

# A STUDY OF COMMUNITY SCIENCE CENTRES IN GUJARAT

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## **INTRODUCTION**

Science Education is a significant aspect of education. It is an important ingredient of education which makes a person logical and scientific. The importance of science is immense. It helps in transforming societies. Science Education can also be provided through non-formal method and Community Science Centres are one of the institutions for imparting non-formal education.

Community Science Centres makes learn science as ‘learning by doing’ and ‘keep it simple make it fun’ principles which provoke, entertain, attract and engage the visitors through guided exploration and facilitated activities. According to Rautela and Sanyal (2010) science centres render a valuable service to their communities. Community Science Centres have a profound impact on learning, motivation and attitude of a person. The centres strengthen the motivation of students and influence learning strategies as well as attitudes towards science. The science centres are meant for creating science awareness and development of scientific temper in the society. The phenomenon of science centre expanded which became an important destination for providing informal science education. The state of Gujarat has also taken a lead to establish Community Science Centres in the state. The objectives of the Community Science Centres in Gujarat are to inculcate, nurture and disseminate science among people and development of scientific temper among children and public. Dr. Vikram Sarabhai established the first Community Science Centre in 1966 at Ahmedabad. The concept spread to other locations of Gujarat and similar community science centres were established gradually in different parts of the state. Gujarat Council on Science and Technology (GUJCOST) under Gujarat Government is set up to promote popularization of science in Gujart.

The researcher had reviewed 56 studies which concentrated on science centres, science museums, non-formal programmes and field camp based experiences, informal education programmes as well as activity based educational programmes. The research found the research gaps while studying the review of literature. The studies did not reveal to what extent the objectives of these informal and non-formal programmes were achieved and

the problems faced by the learners during the process. The researcher came to know that no in-depth study is done on community science centres of Gujarat which focuses on detail critical analysis of objectives of the centres.

## **Objectives of the study**

The study was designed with the following objectives:

1. To critically analyze the objectives of the Community Science Centres in Gujarat.
2. To study the extent of objectives achieved by the Community Science Centres in Gujarat.
3. To study the functioning of these Community Science Centres in Gujarat terms of general administration, financial management, human resource management and infrastructural facilities.
4. To study the problems faced by the community science centres in Gujarat.

## **Methodology**

The population for the research study consisted of 25 Community Science Centres in Gujarat (as in year 2014). These centres are established under state government, central government and private trusts and local bodies. The researcher had categorized the Community Science Centres mainly under two categories: Community Science Centres under GUJCOST (total 18) and Community Science Centres outside GUJCOST (total 7). Community Science Centres under GUJCOST take grant from Gujarat Government and Community Science Centres outside GUJCOST are independent entities. Moreover, there were Community Science Centres established by State Government and Central Government.

The sample for the present study was taken randomly from 1) Community Science Centres under GUJCOST and 2) Community Science Centres which are outside GUJCOST. Stratified random sampling method was used to select the sample institutes. The

researcher took a sample of Community Science Centre-Vadodara, Community Science Centre-Amreli, Community Science Centre-Anand and Community Science Centre-Dang from the category under GUJCOST. The sample of Gujarat Science City-Ahmedabad, Community Science Centre-Dharampur, Vigyan Nagari-Bhavnagar, Vikram Sarabhai Community Science Centre-Ahmedabad, Lokbharti Community Science Centre-Sanosara (Bhavnagar) was taken from the category outside GUJCOST. The researcher constructed observation schedule for observation of activities of centres, semi-structured interview schedule for the interview of heads of centres, response of students, teachers and public. All the nine heads and 22 staff members of all nine selected Community Science Centres also constituted as sample. The students, teachers and the general public who visited the science centre on the days when the researcher went to these centres for data collection were considered as the sample for the present study. A total 73 teachers, 237 students and 168 public were constituted as sample.

### **Major Findings of the study**

All nine centres were active in science popularization for students and general public. They were committed in imparting science education. All nine Community Science Centres catered to local students and public. The research study confirmed that the objectives of non-formal science education were achieved in a partial manner. All nine centres lacked clear vision of science popularization. The centres had very less activities to offer due to dearth of science educators who can organize non-formal science activities for students and public. The students and teachers liked the activities of centres and responded that the activities were helpful in understanding the concepts of science. The interactive exhibits and demonstration of experiments were a good means to learn scientific principles. However, the students and teachers were engrossed in their own educational and personal work that they did not give priority to activities and events of Community Science Centres. They did not pay full attention to the exhibits at the centres and the visit to centres turned into chaos and picnic spots instead to learn science.

The science clubs at Community Science Centres helped in expressing the students' thoughts and share them with peer groups and staff of the centre. Community Science Centres were proved valuable in imparting astronomy education. The centres had technical expertise in handling telescopes and technical equipments as well as resourceful staff for conducting astronomical events. The science centres were useful as learning resource for students as in some schools the education materials, laboratories as well as chemical substances for doing scientific experiments were not available. Thus the centres filled the gap between learner and learning aids. The research concluded that the students and public viewed huge exhibits and astronomy film shows as a means of fascination instead of learning science. The infrastructural facilities at all nine centres were good except Community Science Centre-Dang. All nine centres faced the problem of human resources due to non-availability of educators. The financial management of all nine centres was good.

### **Conclusion and Implications for the study**

All nine Community Science Centres of Gujarat had performed the functions of science popularization with the help of science activities, exhibits and models. However, the centres were inactive in communicating science to public and they had become complacent in their working. Non-formal education has tapped the immense educational resources of the community which were not utilized by the formal school. They helped in enriching the education to masses with their free-choice learning approach.