CHAPTER - V
DISCUSSION OF THE RESULT

5.1.0. INTRODUCTION
This present chapter of "Discussion of the result" is concerned with the conclusive features of the entire study. The analysis and interpretation of data of the previous chapter, led the researcher towards this conclusive phase. The final or concluding aspects of the study has been described in this chapter in a very brief manner. But, while description has been made in this chapter, due care has been taken to include all the significant features of the conclusion, otherwise there would be the miss in the charm of the practicability of the study. However, the content materials of the present chapter has been categorised under these five broad heads.

(i) Major findings of the study
(ii) Broad Conclusions
(iii) Juxtaposition of the findings
(iv) Educational implications of the study
(v) Limitations of the study
(vi) Suggestions for further research

5.2.0. MAJOR FINDINGS OF THE STUDY
On the light of the analysis of data and interpretation of the result of the present investigation as already discussed in previous chapter, the main findings are stated in the following heads.

5.2.1 Effect of MAI over TMT in developing overall cognitive abilities in social studies.
1. Multi dimensional Activity based Integrated approach (MAI) has significant merits over Traditional Method of Teaching (TMT) in developing overall cognitive abilities in social studies at the elementary level.
5.2.2 Effect of MAI over TMT in developing overall creative abilities in social studies.

2. MAI does seem as a better strategy than TMT for developing overall creative abilities in social studies at the elementary level.

5.2.3 Effect of MAI over TMT in developing competency wise cognitive abilities in social studies.

3. Knowledge competency in social studies can best be developed through MAI than TMT.
4. MAI has significant impact for developing understanding competency in social studies than the TMT.
5. The skill competency in social studies can be developed into a significant level at the elementary school stage through using the teaching strategy of MAI. This MAI has merits over TMT.
6. In comparison to TMT, MAI has merits for developing application competency in social studies at the elementary level.

5.2.4 Effect of MAI over TMT in developing competency wise creative abilities in social studies.

7. MAI is found to be an effective and suitable strategy than TMT for developing fluency competency in social studies at the elementary school stage.
8. Significant difference is found between MAI and TMT in terms of developing flexibility competency in social studies. MAI is considered as a beneficial strategy in this regard.
9. There exists no significant difference between MAI and TMT in developing originality competency in social studies at the elementary level. That means, MAI and TMT has the similar effect in terms of developing originality competency in social studies at the elementary level.

5.2.5 Effect of MAI over TMT in developing content area wise cognitive abilities in social studies.

10. Significant difference is found between MAI and TMT regarding the development of cognitive ability of Geography content area in social studies. MAI can facilitate better development of cognitive ability of Geography content area in social studies than TMT.
MAI has greater effect for developing cognitive ability of History content area in social studies at the elementary level than TMT.

There exists significant difference between MAI and TMT in developing cognitive ability of Civics content area in social studies. Here MAI supersedes TMT.

5.2.6 Effect of MAI over TMT in developing content area wise creative abilities in social studies.

MAI has better impact than TMT in developing creative ability of Geography content area in social studies at the elementary level.

The difference in methods of teaching leads to the difference in developing creative ability of History content area in social studies. MAI method is a suitable method in this respect of developing creative ability of History content area in social studies than TMT.

MAI is a beneficial method over TMT for developing creative ability of Civics content area in social studies.

5.2.7 Effect of MAI over TMT in developing competency wise cognitive abilities in different content areas in social studies.

MAI strategy of teaching-learning provides better result than TMT strategy of teaching learning for the development of Knowledge competency of Geography content area in social studies.

MAI is a suitable strategy for developing understanding competency of Geography content area in social studies than TMT strategy.

In comparison to TMT, MAI seems to be a suitable strategy for developing skill competency of Geography content area in social studies.

MAI is an effective strategy than TMT for developing application competency of Geography content area in social studies at the elementary level.

MAI has merits over TMT for developing knowledge competency of History content area in social studies at the elementary level.

There exists significant difference between MAI and TMT in respect of developing understanding competency of History content area in social studies. And, MAI has merits over TMT in this regard.
22 The development of skill competency of History content area in social studies is more possible through MAI technique than TMT technique.

23 The development of application competency of History content area in social studies is possible in a greater extent through MAI strategy than TMT strategy.

24 Significant difference is found between MAI and TMT in respect of developing knowledge competency of Civics content area in social studies. And, MAI is better than TMT in this regard.

25 MAI has merits over TMT in developing understanding competency of Civics content area in social studies at the elementary level.

26 MAI seems to be suitable approach than TMT in respect of developing skill competency of Civics content area in social studies.

27 The application competency of Civics content area can be developed into a significant level through MAI strategy of teaching-learning in comparison to TMT strategy of teaching-learning.

5.2.8 Effect of MAI over TMT in developing competency wise creative abilities in different content areas in social studies.

28 Significant difference is found between MAI strategy and TMT strategy in respect of developing fluency competency of Geography content area in social studies. And, in this regard, MAI strategy is regarded as better strategy than TMT strategy.

29 There exists significant difference between MAI and TMT in respect of developing flexibility competency of Geography content area in social studies. And, MAI has greater effect than TMT for developing this flexibility competency of Geography content area in social studies.

30 There exists no significant difference between MAI and TMT in respect of developing originality competency of Geography content area in social studies. That means, methodological difference (with regard to MAI and TMT) causes no difference in achievement of originality competency of Geography content area in social studies.
MAI is regarded as a better strategy than TMT in respect of developing fluency competency of History content area in social studies.

MAI has more effect than TMT for developing flexibility competency of History content area in social studies.

No difference is found between MAI and TMT in respect of developing originality competency of History content area in social studies.

MAI has merits over TMT for developing fluency competency of Civics content area in social studies.

In comparison to TMT, MAI seems to be a suitable approach for developing flexibility competency of Civics content area in social studies at the elementary level.

MAI and TMT hardly differ in themselves in respect of developing originality competency of Civics content area in social studies at the elementary level.

5.3.0. BROAD CONCLUSIONS

On the basis of the findings of the study, the following broad conclusions are drawn.

1. MAI has significant merits over TMT in respect of developing overall cognitive abilities in social studies at the elementary level.

2. MAI does seem as a better strategy than TMT for developing overall creative abilities in social studies at the elementary level.

3. MAI has significant merits over TMT in developing competency wise cognitive abilities (referring to knowledge competency, understanding competency, skill competency and application competency) in social studies at the elementary level.

4. Referring to the development of competency wise creative abilities in social studies, MAI has merits over TMT in developing fluency competency and flexibility competency in social studies; where as MAI and TMT don't differ in themselves in respect of developing originality competency in social studies at the elementary level.
MAI has merits over TMT in developing content area wise cognitive abilities (referring to Geography content area, History content area and Civics content area) in social studies at the elementary level.

MAI has merits over TMT in developing content area wise creative abilities (referring to Geography content area, History content area and Civics content area) in social studies at the elementary level.

MAI has merits over TMT in developing competency wise cognitive abilities in different content areas (referring to knowledge competency, understanding competency, skill competency and application competency of Geography content area; knowledge competency, understanding competency, skill competency and application competency of History content area; and knowledge competency, understanding competency, skill competency and application competency of Civics content area) in social studies at the elementary level.

Referring to the development of competency wise creative abilities in different content areas in social studies, MAI has merits over TMT in developing fluency competency and flexibility competency of Geography content area; fluency competency and flexibility competency of History content area; fluency competency and flexibility competency of Civics content area in social studies, whereas MAI and TMT don’t differ in themselves in respect of developing originality competency of Geography content area; originality competency of History content area; and also originality competency of Civics content area in social studies.

5.4.0. JUXTAPOSITION OF THE FINDINGS

By employing the ANCOVA technique, the result of the present study has been analysed. The details of the findings of the study and the conclusion drawn from the study are given in the preceding paragraphs. How far the result of the present study corroborates with the results of many other studies conducted in the similar lines is given below.

The studies conducted by Yu(2001), Messman and Jones-Carley(2001), Din and Calao (2001), Tzuriel; Kaniel; Kanner; and Haywood (1999), Biegler (1998), Householter and Schrock (1997), Joshi and Mohapatra (1995), Panda and Choudhury (2000), Bansal and
Suvidha (1997), Singh (1992), Patnaik (1988), Mohanty (1992), Panda (1990) etc. state that cognitive abilities of the individual learners can be developed or the achievement of individual learners in cognitive area can be achieved through using different methodologies in teaching-learning process. Present study corroborates with these studies in the sense that in the present study multi-dimensional activity based integrated approach had been used for cognitive development of the learners and this approach provided the fruitful results.

The studies conducted by Svesson; Norlander; and Archer (2002), Haward–Jones; Taylor and Sutton (2002), Hobbs Trapp (1998), Grawitch; Munz; and Kramer (2003), Antonietti (2000), Gujarathi (1992), Jawaharlal (1990), Kumari (1990), Malohotra (1990), Gulati (1995), Sharma (1995) and many other studies state that the different aspects of creative abilities of the learners can be developed through using the different nurturing strategies and creative inducement programmes. All these studies more or less corroborate with the present study. Because, present study states that, barring to originality aspect of creativity, the other two important aspects of creativity i.e. fluency and flexibility can be developed to a significant level through multi-dimensional activity based integrated approach of teaching-learning.

One significant characteristic one can find in the present study is that, in the present study, due care had been taken to develop both cognitive and creative abilities simultaneously through multi-dimensional activity based integrated approach. The study resulted that the different aspects of both cognitive and creative abilities can be developed through multi-dimensional activity based integrated approach except the originality aspect of creative ability. The studies conducted by Schlichter and Palmer (2002), Tennyson and Breuer (2002), Blumen-Prado (2002), Choudhury; Vaida; Navalakha and Mohapatra (1999) etc. state that the creative abilities of the learners along with the different aspects of cognitive ability / achievement in cognitive area can be developed through the use of different teaching strategies in the teaching-learning process. Therefore, present study corroborates with the studies of Schlichter and Palmer (2002), Tennyson and Breuer (2002), etc. in the light of developing both cognitive and creative abilities simultaneously through the use of different teaching strategies.
The result of the present study states that multi-dimensional activity based integrated approach is an effective strategy through which two important types of abilities i.e. cognitive ability and creative ability in the area of social studies can be developed barring to one aspect of creative ability in the area of social studies i.e. originality creative ability in social studies. The studies conducted by Holliday (2000; 2001), Beam (2000), Shahi (1989), DasGupta (1989), Sharma (1994), and Kulkarni (1991) in the area of social studies resulted that the different abilities in the area of social studies can be developed through the use of different teaching-learning techniques. The result of the present study juxtaposes with these studies conducted in the area of social studies.

5.5.0. EDUCATIONAL IMPLICATIONS

The findings of the present study signify that the development of cognitive and creative abilities in the area of social studies of the learners / students at the elementary level is possible through the use of multi-dimensional activity based integrated approach. The following educational implications can be drawn referring to the present study.

❖ The aim of our school education shouldn't be only cognitive development (cognitive development in terms of convergent thinking) of the learners but it should aim at bringing both cognitive as well as creative development (creative development in terms of divergent thinking) of the learners.

❖ Due care must be taken to develop creative ability of the learners through the teaching of different school subjects instead of teaching creativity as a separate discipline.

❖ Due care must be taken to use the subject ‘social studies’ as one of the best means for creative development of the young learners of our schools.

❖ The teacher should try the best to use multi-dimensional activity based integrated approach for developing various abilities of the school children. But, the teacher should give much emphasis on this approach for the development of the creativity of the school learners.
Due care must be taken to create such an atmosphere in the home, school and community of the learner which would lead the learner towards divergent and critical thinking.

The teaching-learning process of our school should not aim at only the development of individual creativity rather it should aim at developing both individual creativity and corporate / group creativity.

The entire teaching-learning process of the school should be democratic, congenial, innovative, friendly, participative and practical oriented.

Due care must be taken to employ such kind of teachers in our schools who would discourage to impart the rote and rudimentary knowledge to the students and encourage / facilitate imaginative, practical and cognitively flexibility knowledge to the students.

Due care must be taken to design our teacher training programme in such a way that, it would prepare the teachers properly for bringing the holistic development of the learners. Similarly, our teacher training programme must train our teachers properly regarding how to use activity based integrated approach in our teaching-learning process.

Due care must be taken to use the multi-dimensional activity based integrated approach at different class level of our school education and to develop the different abilities through it.

Planning must be made starting from national level to local level for flourishing all the creative talents and characteristics of the learners of our schools.

Quality education for the learners in our school should be interpreted from the point of view of holistic development of the learners by giving special emphasis on the development of the creative abilities of the learners.

The development of creative ability along with the development of other abilities should not only the part of the objectives of our teaching-learning process but this development of creative ability should form the integral part of our teaching learning procedure, text book, evaluation procedure and in a single word all the inside and outside activities of the school.
The recent trend of competency based and commitment-oriented teaching-learning should include the development of creativity as one of its most important dimension. And, the multi-dimensional activity based integrated approach should be followed / considered as the most important strategy / method to achieve the objectives of this competency based and commitment oriented teaching-learning.

5.6.0. LIMITATIONS OF THE STUDY

1 The multi-dimensional activities developed by the researcher for the enhancement of cognitive and creative abilities in social studies might not have high validity and reliability. Because, there might be formed many other activities, which would have more reliability and validity for the enhancement of cognitive and creative abilities in social studies than the present activities.

2 The maximum activities used for creative development referring to present study were head related in nature. The less number of activities were hand related and heart related. This is one limitation of the present study.

3 The cognitive ability in this study is mostly understood in terms of convergent thinking. But, some of the questions used in the cognitive ability test (i.e. CTS) of the present study require a little bit divergent thinking also. This is one limitation of the present study.

4 Since cognitive and creative abilities are mostly related to each other, so it is very difficult to draw a clear-cut demarcation between them.

5 No readymade scoring key was followed for the Basantia's Test of Creative Thinking (BTCS), because the answers required for each item of any creative ability test is mostly divergent in nature.

6 The scoring key followed for Cognitive Ability Test in Social Studies (CTS) used in this study is not attached with this research report.

7 It was not possible on the part of the researcher to control all the extraneous variables that have affected in the process of experiment.
5.7.0. SUGGESTIONS FOR FURTHER RESEARCH

1 The present study has been conducted on an English Medium school of urban setting. But this type of study may be extended to many regional language medium schools as well as schools having differential backgrounds like semi-urban setting, rural setting etc.

2 The present study has been conducted in order to know the effect of Multi-dimensional Activity based Integrated approach (MAI) over Traditional Method of Teaching (TMT) in developing both cognitive and creative abilities in social studies of elementary school children, but, another similar type of study may be conducted in order to know the effectiveness of MAI over TMT for developing only cognitive ability or only creative ability in social studies of elementary school children.

3 The present study has been conducted in order to know the effectiveness of MAI over TMT in developing cognitive and creative abilities in the broad area of social studies. But, the study may be extended to different other areas / disciplines like mathematics, sciences, language and literature, work experiences etc.

4 The present study has been conducted on class-VI students of elementary school. A similar kind of present study may be extended to different classes and different stages of our school education.

5 In the present study, the effect of MAI over TMT for developing cognitive and creative ability is judged. But, many other studies may be conducted in order to judge the effect of MAI over different other teaching-learning strategies (i.e. co-operative method, programme learning method, synetic method etc.) for development of cognitive and creative abilities.

6 Present study does not include the background variables like caste, gender, socio economic status etc. for comparison. A study may be undertaken to judge the effect of MAI over TMT in developing cognitive and creative abilities of the school children with regard to background variables like socio-economic status, rural-urban setting, gender, achievement motivation of the students etc.
7 A theoretical study may be undertaken to find out / state sufficient number of multi-dimensional activities for developing the various abilities of our school children and to categorise those activities into different behavioural heads.

8 A factorial study may be conducted in order to ascertain the nature of the factors and attributes those contribute to the development of manifold cognitive and creative abilities of the students.

9 In the present study, MAI as an innovative technique has been used for creativity and cognitive development of the learners. A study may be conducted to judge the effectiveness of many other new and innovative techniques for creativity and cognitive development of the learners.

10 Evaluative studies may be undertaken to know the effectiveness of different activity based teaching learning strategies for the development of the cognitive and creative abilities of the learners.

11 Present study states that MAI has merits over TMT in developing fluency and flexibility competencies of the learners, where as, MAI has little / no effect for developing originality competency of the learners. But, a study may be undertaken to judge the long-term effect of MAI over TMT or other methodologies for the development of originality competency of the learners.

12 A theoretical study may be undertaken in order to suggest different approaches through which the more creativity elements can be infused in our school curriculum.