

CHAPTER I

INTRODUCTION

1.1 INTRODUCTION

Science is one of the activities that human beings have created to gratify certain needs, interests and desires. It is a disciplined way of seeking new knowledge. For an education built upon reasoning, experimentation and problem solving skills, science is considered to be particularly suitable. Hence science takes its place side by side with other subjects as an essential component of school education.

In a world where there is tremendous growth in the amount of scientific knowledge and rapid technological advancement, the curriculum developers realised the importance of instilling a firm understanding about science and technology into the learners. The teaching of science is thus expected to impart training in scientific method, develop scientific attitude and scientific temper (NPE –86).

It has been considered important to equip the learner in understanding, interpreting and dealing with the natural phenomena in a way to develop scientifically literate individuals. The science courses in schools are no more to be looked upon as bodies of content to be memorised but should be able to provide opportunities for learners to develop an understanding of the principles of science and scientific method (NCERT 1988). More importantly, the scientific methods extend beyond

science as a subject and find utility in every individual's life towards the concern for environmental and social aspects. At school level, a new direction has been given in recent years to spread scientific literacy as distinct from imparting of scientific knowledge alone. This has given rise to a science-technology-society impetus to the revised curriculum in science education.

In the academic arena curriculum plays a significant role and occupies a central place in any educational system. It is the means to realise the objectives of education. The realisation of the above mentioned curricular intentions of science therefore depends upon the curriculum framed, prescribed and more importantly the way it is implemented and transacted in its natural classroom environment in the educational institutions. In the implementation of any curriculum, the institutions imparting education are expected to make use of varied practices through which a variety of learning experiences can be provided to the learner. These include lectures, discussions, field trips, assignments, experiments, and projects. But there is no assurance that in practice, these techniques will always yield the desired results.

Many a time the curriculum transacted in a school setting may vary with the intended curriculum. Periodic evaluation of a curriculum is necessary to determine the worth of the curriculum which has been "formulated" as well as the "curriculum" as it manifests in an actual setting. This leads to curriculum evaluation, which refers in main, to the judgements made about what is actually

happening in an educational institution.

A study of the different aspects of curriculum evaluation shows that it has to address questions such as the scope of the objectives, the extent to which these objectives are attained, the efficacy and adequacy of educational experiences offered (the manner in which the curriculum is translated), the adequacy of material resources, the worth of curriculum materials like textbooks, teaching aides, additional resources, etc., and finally the methods of assessment.

The present science curriculum followed in Gujarat schools under study was implemented at the secondary stage starting from the year 1992. The new syllabus had been framed keeping in view the curricular recommendation of NPE-86, which required the science curricula to focus on achievement of scientific literacy. It was of interest therefore to explore the manner in which the newly implemented science curriculum manifested in the schools and classrooms, the opinion of the teachers and their understanding of the scope of scientific literacy, the support provided for sustaining the science curriculum in terms of resources and text books, and the assessment methods followed.

1.2 ORGANIZATION OF THE STUDY

The first Chapter gives an introduction and overview of the subject matter of the present investigation, with a brief mention of the broad objective.

Chapter 2 reviews the concepts and meanings of some of the important terms and

different aspects of curriculum evaluation.

In Chapter 3, review on Science education pertinent to the present investigation is given.

Chapter 4 deals with the need for the study, objectives and methodology adopted in this investigation.

In Chapter 5 the results of Classroom observation, responses received from the teachers to the questionnaire and results of follow up interviews, content analysis of textbook, are described along with a discussion of the results.

Summary and conclusions from this investigation form the subject matter of Chapter 6.