ABSTRACT

The nature of education demands that researches in its various areas are essential as this century is characterized by intense application of science and technology.

The period of Upper Primary School is even now recognized as the period of compulsory schooling, vide the constitutional amendment, making education a fundamental right. The National Curriculum Framework (2005) recommends that curriculum should help learners to become constructors of knowledge and emphasizes the active role of teachers in relation to the process of knowledge construction. Learners construct knowledge while engaged in the process of learning and the teachers’ role is to engage the process of learning through well chosen tasks and questions. Schools must provide opportunities to question, enquiry, reflect and arrive at concepts to create new idea.

In the words of Mahatma Gandhi, “True education is that which draws out and stimulates the spiritual, intellectual and physical faculties of the children”. So the major objective of science education is to transform individuals and societies with knowledge about work around them. Science can play a truly liberating role, helping people and of vicious circle of poverty, ignorance and superstition.

The aim of the present study was to find out the effect of Multimedia Approach on Knowledge and Skills in and Attitude of students towards Science at Upper Primary Level. The proposed study involves independent variable i.e. Multimedia Approach and dependent variables – achievement of Knowledge in Science, attainment of Skills in Science and Attitude towards Science. The major objectives of the study were the following i) to develop instructional material based
on Multimedia Approach in Science at Upper Primary Level for developing Knowledge, Skills and Attitude ii) to study the effectiveness of Multimedia Approach over the Conventional method in Science at Upper Primary Level for developing Knowledge, Skills and Attitude iii) to study the gender differential effectiveness of Multimedia Approach and Conventional method at Upper Primary Level. The hypotheses of the study were i) the students exposed to MMA will have greater achievement in science than the Conventional method at Upper Primary Level in terms of Knowledge ii) the students exposed to MMA will have greater achievement in science than the Conventional method at Upper Primary Level in terms of Skills. iii) the students exposed to MMA will have greater Attitude towards science than the Conventional method at Upper Primary Level iv) the effect of MMA and Conventional method in science will be different on boys and girls at Upper Primary Level in terms of development of Knowledge. v) the effect of MMA and Conventional method in science will be different on boys and girls at Upper Primary Level in terms of development of Skills. vi) The effect of MMA and Conventional method will be different among boys and girls at Upper Primary Level with respect to Attitude towards science.

The sample of the study consisted of two intact groups of 50 students each of VII standard who belonged to two sections of Kunnamangalam Higher Secondary School located in Kozhikode with affiliation to CBSE. Randomly one section was considered as the Experimental group and the other as Control group. Multimedia Approach was used to teach six selected topics in science for a period of four months for the Experimental group and for the Control group the Conventional method was used to teach the same lessons for a period of four months. Before treatment with MMA the investigator conducted a pre test in science and Attitude scale was
administered for both the groups. After the treatment, a common post test was administered to both the groups. The data were analyzed by Mean, Standard Deviation and ‘t’ test. The study revealed that there is a significant difference between the Experimental group and Control group on the achievement of Knowledge in science and there is a significant difference between the Experimental group and Control group on the attainment of Skills as the mean gain of Experimental group was higher than the Control group. The result also shows a significant difference between the Experimental group and Control group on development of Attitude towards science. Significant difference was found between the girls and boys of Experimental group and Control group on achievement of Knowledge in science and it was found that the boys of Experimental group could achieve more than the girls of that group and for the Control group the girls achieved more Knowledge in science than the Control group. A significant result was found between the boys and girls of Experimental group and Control group on attainment of Skills on science. In both the Experimental group and Control group the boys could attain more on skills in science than the girls. Significant difference was also found in the development of Attitude towards science among boys and girls of Experimental group and Control group. In the Experimental group girls showed more favourable Attitude towards science than boys and in the Control group boys showed more favourable Attitude towards science.