UNIT- 2 : BEGINNING OF SCIENCE COMMUNICATION IN INDIA

UNIT STRUCTURE

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2.1 LEARNING OBJECTIVES

After going through this unit you will be able to

- explain how science communication began in India
- discuss the contribution of different medias in science communication
- the significance of science communication movement in India

2.2 INTRODUCTION

In this first unit of this course we have concentrated on the concept of Science Communication, its need and significance. This unit is going to cover such important topics as the beginning of science communication in India and the contribution of print and electronic media in carrying science to the masses. Besides, science communication movement in India has been given particular emphasis since efforts to popularise science among the masses have been undertaken at the level of the Government and non-governmental sector.

In this unit the history of science communication in India will be summarized. The contribution of different medias like print, radio and television will also be further discussed in the unit.

2.3 BEGINNING OF SCIENCE COMMUNICATION IN INDIA

There have been many instances in the history of science when scientists gave particular attention to communicating their thoughts to the public. During the eighteenth century, for example, the phase now known as the Enlightenment produced a good number of scientific books, many of which sold very extensively. Science even became fashionable and public lecturers attracted audiences that included a large section of the society from society ladies to the working men.

But the lack of public understanding of science today inspite of the omnipresence of science in every sphere of life is a matter to be discussed. The "Public understanding of science" movement can be traced to the report of the Royal Society in England which drew the following conclusion-

- Science and technology play a major role in most aspects of our daily lives. Our national prosperity depends on them.
- There is scope for more science in the media and strong case for more science in general programmes and for improving the contact between scientists and journalists.
- Scientists must learn to communicate with the public.

The Royal Society seemed to be guided by the belief that more the people knew about science and technology, the more they would come to value and respect science.

India has an imposing scientific heritage. Scientific research in fields such as mathematics, astronomy, medicine and material science has been carried out in the Indian sub-continent since ancient times. However, a remarkable gap has persisted between this scientific knowledge and the 'common' man and woman and, until recently, almost no effort has been made to bridge this gap. Scientist and a class of people of different countries have been trying to popularize science among the masses over the periods. In India popularization of science was visible very strongly after the British

came. Scientists like Meghnad Saha, Satyandra Nath Bose, C.V. Raman, and D.S. Kothari, Mahendralal Shikdar, Jagdish Chandra Bose, Prafulla Chandra Roy, Ruchi Ram Sahani and others carried science to the common people and had done a lot in this context. This trend had been continued after independence also.

It was Pandit Jawaharlal Neheru, the first Prime Minister, who first introduced the concept of 'scientific temperament' and emphasized on its promotion in the society. In 1958, a proposal was taken in the Cabinet in this regard and to solve the problems of the country by using science for the upliftmen of the people. In fact, in our constitution, Article 51 (A) says that it is the duty of all citizens "to develop scientific temper, humanism and the sprit of enquiry and reform."

Now, let us discuss the contribution of print and electronic media in popularizing science in last few decades.

2.3.1 Contribution of Print Media

Vijnan Sanchar (Science Communication) a book by Dr. Manoj Kr Patairiya carries a historical account of science journalism and science communication in India. Some significant highlights are present here. Throughout history, there have been attempts to take science to the common people. For example, *Vigyan* (Science) — a monthly popular science magazine in Hindi — has been published by Vigyan Parishad (a learned society of scientists and academics) since 1915. News, views and features on scientific topics have been appearing , though sporadically, in Indian media since second half of the 19th century. Popular science writing was started in the year 1818 through bilingual (Hindi- English) '*Digdarshan*', published from Srirampur, West Bengal. In 1842, a Bengali magazine *'Vidyadarshan'* carried a series of science articles. In subsequent years magazines and newspapers like Marathi *'Dhyan Parcharak',* Tamil *'Chitamani'*, Assamese *'Arunudoi'* etc were the pioneers in publishing science features and news from time to time. Meghnad Saha a famous scientist used to write regularly on various scientific issues in the research journal "Science and Culture". Science writing in English started in India with the

publication of *'Science Reporter*' in 1964 by CSIR. Prior to that *'Vigyan Bidhi'* in Hindi was launched in 1952. In 1966, Times of India started publishing *'Science Today'*. In 1971, NRDC also launched *'AVISKAR'* in Hindi. Another science magazine named 'Science Age' was published in 1983 by Nehru Center, Mumbai. *'Down to Earth'*- a magazine devoted to environmental issues was started in 1991 with the effort of Centre for Science and Environment. However, both *'Science Age'* and *' Science Today'* do not exist any more. But *'Science Reporter', 'Vigyan Pragati', 'Invention Intelligence'*, and *'Aviskar'* are still continuing. Some computer magazines like 'Computer Today' and 'Data Quest' have become popular. Meanwhile, science features, news, reports etc are regularly appearing in major English Newspapers through supplements or in Sunday issues. The Regional newspapers have also started emphasizing science coverage in order to promote scientific temperament among the people.

2.3.2 Contribution of Radio

Radio Broadcasting was started in India in 1927, with two privately owned transmitters in Bombay and Calcutta. The government took over the transmitters in 1930 and stared operating them under the name of Indian Broadcasting Service. It was changed to All India Radio (AIR) in 1936 and later it came to be called as 'Akashbani' from 1957. AIR is working as an effective medium to inform and educate the people besides providing healthy entertainment.

All India Radio (AIR) has been playing an important role in popularizing science among the Indian masses. Science programmes are being broadcast by AIR for a long time since its establishment in 1936. In an effort to give science communication a new dimension, Science Cells was established in some radio stations in 1975 with science trained executives. Some science officers like Dr. R Sreedhar, Dr. Krishnamurthy, Amit Chakravarty, Usha Bhasin, Aparna Vaish, Brij Mohan Gupta, Nilima Harjal, Jayanta Erande, Dr. Kishore Kulkarni, Dilip Mayangbam etc have made valuable contribution in science broadcasting. Some radio serials like *Manav ka Vikash* (1991-93), *Vigyan Vidhi* (1987-88) etc proved extremely useful in popularizing science with a sizable portion of the audience remaining

glued to the radio at the time of the broadcasting of these serials which were so popular that later they were broadcast in many regional languages. The regional language stations, promotion of science and took very successful steps. Among them, the phone-in programmes and radio-bridge programmes are very popular.

The, Radio Farm Forum was constituted in seven radio centers of the country. In the year 1966, keeping in view the importance of agriculture in our country, in some radio stations Agricultural Unit was opened and some Farm and Home Units were also started at various stations. Besides, the Broadcast also included programmes for rural women and rural children where the main thrust is on issues relating to the rights of the child, gender bias and child abuse. Science also got specific space in Akashbani. From 25th June 1989 to 24th September Akashbani in collaboration with National Council of Science and Technology Communication aired a series of programme named *'Bigyan Bidhi'*, compressing 13th episodes. Under this programme, through different regional Indian languages 1,40,000 children of age group between 10 to 14 in the country were registered as radio listeners. Another serial named *'Human Evolution'* was broadcast from all the stations of AIR, in respective regional languages. Central Production of AIR, New Delhi in collaboration with National Council of Science and Technology Communication (NCSTC), produced that programme. Another programme called 'Paryavaran', jointly produced by AIR and Vigyan Prasar, was broadcast from January 1998 to December 1998. In the same year, another serial named 'Chhoo–Mantar' was broadcast on AIR, Delhi from 3rd October. AIR and 'Vigyan Prasar' jointly produced this 52 episode serial. Other than AIR, various Private FM radio and Community radio stations are also broadcasting science related programmes. The Ministry of Information and Broadcasting has given emphasis to airing science programmes, so that different aspects of science can easily reach the masses.

2.3.3 Contribution of Television

The use of broadcast and digital media has opened a new vista of science communication in India. Doordarshan, the national television service of India

devoted to public service broadcasting is one of the largest television networks in the world. Since its inception in 1957, Doordarshan has been telecasting science programmes for students. The first popular science programme telecast by it was *'Vigyan Partrik'* during 1971 to 1975. In the year 1966, agriculture based programmes began to be telecast. The year 1982, when colour television came to India brought a new phase in television service in India. During 1984-92, a popular science programme named *'Quest'* produced by Calcutta, *Doordarshan,* ran for eight years. A programme on the growth of science in India was produced by NCSTC and it was called *' Bharat Ki Chap'*, *'Bigyan ki Baate'.* It had been broadcast in every Saturday. Then *'Turning Point'* was landmark programme started in 1991 which had been telecast in some regional languages also. Doordarshan also telecasts some western Television programmes. Many private TV channels such as National Geography, Animal Planet , Discovery etc have been producing science programmes on number of issues and after the emergence of these private channels , science and technology have become much more interesting for everybody.

In both Print and Electronic media science awareness is being promoted through advertisement. A good number of government deportments, both Central and State, have been using commercial broadcasting to disseminate important information on science to the people. In this regard, we can mention the efforts of creating awareness about bird flu, AIDS, family planning, pluspolio, immunization, energy conservation, pollution, environmental problem and other important issues.

Besides the print and electronic media, Folk media also play an important role in this context. Through street plays, puppet shows, theatre, folk songs, folk dance etc folk media have contributed a lot in popularizing science, especially among the rural masses. In fact, at present Internet also plays a vital role through various upto-date scientific information.



CHECK YOUR PROGRESS

Q.1: Fill in the blanks:-

a) Doordarshan started its services in the year.....

b) ..... a Popular science writing started in the year 1818.

c) All India Radio (AIR) came to be known as .....

2.4 THE SCIENCE COMMUNICATION MOVEMENT IN INDIA

For the past two decades, science communication activities have gained momentum in India. Efforts have been made from both governmental and non-governmental platforms to enhance the public understanding of science. The idea is to help science and a scientific culture penetrate India's socio-culturally diverse society, and to transform it into a nation of scientifically thinking and scientifically aware people. After Independence, a number of government agencies and non-governmental organisations (NGOs) took their cue from the constitution and became involved in science popularisation. In this way, science communication was taken up at various levels, institutional as well as individual. Nehru was a major force behind this advancement of science in independent India.

The National Institute of Science Communication and Information Resources (NISCAIR) — previously the Publications and Information Directorate (PID) and subsequently NISCAIR began the publishing of the Hindi popular science journal *Vigyan Pragati* (Progress in Science) in 1952. The Science Reporter (an English monthly) and *Science Ki Dunia* (an Urdu quarterly) followed soon after. Today, NISCAIR also brings out 11 professional scientific journals and publishes various popular science books (often in Indian languages).

In 1980, science communication was given prominence in India's sixth Five Year Plan, and two years later the National Council for Science and Technology Communication (NCSTC) was established. The Council has a mandate to integrate, coordinate, catalyse and support science communication and popularisation, at the micro as well as macro level. NCSTC's programmes include training in science and technology

communication, software development, research, field-based projects, and creating information networks and databases.

Other Indian government initiatives include Vigyan Prasar, an autonomous organisation of the Department of Science and Technology set up in 1989, which plays an important role in coordinating the efforts among various scientific institutions, educational and academic bodies, laboratories, museums, industry and other organisations for the effective exchange and dissemination of scientific information. Vigyan Prasar also develops and disseminates software materials and organises popular science events including workshops, debates and lectures.

The National Council of Science Museums, based in Calcutta, is the coordinating body of 26 science museums and science centres across the country. Science City in Calcutta has more than 1,000 exhibits and attracts around 500,000 visitors a year. Based on the experiences and popularity of Science City, other such projects are being developed across the country.

Several NGOs have also pursued science communication programmes. The Indian Science Writers' Association (ISWA), for example, was founded in 1985 with a view to developing and nurturing the science writing profession in India. The association has around 200 members and undertakes a broad spectrum of activities including training courses, lectures and fellowships. ISWA also works with government agencies and NGOs in promoting science communication activities.



2.5 LET US SUM UP

In this unit you have come to know about the background of science communication in India and how of the concept grew from the embroyic stage. The beginning of science communication was the result of the contribution of different medias, that include, both print and electronic media. Newspaper, journals, Radio and now television have together given the necessary thrust to Science Communication as an authentic means to popularize science among the masses. The contribution of a few scientists and leader like Jawaharlal Nehru has gone a long way in establishing a

science policy in India for which science communication has been used as an effective tool for bringing science closer to the masses.



2.6 FURTHER READING

- Schiele, Bernard, Claessens, Shi, Shunke (2012), Science Communication in the World : Practices, Theories and Trends, New Yourk : Springer.
- Patairiya, Dr. Monoj Kr. Vigyan Patrakarita, New Delhi : Vani Prakashan



2.7 ANSWERS TO CHECK YOUR PROGRESS

Ans to Q. No. 1: 1957

Ans to Q. No. 2: 'Digdarshan'

Ans to Q. No. 3: 'Akashbani'



2.8 POSSIBLE QUESTIONS

Q.1: Describe the beginning of science communication in India.

Q.2: Explain how media contributed towards the onset of science communication in India.

Q.3: Write briefly on the science communication movement of India.

Q.4: Write short notes on.

a) National Institute of Science Communication (NISC)

b) All India Radio and Science Communication.

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