CHAPTER – V

5. SUMMARY, FINDINGS, RECOMMENDATIONS AND SUGGESTIONS FOR FURTHER STUDY

5.1 INTRODUCTION

This chapter includes three sections: Summary of the findings, conclusions and recommendations for future research. In the summary of findings, an overview of the study methodology and results are provided. The conclusion section includes a discussion of the findings for each of the four types of effects as well as inferences drawn from the results. The recommendations section provides areas for further research.

5.2 NEED FOR THE STUDY

The emerging trend all over the world is towards more individualized and flexible forms of learning with an emphasis on the individual learning. The National Policy on Education (1986) has emphasized the application of Educational Technology to improve the Quality of Education at all levels. It has also laid a special emphasis on using computers in the teaching learning process. The rapid development in the computer technology, together with the use of computers by the teachers, paved the way for the introduction of computers in teaching and learning. With
the advancement of technology, the computer has become more user friendly, so the teachers can attempt to develop E-Content and to train the teachers to use appropriately.

One of the important systems of communication of the knowledge, in recent times, has been through web casting and its delivery through internet and now it is likely to be through broadband. One is able to see on the website whatever is hosted by the Information / Knowledge Providers. Content production in the electronic format is the need of the hour. With the powerful medium namely internet the content can be communicated to the needy target group with less cost and more effectively. The point of paramount importance is the fact that if teachers don’t create E-Content, either no one else can or somebody else will. Of course, the task of developing E-Content or Knowledge Packaging necessitates collaborative efforts by technologists and academics. In this context, the following observation of Vladimir Kinelev (2005) needs attention, “ICTs have not eliminated the most pressing of problems that education systems face. Attempts to improve education through ICTs suffer from the absence of sound education paradigms”. It is here that the teacher with clarity in content and depth in pedagogy assumes a pivotal role in creating the right instructional design and in creating appropriate content in effective manner.
History as a subject plays a major role in relating to students how our culture, customs, the destructions and development of each nation. Such a subject is facing a major setback very few students are opting for History, as the methodology used for teaching History is still traditional chalk and talk method. Students feel it is tedious to learn the dates and various events. Learning History in Higher Secondary level is not considerably large at present. This means that the pupil’s attitude towards selecting subject like History is not appreciably large in number. This is not a simple statement and it is an acceptable truth from the teachers’ side as well as students’ side. When the investigator tending to find the real curse of this major problem, the following are some of the arbitrary reasons among the learners’ side, viz., the value and depth of the subject cannot be realized by the learners since it is entirely new subject when the pupils come from high school level to higher secondary level there is no attractive methods to teach/learn the subject joyfully, the learners think that the scope of the subject is very less, also the learner have unfaith on employability and the resources to be utilized to impart the subject is nor appropriately provided by the schools.

The teachers must certainly try some attractive methods to teach the subject joyfully. In order to provide an effective method in teaching Social science the investigator decided to develop the
E-Content material on social science to teach at IX standard level and further to analyse the effectiveness.

5.3 STATEMENT OF THE PROBLEM

In the present day context the need for digital convergence of teaching learning material is imperative to provide quality education to greater quantities of learners for the simple reason that the reach and richness of E-Content is quite high. The salient features of E-Content viz., bi-sensory learning experience, digital convergence of text, image, audio, video, animation etc. to create the effects of multimedia, accessibility, reusability, interoperability etc. are the supporting points in favour of the claim to give top priority to E-Content development, among all academic endeavours.

It might be seen that there is a great lack in developing E-Content material for teaching Social science considerably. Hence, the investigator intended to develop E-Content in selected topic in Teaching Social science at IX std level. This research is intended to develop, validate and find out the effectiveness of E-Content in the normal teaching learning environment. The problem of the study shall be stated as follows “Developing, Validating and Measuring the Effectiveness of E-Content in the subject social science at Secondary Level”
5.4 OPERATIONAL DEFINITION OF THE TERMS

Effectiveness

According to Oxford Advanced Learners’ Dictionary of correct English by A.S. Horn by (OUP) “effective” means the power to bring about a result. As far as the study is concerned, effect refers to impressive result in the improvement of achievement through the E-Content. The effectiveness is determined in terms of the gain scores obtained by the students in the experiment. The gain score is the difference between the pre-test score and the post-test score.

Achievement

Good (1959) defined achievement as “Accomplishment or proficiency of performance in a given skill or body of knowledge”. In this study achievement denote the relative standing of the student as measured by the achievement test in social science.

Social science Students

In this study it refers to the students studying in the IX standard.

E-Content

Oxford dictionary defines E content as - Digital text and images designed for display on web pages. Here in this study E Content refers to which includes electronic versions of books,
journals, maps, media, and archival materials that can be used for teaching and learning.

The content available through TV, radio, phone, multimedia CD/DVDs and Internet can also be termed as E-Content. In this context the E-Content developed in the form of a Compact Disc is considered as E-Content material for the study.

**Conventional Method**

The usual talk and chalk traditional method in which teacher teaches the content of the subject matter given in the specified textbook.

**Secondary Level**

The secondary level refers to VI standard to X standard in the school education. For the convenience of the study the students of IX standard were considered as secondary level students.

**5.5 OBJECTIVES**

1. To develop and validate an E-Content for teaching social science.

2. To find out the effectiveness of the validated E-Content for teaching social science.
3. To study the significant difference if any between the E-Content group and Conventional Method group students’ achievement in social science Pre-Test scores.

4. To study the significant difference if any between the E-Content group and Conventional Method group students’ achievement in social science Post-Test scores.

5. To study the significant difference if any between the E-Content group and Conventional Method group students’ achievement in social science gain scores.

6. To study the significant difference if any between the achievement of Male and Female students in E-Content group Post-Test scores.

7. To study the significant difference if any between the achievement of Male and Female students in Conventional Method (CM) group Post-Test scores.

8. To study the significant difference between the achievement of Rural and Urban students in E-Content group Post-Test scores.

9. To study the significant difference between the achievement of Rural and Urban students in Conventional Method (CM) group Post-Test scores.
10. To study the significant difference between the achievement of students having Computer Knowledge and not having Computer Knowledge in E-Content group Post-Test scores.

11. To study the significant difference between the achievements of students having Computer Knowledge and not having Computer Knowledge in Conventional Method (CM) Post-Test scores.

12. To study the significant difference between the achievement of students with school Level and Degree Level Parent Educational Qualification in E-Content group Post-Test scores.

13. To study the significant difference between the achievement of students with Degree Level and Professional Level Parent Educational Qualification in E-Content group Post-Test scores.

14. To study the significant difference between the achievement of students with school Level and Professional Level Parent Educational Qualification in E-Content group Post-Test scores.

15. To study the significant difference between the achievement of students with school Level and Degree Level Parent
Educational Qualification in Conventional Method (CM) Post-Test scores.

16. To study the significant difference between the achievement of students with Degree Level and Professional Level Parent Educational Qualification in Conventional Method (CM) Post-Test scores.

17. To study the significant difference between the achievement of students with school Level and Professional Level Parent Educational Qualification in Conventional Method (CM) Post-Test scores.

5.6 HYPOTHESES

16. There is no significant difference between the E-Content group and Conventional Method (CM) group students’ achievement in social science Pre-Test scores.

17. There is no significant difference between the E-Content group and Conventional Method (CM) group students’ achievement in social science Post-Test scores.

18. There is no significant difference between E-Content group and Conventional Method (CM) group students’ gain score in social science.
19. There is no significant difference between the achievement of Male and Female students in E-Content group Post-Test scores.

20. There is no significant difference between the achievement of Male and Female students in Conventional Method (CM) Post-Test scores.

21. There is no significant difference between the achievement of Rural and Urban students in E-Content group Post-Test scores.

22. There is no significant difference between the achievement of Rural and Urban students in Conventional Method (CM) Post-Test scores.

23. There is no significant difference between the achievement of students having Computer Knowledge and not having Computer Knowledge in E-Content group Post-Test scores.

24. There is no significant difference between the achievement of students having Computer Knowledge and not having Computer Knowledge in Conventional Method (CM) Post-Test scores.

25. There is no significant difference between the achievement of students with school Level and Degree Level Parent
26. There is no significant difference between the achievement of students with Degree Level and Professional Level Parent Educational Qualification in E-Content group Post-Test scores.

27. There is no significant difference between the achievement of students with school Level and Professional Level Parent Educational Qualification in E-Content group Post-Test scores.

28. There is no significant difference between the achievement of students with school Level and Degree Level Parent Educational Qualification in Conventional Method (CM) Post-Test scores.

29. There is no significant difference between the achievement of students with Degree Level and Professional Level Parent Educational Qualification in Conventional Method (CM) Post-Test scores.

30. There is no significant difference between the achievement of students with school Level and Professional Level Parent Educational Qualification in Conventional Method (CM) Post-Test scores.
5.7 SAMPLE

The present study aimed to find out the effectiveness of E-Content in learning social science at IX std level. In order to find out the effectiveness the investigator selected 180 students of IX std from three Schools. The distribution of the sample is as follows.

5.1 Distribution of Sample

<table>
<thead>
<tr>
<th>School Treatment</th>
<th>School I</th>
<th>School II</th>
<th>School III</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>G</td>
<td>B</td>
<td>G</td>
<td>B</td>
</tr>
<tr>
<td>E-Content</td>
<td>14</td>
<td>16</td>
<td>18</td>
<td>12</td>
</tr>
<tr>
<td>Conventional Method</td>
<td>16</td>
<td>14</td>
<td>17</td>
<td>13</td>
</tr>
<tr>
<td>Total</td>
<td>30</td>
<td>30</td>
<td>35</td>
<td>25</td>
</tr>
</tbody>
</table>

G- Girls  B- Boys

5.8 VARIABLES USED

In this study E-Content method Conventional Method (CM) are the dependant variables, the gain scores of two treatment groups is independent variables and Sex, Residential Background, Computer Knowledge and Parent Educational Qualification of the students are the background variables.

5.9 DELIMITATION

- This present study confined only to three schools where the facility to use computer are available.
• The developed E-Content were used under the supervision of teachers for whom instructions have been given.

• The E-Content were developed only in a few topics at IX std level.

• The present study is limited to consider the following factors, viz.,
  ➢ Sex
  ➢ Residence
  ➢ Knowledge in Computer and
  ➢ Parent Educational Qualification

5.10 METHODOLOGY

The investigator followed an Experimental Research for this study. The aim of experimental research is to establish cause and effect relationship between variables and conditions. Establishing cause and effect relationship between the phenomenon is the fundamental concern of experimental research. Experimental research deals with three types of variables the dependant, independent and controlled. The setting in which experimental research is conducted in usually standardized and well-defined. The experimental research is conducted in highly controlled
The experiment is generally regarded as the most sophisticated research method for testing hypothesis.

In this present study, there are 180 sample were selected from three schools. The two groups were equated numerically based on their achievement in their quarterly examination marks in the social science subject. Out of divided two groups, first group was treated with E-Content called Experimental Group and the second group was treated with Conventional Method, called Control Group.

5.11 TOOLS USED IN THE STUDY

- The E-Content was developed by the Investigator
- The Achievement Test was prepared by the Investigator for Pre-Test and Post-Test.

5.12 STATISTICAL TECHNIQUES USED

1. Descriptive analysis
2. Differential analysis
3. Regression analysis

5.13 FINDINGS

The IX standard students do not differ significantly in their pre-test score of achievement in Social science. The mean difference is not favour of achievement of students of any of these two methods of instruction.
The IX standard students differ significantly in their post-test score of achievement in Social science. The mean difference is in favour of achievement of students of E-CONTENT method.

The IX standard students gain score of achievement of E-CONTENT and conventional group differ significantly. The gain difference is in favour of achievement of students of E-CONTENT group.

The mean score of achievement of Female students is found to be higher to those of male students of E-Content Group.

The mean score of achievement of students belonging to urban is found to be higher to those of students belonging to rural through E-Content Group.

The mean score of achievement of students who are having computer knowledge is found to be higher to those other category through E-Content mode of teaching.

The mean score of achievement of students whose parents are professional is found to be higher to those of other categories through E-Content mode of teaching.

The mean score of achievement of female students are found to be higher to mean score of achievement of male students through E-Content mode of teaching.
The urban students’ achievement was found to be higher to rural students through E-Content mode of teaching.

The mean score of achievement of students who are having computer knowledge are found to higher to those of students who are not having computer knowledge through E-Content mode of teaching.

The mean score of achievement of students with Degree level parent educational qualification is found to be higher than those of students with school level parent educational qualification through E-Content mode of teaching.

The mean score of achievement of female students through Conventional method is found to be higher than those of male students.

The mean score of achievement of students belonging to Urban through Conventional method is found to be higher than those of students belonging to rural background.

The mean score of the achievement of students through Conventional method who are having computer knowledge is found to be higher than those of students who are not having computer knowledge.

The mean score of achievement of students whose parents are professional through Conventional method is found to be scored
more than those of students with School and Degree level parent educational qualification.

The students do not differ significantly in their pre-test score of achievement in Social science. The mean difference is not favour of achievement of students of any of these two methods of instruction.

The students differ significantly in their post-test score of achievement in Social science. The mean difference is favour of achievement of students of E-Content method.

The students gain score of achievement of E-Content and conventional group differ significantly. The gain difference is in favour of achievement of students of E-Content group.

The Male and Female students differ significantly in their post-test score of achievement in Social science. The mean difference is in favour of achievement of male students of E-Content group.

The IX std Rural and Urban students differ significantly in their post-test score of achievement in Social science. The mean difference is in favour of achievement of Urban students of E-Content group.
The Rural and Urban students differ significantly in their post-test score in Social science. The mean difference is in favour of achievement of Urban students of Conventional Method.

The students who are having Computer Knowledge and who are not having Computer Knowledge differ significantly in their post-test score of achievement in Social science. The mean difference is in favour of achievement of students with Computer knowledge of E-Content group.

The students who are having Computer Knowledge and are not having Computer Knowledge differ significantly in their post-test score of achievement in Social science. The mean difference is in favour of achievement of students with Computer Knowledge of Conventional Method.

The students with School level Parent Educational Qualification and with Degree level Parent Educational Qualification differ significantly in their post-test score of achievement in Social science. The mean difference is in favour of achievement of students with Degree level Parent Educational Qualification of E-Content group.

The students with Degree Level Parent Educational Qualification and with Professional level Parent Educational Qualification is not differ significantly in their post-test score in
Social science. The mean difference is not favour of achievement students with any of their Parent Educational Qualification of E-Content group.

The students with School level Parent Educational Qualification and with Professional level Parent Educational Qualification differ significantly in their post-test score of achievement in Social science. The mean difference is in favour of achievement of students with Professional level Parent Educational Qualification of E-Content group.

The students with School level parent educational qualification and with Degree level Parent Educational Qualification is not differ significantly in their post-test score of achievement in Social science. The mean difference is not favour of achievement of students with any of their Parent Educational Qualification of Conventional Method.

The students with Degree level Parent Educational Qualification and with Professional level Parent Educational Qualification is not differ significantly in their post-test score of achievement in Social science. The mean difference is not favour of achievement of students with any of their Parent Educational Qualification of Conventional Method.
The students with School level Parent Educational Qualification and with Professional level Parent Educational Qualification differ significantly in their post-test score in Social science. The mean difference is in favour of achievement of students with Professional level Parent Educational Qualification of Conventional Method.

**REGRESSION FINDINGS**

In the process of treatment of step-wise regression analysis it was found that only two out of four background variables have contributed to gain score of experimental group significantly. The contributing variables are residence of the students and the students knowledge in computer.

**5.14 RECOMMENDATIONS**

Developing digitalized content suitable for the school curriculum is the need of the hour. The study reveals that the students differ significantly in their post-test score of achievement in Social science. The mean difference is favour of achievement of students of E-content method and also in the gain score. It substantiates that the teaching through E content is having better result than the conventional method. Hence effort must be taken by the authorities to train the teacher to develop E content and to
insist them to make use of the same in their teaching learning process.

5.15 SUGGESTIONS FOR FURTHER STUDY

The same study may be taken up with reference to developing E content in different school subjects.

A study may be undertaken to find out the effectiveness of E content in providing through synchronous and asynchronous mode.

A study may be undertaken to find out the effectiveness of E content with teacher support and without teacher support method.

Developing, Validating and finding the effectiveness of E content which suits for online learning may be taken up.

Attitude of Teachers and students towards teaching and learning through E content may be studied.