DECLARATION

I hereby declare that the thesis entitled “THE EFFECT OF SELECT TEACHING STRATEGIES ON ACHIEVEMENT OF HIGHER SECONDARY STUDENTS IN CHEMISTRY” submitted by me for the degree of Doctor of Philosophy in Education is the result of my original and independent research work carried out under the guidance of Dr G.Rexlin Jose, Assistant Professor, Department of Education, Manonmaniam Sundaranar University, Tirunelveli and it has not been submitted for the award of any degree, diploma, associateship, fellowship of any University or Institution.

Place : Tirunelveli                      (Sr. J. Jeya Rani)
Date  : 27-05-2015                      Signature of the Candidate

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- Sr J. Jeya Rani

PREFACE
Education is a process of human enlightenment and empowerment for the achievement of better and higher quality of life. Today in the age of Science and Technology there is an urgent need to study the effect of new teaching methods and strategies. Technology plays an important role in the field of Education. Educational Technology has given a significant contribution in education by taking into consideration the individual differences of the learners and catering to their needs. The emerging trend all over the world is towards more individualized and flexible forms of learning with an emphasis on the individualized methods of instructions. It has laid a special emphasis on using computers in the teaching and learning process specially for providing instructions in the classroom situations. The entry of computers in the classroom has changed the entire scenario. The computer is now regarded as the super-teaching machine. Its use in education has been tried as an innovation and it has also proved its efficiency in teaching chemistry. Computer assisted instruction has been gaining acceptance as one of the technologies. Learning is made more enjoyable, effective, exciting, interesting and challenging.

Similarly, the Co-operative Learning (CL) is one of the most successfully explored instructional strategies in the history of educational research. Co-operative Learning techniques have also been shown to increase student motivation and retention of the learning material. CL facilitates active learning, enrichment of collaborative learning, encouragement of greater students’ independence and task-based teaching. The students of this modern era cannot be separated from current and innovative technology. They expect the same technology to be used as an instrument of learning strategies.

Most of the students face difficulty in learning Chemistry. The investigator being a Chemistry teacher-educator wanted to do a piece of research work on “The Effect of Computer
Assisted Instruction (CAI) and Co-operative Learning (CL) on the Achievement of Higher Secondary Students in Chemistry”. The investigator believes that it will be a real contribution to the teaching community. This study has become fruitful in achieving its goal and it discusses a few academic matters in a detailed manner and gives the reader a clear picture of what has been done.

**Chapter 1** in the thesis is about the need and significance of the study, concept of teaching-learning process, Role of Technology in Education, Importance of Computer Assisted Instruction and Co-operative Learning Strategies to make teaching-learning process more interesting, exciting, lively and vibrant, thereby enhancing the quality of education.

**Chapter 2** deals with the review of related studies which are grouped into various sections. The synthesis of the reviewed studies is also discussed for a quick look.

**Chapter 3** tells about how the methodology is followed. It deals with the Statement of the Research Problem, Operational Definitions of the Key Terms, Objectives of the Study, Hypotheses Formulated, Design of the Study, Method used for the Study, Population and Sample, Research Instruments used, Treatment, Threats to Experimental Validity, Variables involved in the Study, Delimitations of the Study and Statistical Techniques used for the Study.

**Chapter 4** deals with the analysis of the collected data. It covers the analysis of pre-test, post-test, delayed post-test and analysis of Covariance.

**Chapter 5** discusses the findings and conclusion of the study. It also deals with the recommendations to different educational clients such as teachers, educationists, managements of school education, government administrators and the regulatory bodies. It also includes the suggestions to the researchers for further studies related to this area.

The investigator is confident that this piece of research work will prove to be a milestone in the field of education and it will be supportive to the budding researchers to move a step further in the teaching learning process.