CHAPTER V

SUMMARY AND CONCLUSION
5.1 INTRODUCTION

This chapter provides the findings and conclusion of the study. It consists of nine sections. The first section deals with introduction of this chapter. The second section states the Restatement of the problem. The third section listed out the objectives of the study. The fourth section point out the predicted hypotheses in the study. The fifth section tells design of the study. The Sixth section records findings of the study. The seventh section deals with the conclusion of the study. The eighth section deals with the educational implication. The eighth section deals with suggestion for the further research.

5.2 RESTATEMENT OF THE PROBLEM

The title of the study is “A study on Teachers, Parents and Learners attitude towards Science exhibition at Secondary level in Virudhunagar District”.

5.3 OBJECTIVES OF THE STUDY

1. To find out the attitude of teachers at secondary level towards science exhibition.

2. To find out the attitude of teachers at secondary level towards science exhibition in terms of sex.

3. To find out the attitude of teachers at secondary level towards science exhibition in terms of age.

4. To find out the attitude of teachers at secondary level towards science exhibition in terms of educational qualification.
5. To find out the attitude of teachers at secondary level towards science exhibition in terms of working experience.

6. To find out the attitude of teachers at secondary level towards science exhibition in terms of type of school.

7. To find out the attitude of teachers at secondary level towards science exhibition in terms of monthly income.

8. To find out the attitude of teachers at secondary level towards science exhibition in terms of social status.

9. To find out the attitude of teachers at secondary level towards science exhibition in terms of locality.

10. To find out the attitude of parents at secondary level towards science exhibition.

11. To find out the significant difference in the attitude of parents at secondary level towards science exhibition in terms of their relationship with the student.

12. To find out the attitude of parents at secondary level towards science exhibition in terms of age.

13. To find out the attitude of parents at secondary level towards science exhibition in terms of type of school.

14. To find out the attitude of parents at secondary level towards science exhibition in terms of social status.
15. To find out the attitude of parents at secondary level towards science exhibition in terms of locality.

16. To find out the attitude of parents at secondary level towards science exhibition in terms of educational qualification.

17. To find out the attitude of parents at secondary level towards science exhibition in terms of interest in science related field.

18. To find out the attitude of parents at secondary level towards science exhibition in terms of monthly income.

19. To find out the attitude of learners at secondary level towards science exhibition.

20. To find out the attitude of learners at secondary level towards science exhibition in terms of sex.

21. To find out the attitude of learners at secondary level towards science exhibition in terms of standard.

22. To find out the attitude of learners at secondary level towards science exhibition in terms of type of school.

23. To find out the attitude of learners at secondary level towards science exhibition in terms of social status.
24. To find out the attitude of learners at secondary level towards science exhibition in terms of locality.

25. To find out the attitude of learners at secondary level towards science exhibition among secondary students in terms of fathers’ educational qualification.

26. To find out the attitude of learners at secondary level towards science exhibition in terms of mothers’ educational qualification.

27. To find out the attitude of learners at secondary level towards science exhibition in terms of fathers’ occupation.

28. To find out the attitude of learners at secondary level towards science exhibition in terms of parents’ monthly income.

29. To find out the attitude of learners at secondary level towards science exhibition in terms of parents interested in science related field.

30. To find out the attitude of learners at secondary level towards science exhibition in terms of hobby as doing science project.

31. To find out the significant relationship among teachers, parents and learners at secondary level in their attitude towards science exhibition.
5.4 HYPOTHESIS OF THE STUDY

1. The attitude of teachers at secondary level towards science exhibition is average.

2. There is no significant difference in the attitude of teachers at secondary level towards science exhibition in terms of sex.

3. There is no significant difference in the attitude of teachers at secondary level towards science exhibition in terms of age.

4. There is no significant difference in the attitude of teachers at secondary level towards science exhibition in terms of educational qualification.

5. There is no significant difference in the attitude of teachers at secondary level towards science exhibition in terms of working experience.

6. There is no significant difference in the attitude of teachers at secondary level towards science exhibition in terms of type of school.

7. There is no significant difference in the attitude of teachers at secondary level towards science exhibition in terms of monthly income.

8. There is no significant difference in the attitude of teachers at secondary level towards science exhibition in terms of social status.
9. There is no significant difference in the attitude of teachers at secondary level towards science exhibition in terms of locality.

10. The attitude of parents at secondary level towards science exhibition is average.

11. There is no significant difference in the attitude of parents at secondary level towards science exhibition in terms of relationship with the student.

12. There is no significant difference in the attitude of parents at secondary level towards science exhibition in terms of age.

13. There is no significant difference in the attitude of parents at secondary level towards science exhibition in terms of type of school.

14. There is no significant difference in the attitude of parents at secondary level towards science exhibition in terms of social status.

15. There is no significant difference in the attitude of parents at secondary level towards science exhibition in terms of locality.

16. There is no significant difference in the attitude of parents at secondary level towards science exhibition in terms of educational qualification.

17. There is no significant difference in the attitude of parents at secondary level towards science exhibition in terms of interest in science related field.
18. There is no significant difference in the attitude of parents at secondary level towards science exhibition in terms of monthly income.

19. The attitude of learners at secondary level towards Science Exhibition is average.

20. There is no significant difference in the attitude of learners at secondary level towards science exhibition in terms of sex.

21. There is no significant difference in the attitude of learners at secondary level towards science exhibition in terms of standard.

22. There is no significant difference in the attitude of learners at secondary level towards science exhibition in terms of type of school.

23. There is no significant difference in the attitude of learners at secondary level towards science exhibition in terms of social status.

24. There is no significant difference in the attitude of learners at secondary level towards science exhibition in terms of locality.

25. There is no significant difference in the attitude of learners at secondary level towards science exhibition in terms of fathers’ educational qualification.
26. There is no significant difference in the attitude of learners at secondary level towards science exhibition in terms of mothers’ educational qualification.

27. There is no significant difference in the attitude of learners at secondary level towards science exhibition in terms of fathers’ occupation.

28. There is no significant difference in the attitude of learners at secondary level towards science exhibition in terms of parents’ monthly income.

29. There is no significant difference in the attitude of learners at secondary level towards science exhibition in terms of parents interested in science related field.

30. There is no significant difference in the attitude of learners at secondary level towards science exhibition in terms of hobby as doing science project.

31. There is no significant relationship among teachers, parents and learners at secondary level in their attitude towards science exhibition.
5.5 DESIGN OF THE STUDY

The investigator has adopted normative survey method for the present study. Survey is a method for collecting and analyzing data obtained from a specific population through questionnaires and schedules.

A survey is concerned with the present and attempts to determine the status of the phenomenon under investigation. Educational surveys are particularly versatile and practical in that they identify present conditions and point to present needs. They provide worthy information for taking decisions.

A worthwhile research project is likely to result from a well-formulated research design. A design can be equated to a blue print which provides a clear-cut guideline to the investigator in carrying out his/her research successfully.

In the present study, the investigator developed and validated three types of rating scales viz., Attitude of Teachers Towards Science Exhibition (ATTSE), Attitude of Parents Towards Science Exhibition (APTSE) and Attitude of Learners Towards Science Exhibition (ALTSE) in order to find out teachers, parents and learners attitude towards science exhibition among secondary students.

The investigator adopted a stratified random sampling technique for this study. The strata were government, government-aided and matriculation schools. The sample consists of 200 teachers, 356 parents and 596 learners.

The appropriate statistical techniques like ‘t’ test, ANOVA and correlation were found out.
5.6 FINDINGS OF THE STUDY

After processing the data, the investigator found out the following findings:

1. The majority of teachers (65%) at secondary level are having positive attitude towards science exhibition. At the same time 28% of teachers are having attitude towards science exhibition at moderate level, very few percentage of teachers (5.5%) are having attitude towards science exhibition at low level.

2. There is no significant difference in the attitude of teachers at secondary level towards science exhibition in terms of sex.

3. There is no significant difference in the attitude of teachers at secondary level towards science exhibition in terms of age.

4. There is significant difference in the attitude of teachers at secondary level towards science exhibition in terms of educational qualification. The teachers having basic qualification have more positive attitude towards science exhibition than teachers having additional qualification.

5. There is no significant difference in the attitude of teachers at secondary level towards science exhibition in terms of working experience but the post ANOVA and ‘t’ test reveals that there is significant difference between teachers having 5 years of experience and teachers having above 10 years of experience in their attitude towards science exhibition. The teachers having 5 years of experience have more positive attitude towards science exhibition than teachers having above 10 years of experience. There is no significant difference between teachers having 5-10 years of experience and teachers
having above 10 years of experience in their attitude towards science exhibition.

6. There is no significant difference in the attitude of teachers at secondary level towards science exhibition in terms of type of school.

7. There is no significant difference in the attitude of teachers at secondary level towards science exhibition in terms of monthly income. But the post ANOVA and ‘t’ test reveals that there is significant difference between teachers having monthly income up to Rs.10,000 and teachers having monthly income in the range of Rs.10,000 to Rs.50,000 and between teachers having monthly income up to Rs.10,000 and above Rs.50,000. There is no significant difference between teachers having monthly income in the range of Rs.10,000 to Rs.50,000 and teachers having monthly above 50,000. The teachers having the monthly income up to Rs.10,000 are having high level of positive attitude towards science exhibition which is followed in an order by teachers having monthly income in the range of Rs.10,000 - Rs.50,000 and teachers having monthly income above Rs.50,000.

8. There is no significant difference in the attitude of teachers at secondary level towards science exhibition in terms of social status.

9. There is no significant difference in the attitude of teachers at secondary level towards science exhibition with regard to locality.

10. The majority of parents forming 60% are having high level of attitude towards science exhibition. It is noted here that 28% of parents at secondary level are having attitude towards science exhibition at moderate level. Only 27% of parents are having low level of attitude towards science exhibition.
11. There is no significant difference in the attitude of parents at secondary level towards science exhibition in terms of their relationship with the student.

12. There is no significant difference in the attitude of parents at secondary level towards science exhibition in terms of age.

13. There is no significant difference in the attitude of parents at secondary level towards science exhibition in terms of type of school.

14. There is no significant difference in the attitude of parents at secondary level towards science exhibition in terms of social status. The parents belonging to SC category are having high level of attitude towards science exhibition which is followed in an order by parents belonging to BC category, parents belonging to general category and parents belonging to MBC category.

15. There is no significant difference in the attitude of parents at secondary level with regard to locality. But the post ANOVA and ‘t’ test reveals that there is significant difference in the attitude of parents towards science exhibition between parents living in urban area and parents living in semi-urban area. The parents living in urban area have more positive attitude towards science exhibition than parents living in semi-urban area. There is no significant difference in the attitude of parents towards science exhibition between parents living in urban area and parents living in rural area and between parents living in semi-urban area and parents living in rural area.

16. There is no significant difference in the attitude of parents at secondary level towards science exhibition in terms of educational qualification.
17. There is no significant difference between parents having interest in science related field and parents not having interest in science related field in their attitude towards science exhibition.

18. There is no significant difference in the attitude of parents at secondary level towards science exhibition in terms of monthly income.

19. The learners at secondary level exactly 59% are having high level of attitude towards science exhibition. The learners at secondary level forming 25% are having moderate level of attitude towards science exhibition. Very low percentage that is 16% are having attitude towards science exhibition at low level.

20. There is no significant difference in the attitude of learners at secondary level towards science exhibition in terms of sex.

21. There is no significant difference in the attitude of learners at secondary level towards science exhibition in terms of standard.

22. There is no significant difference in the attitude of learners at secondary level towards science exhibition in terms of type of school.

23. There is no significant difference in the attitude of learners at secondary level towards science exhibition in terms of social status. But the post ANOVA and ‘t’ test reveals that there is significant difference between learners belonging to general category and learners belonging to BC category in their attitude towards science exhibition. The learners belonging to general category have
more positive attitude towards science exhibition than learners belonging to BC category. There is significant difference between learners belonging to general category and learners belonging to MBC in their attitude towards science exhibition. The learners belonging to MBC category learners has less positive attitude towards science exhibition than general category. However there is no significant difference in the attitude of learners towards science exhibition between learners belonging to SC category and learners belonging to general category. There is no significant difference between learners belonging to BC category and learners belonging to SC category. There is no significant difference between learners belonging to MBC category and learners belonging to SC category. The learners belonging to general category are having high level of attitude towards science exhibition which is followed in an order by learners belonging to BC category, learners belonging to SC category and learners belonging to MBC category.

24. There is no significant difference in attitude of learners at secondary level towards science exhibition in terms of locality.

25. There is no significant difference in the attitude of learners at secondary level towards science exhibition in terms of fathers’ educational qualification. There is significant difference between illiterate fathers and fathers with school education in their attitude towards science exhibition. The illiterate fathers are having more positive attitude towards science exhibition than the fathers with school education. There is no significant difference between illiterate fathers and fathers with higher education in their attitude towards science exhibition. There is significant difference between fathers with school education and fathers with higher education in their attitude towards science exhibition. The fathers with higher education are having more positive attitude towards science exhibition than fathers with school education. The illiterate fathers’ are having high level of attitude towards science exhibition which is
followed in an order by fathers with higher education and fathers with school education.

26. There is no significant difference in the attitude of learners at secondary level towards science exhibition in terms of mothers’ educational qualification. There is significant difference between illiterate mothers and mothers with school education in their attitude towards science exhibition. The illiterate mothers have more positive attitude towards science exhibition than the mother with school education. It is interpreted that there is significant difference between mothers with school education and mothers with higher education. The mother with higher education has more positive attitude towards science exhibition. The mothers with higher education have high level of positive attitude towards science exhibition which is followed by the illiterate mother and mother with school education in an order.

27. There is no significant difference in the attitude of learners at secondary level towards science exhibition in terms of fathers occupation.

28. There is no significant difference in the attitude of learners at secondary level towards science exhibition with regard to parents’ monthly income.

29. There is no significant difference between parents interested in science related field and parents not interested in science related field in their attitude towards science exhibition.

30. There is significant difference in the attitude of learners at secondary level towards science exhibition in terms of learners’ hobby as doing science project. The learners having hobby as doing science project are having more positive attitude towards science exhibition than learners who do not have doing science project as hobby.
31. The relationship between attitude of parents at secondary level towards science exhibition and attitude of teachers at secondary level towards science exhibition is negligible (r=0.04). The relationship between attitude of parents and attitude of learners at secondary level towards science exhibition is negligible (r=0.06). The relationship between attitude of teachers and attitude of learners at secondary level towards science exhibition is negligible (r=0.14). There is negligible correlation among the attitude of teachers, parents and learners in their attitude towards science exhibition. The variables do not have noted significant relationship.
5.7 Conclusion of the study

The present findings are derived from the empirical data collected for the present study. Based on the attempts made by the investigator and findings of the related studies, the investigator feels that for reaching conclusions could not be arrived at. As discussed earlier, the present study attempted to find out the teachers, parents and learners attitude towards science exhibition at secondary level in virudhunagar district. It also aimed to find out the differences in attitude towards science exhibition among teachers, parents and learners in terms of the subgroups of the sample selected for the study. From the perusal of present findings the following conclusions from the descriptive, differential and correlative analysis. They are

1. The majority of teachers (65%) at secondary level are having positive attitude towards science exhibition. At the same time 28% of teachers are having attitude towards science exhibition at moderate level, very few percentage of teachers (5.5%) are having attitude towards science exhibition at low level.

2. There is significant difference in the attitude of teachers at secondary level towards science exhibition in terms of educational qualification. The teachers having basic qualification have more positive attitude towards science exhibition than teachers having additional qualification.

3. There is no significant difference in the attitude of teachers at secondary level towards science exhibition in terms of working experience but the post ANOVA and ‘t’ test reveals that there is significant difference between teachers having 5 years of experience and teachers having above 10 years of experience in their attitude towards science exhibition. The teachers having 5 years of experience have more positive attitude towards science exhibition than teachers having above 10 years of experience. There is no significant difference between teachers having 5-10 years of experience and teachers having above 10 years of experience in their attitude towards science exhibition.
4. There is no significant difference in the attitude of teachers at secondary level towards science exhibition in terms of monthly income. But the post ANOVA and ‘t’ test reveals that there is significant difference between teachers having monthly income up to Rs.10,000 and teachers having monthly income in the range of Rs.10,000 to Rs.50,000 and between teachers having monthly income up to Rs.10,000 and above Rs.50,000. There is no significant difference between teachers having monthly income in the range of Rs.10,000 to Rs.50,000 and teachers having monthly above 50,000. The teachers having the monthly income up to Rs.10,000 are having high level of positive attitude towards science exhibition which is followed in an order by teachers having monthly income in the range of Rs.10,000 - Rs.50,000 and teachers having monthly income above Rs.50,000.

5. There is no significance difference in the attitude of teachers towards science exhibition in terms of sex, age, type of school, social status and locality.

6. The majority of parents forming 60% are having high level of attitude towards science exhibition. It is noted here that 28% of parents at secondary level are having attitude towards science exhibition at moderate level. Only 27% of parents are having low level of attitude towards science exhibition.

7. There is no significant difference in the attitude of parents at secondary level towards science exhibition in terms of social status. The parents belonging to SC category are having high level of attitude towards science exhibition which is followed in an order by parents belonging to BC category, parents belonging to general category and parents belonging to MBC category.

8. There is no significant difference in the attitude of parents at secondary level with regard to locality. But the post ANOVA and ‘t’ test reveals that there is significant difference in the attitude of parents towards science exhibition between parents living in urban area and parents living in semi-urban area. The parents living in urban area have more positive attitude towards science exhibition than parents living in semi-urban area. There is no significant difference in the attitude of parents towards science exhibition between
parents living in urban area and parents living in rural area and between parents living in semi-urban area and parents living in rural area.

9. There is no significant difference in the attitude of parents towards science exhibition in terms of their relationship with the student, age, type of school, educational qualification, interest in science related field and monthly income.

10. The learners at secondary level exactly 59% are having high level of attitude towards science exhibition. The learners at secondary level forming 25% are having moderate level of attitude towards science exhibition. Very low percentage that is 16% are having attitude towards science exhibition at low level.

11. There is no significant difference in the attitude of learners at secondary level towards science exhibition in terms of social status. But the post ANOVA and ‘t’ test reveals that there is significant difference between learners belonging to general category and learners belonging to BC category in their attitude towards science exhibition. The learners belonging to general category have more positive attitude towards science exhibition than learners belonging to BC category. There is significant difference between learners belonging to general category and learners belonging to MBC in their attitude towards science exhibition. The learners belonging to MBC category learners has less positive attitude towards science exhibition than general category. However there is no significant difference in the attitude of learners towards science exhibition between learners belonging to SC category and learners belonging to general category. There is no significant difference between learners belonging to BC category and learners belonging to SC category. There is no significant difference between learners belonging to MBC category and learners belonging to SC category. The learners belonging to general category are having high level of attitude towards science exhibition which is followed in an order by learners belonging to BC category, learners belonging to SC category and learners belonging to MBC category.
12. There is no significant difference in the attitude of learners at secondary level towards science exhibition in terms of fathers’ educational qualification. There is significant difference between illiterate fathers and fathers with school education in their attitude towards science exhibition. The illiterate fathers are having more positive attitude towards science exhibition than the fathers with school education. There is no significant difference between illiterate fathers and fathers with higher education in their attitude towards science exhibition. There is significant difference between fathers with school education and fathers with higher education in their attitude towards science exhibition. The fathers with higher education are having more positive attitude towards science exhibition than fathers with school education. The illiterate fathers’ are having high level of attitude towards science exhibition which is followed in an order by fathers with higher education and fathers with school education.

13. There is no significant difference in the attitude of learners at secondary level towards science exhibition in terms of mothers’ educational qualification. There is significant difference between illiterate mothers and mothers with school education in their attitude towards science exhibition. The illiterate mothers have more positive attitude towards science exhibition than the mother with school education. It is interpreted that there is significant difference between mothers with school education and mothers with higher education. The mother with higher education has more positive attitude towards science exhibition. The mothers with higher education have high level of positive attitude towards science exhibition which is followed by the illiterate mother and mother with school education in an order.
14. There is significant difference in the attitude of learners at secondary level towards science exhibition in terms of learners hobby as doing science project. The learners having hobby as doing science project are having more positive attitude towards science exhibition than learners who do not have doing science project as hobby.

15. There is no significant difference in the attitude the learners towards science exhibition in terms of sex, standard, type of school, locality, fathers occupation, parents monthly income and interested in science related field in their attitude towards science exhibition.

16. There is negligible correlation among the attitude of teachers, parents and learners in their attitude towards science exhibition. the variables don’t have noted significant relationship.
5.8 EDUCATIONAL IMPLICATIONS OF THE STUDY

This study mainly expresses the significance of the science in the society. Science can change each and every movement in our earth. Creation of awareness leads to reduce our environmental problems. Science can magnify the world in a successful manner. The young scientist is a backbone of the modern scientific world. Through science exhibition the teachers and parents can produce numerous modification and modernization in this earth. But the attitude of teacher, parents and learners should be in a positive way. To develop the positive attitude of science is channel of developing more scientists in this world. Through this study the investigator wants to create some awareness about the importance of science and its power among the secondary level in Virudhunagar district.

The science teachers having positive attitude towards science exhibition because teachers are motivated by the institutions and parents. It seems that science exhibition is an awaking among teachers.

Parents realize that learning by doing is giving concrete experience to children. Hence, they have shown positive attitude towards science exhibition.

Experiments and projects in science exhibition are motivating factors. It enthuses young learners to do and learn. This is known as experiential learning. It sounds good in science learning. It has been proved in the present study as majority of the learners (59%) have shown positive attitude towards science exhibition.
5.9 SUGGESTION FOR FURTHER RESEARCH

This study can be further studied in the following area:

- The present study as such can be replicated at various levels.
- The present study as such can be replicated in various districts.
- The present study as such can be replicated at higher secondary level.
- The present study as such can be replicated with any other sections of the society.