scores (X2)**
1	13	1	6
2	14	2	4
3	15	3	6
4	14	4	5
5	12	5	8
6	15	6	3
7	13	7	5
8	12	8	8
9	11	9	4
10	13	10	6
11	12	11	5
12	13	12	3
13	11	13	6
14	13	14	5

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15	13	15	6
Z X1	194	Z X2	80

Table No. 4.6: Table showing the results of the interpretation

Group	N	Mean	S.D	SEm	Df	"t-ratio"
Group-A (Control group	15	12.56	1.89	0.47	48	15.48**
Group-B (Experimental group	15	5.28	1.45			

**Significant at 0.01 level

On the basis of gain scores, Mean score for Control group is 12.56 & Standard deviation is 1.89. On the other hand, Mean score for Experimental groupis 5.28 & Standard deviation is 1.45.t-value is 15.48 which is significant at 0.01 level. This shows that students can achieve well after teaching with Constructivist approach.

So the hypothesis: "There is no significant difference in the mean retention scores of male and female students in Social science to be taught through conventional classroom teaching" stands rejected. It shows that students who weretaught through Smart Classroom were better as compared to the students who were taught through the Traditional method.

MAIN FINDINGS OF THE STUDY:

1. The students of Experimental group (Smart classroom) and Control group (Text-book) did not differ significantly on their pre-test scores.
2. A significant difference was found between post-test scores of Experimental group and Control group. Students of experimental group were found to have higher score on achievement as compared to the students in Control group.
3. A significant difference was found between Mean Gain scores of Experimental group and Control group. The experimental group showed higher gain score as compared to their counter parts.

FINDING OF THE STUDY

On the basis of analysis of data and interpretation of results of the present study, following conclusion was draw:-

1. From the result of hypothesis 1: we conclude that there is no effect on the pre-test scores of students.
2. From the result of hypothesis 2: we conclude that there is a effect of smart classroom on the post-test scores of the students.
3. 3. From the result of hypothesis 3: we conclude that student taught through Smart classroom achieved better as compared to those taught through traditional instruction and there is a better difference in the gain scores of students.

CONCLUSION

- The students of Experimental group (Smart classroom) and Control groupϖ (Text-book) did not differ significantly on their pre-test scores.
- A significant difference was found between pre-test scores of Experimentalϖ group and Control group.
- Students of Experimental group were found to have higher score on achievement as compared to the students in Control group.
- A significance difference was found between Mean Gain scores of theϖ Control group and Experimental group.
- The Experimental group showed higher gain score as compared to their counter parts.
- The investigator felt that students can learn concepts of Social Scienceϖ better through Smart classroom method.
- It was observed by the investigator that students learn quickly whenϖ teacher taught through visual aids in interesting manner

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