

## Comment

# Innovations to enrich science communication through radio

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### Introduction

The Radio is an instrument of communication that has percolated to all the strata of the diverse Indian society. Its position has been consolidated through history as a regular companion and a source of information and entertainment. Its affordability, accessibility and non-reliance on costly resources have ensured its presence in almost all the households. It has become indispensable from kitchens, family rooms and even workspaces. It is one of the few or rather the only medium of communication after the print media wherein information dissemination still is primary and entertainment a secondary requirement, especially the rural areas.

The role of radio in rural India is one that demands prominence and hence has been used as a primary resource for various projects on science communication. A majority of the science radio serial listeners are from the rural areas. The radio therefore is an ideal medium for reaching out to the masses. The radio even with its popularity and huge following is lacking in certain aspects that make science communication complete. Manthan Educational Programme Society developed concepts to make these efforts more effective by ensuring higher involvement and interest in these programs.

### The concept

The innovation is based on the belief that better communication is possible with high amount of interactivity and by ensuring a sustainable interest in the audience. A whole new dimension of interactivity was to be introduced to implement this concept which had to grip the audience and also ensure a high participation for the science serial that was to be broadcast.

To achieve this, outreach material was to be developed and sent to the audience. A whole new methodology was developed and implemented to identify and reach to this audience. This outreach material was to act as the element of interactivity and was supposed to trigger a thought process and a degree of curiosity for the radio serial that was to be broadcast.

### Our innovations

We have worked with tremendous success in introducing the element of interactive participation to make the radio programs more interesting. Outreach Materials have been conceptualized and developed with the help of experts and resource people. Outreach materials are developed with the basic six-point design approach:

- **Low cost**

The outreach material should be developed and produced in minimal costs so that it would be possible to give this material free to all those who wanted it. Cost would be a barrier to the audience in the rural area. As the cost was to be completely borne by the radio serial producers, it had to be feasible for them.

- **Eco friendly**

Mass production of this material should not cause concern from the pollution point of view. The material was to go to far flung areas and neglect towards it should not transpire into a local hazard or any level.

- **Activity oriented**

Interest could only be created and sustained with activities. Also, the material had been designed in such a manner that it had activities that were fun and it involved minimum resources so that the lack of the same would not cause the participant to lose interest.

- **Easy to reach out via conventional mailing systems**

The target audience was across the length and breadth of the sub continent. The regular mail was the only option to reach to each and every corner of this vast land mass. This constraint also decided the size and weight of the outreach material.

- **Related to the topic of Broadcast**

The outreach material was to be related to the subject of the radio broadcast. This defined the boundaries and at the same time depth of the information to be disseminated through the material. As the outreach material was to act as a supporting element, it had to reflect what was broadcast on the radio.

- **Idea catalyzing**

The outreach material aimed to trigger the thought process and evoke curiosity in the minds' of the participants. The outreach material was to be designed in such a manner that it not only answered questions but also raised questions.

Science communication is a quest to answer questions and a search to answer the questions, which arise from those answers.

## **Human Resource**

We have used the experience and resources of various experts to bring out a highly effective outreach material. The human resource thus utilized involves:

- **Scientists**

The scientists were involved to decide on the content, the authenticity of the same and to assimilate and freeze the subject under discussion.

- **Behavioral specialists**

The design was to be made keeping in mind the registrations received prior to the broadcast. The specialists decided on the approach that would be generic and effective to the majority of the segment identified as the target audience.

- **Science communicators**

A major role was to be played by the science communicators. They took into cognizance the subject matter decided by the scientists and the approach decided by the behavioral specialists. Then they conceptualized the outreach material and the form it was to reach the masses. They also had to simplify the complex science to make it easy to understand and absorb for the masses. A majority of the contribution comes from the science communicators.

- **Designers**

The concepts and ideas are put into the form of Act and Effect. This is conveyed to the designers. These have to be implemented in a manner that is easy, effective and carried out by the available resources. The design team develops the actual activity or the outreach material in its presentation form.

- **Educators**

The material that is developed is ultimately to instruct and teach the target audience. The contribution of educators is to modulate the final form to give it the essence of instruction without compromising on the interest and the interactivity part defined by the previous team members.

- **Language experts**

The language of the outreach material developed may need to be translated for a multilingual audience. In India this is usually the case where there are more than 15 official languages. Even if the material is to be produced in the national language (Hindi), the language experts have to be used, as most of the resource is in English.

- **Paper engineers**

As mentioned earlier, the material had to be low cost, eco friendly and easy to reach through the regular mail. This ensured that most of the material was made from paper in its various forms. The contribution of paper engineers ensured a judicious, optimum and effective utilization of paper.

- **Production people**

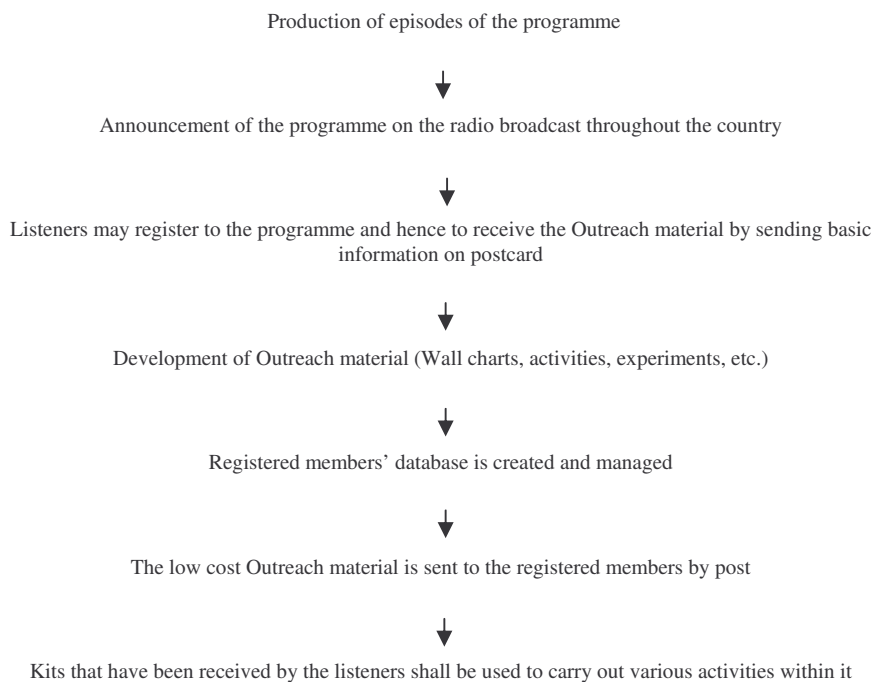
Production people contributed for the mass production of the outreach material.

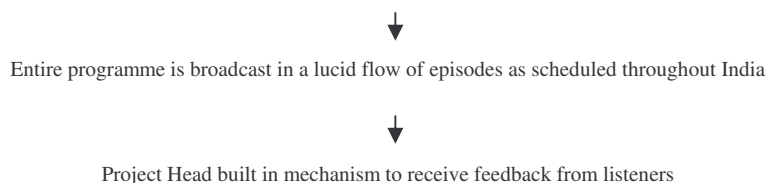
- **Administration people**

Administration, which does not play a part in the actual conceptualization and production of the outreach material, help immensely in the coordination and execution of the project by working out the involved costs and related inevitable hassles. They have been found to be irreplaceable as far as maintaining a degree of sanity is concerned.

## Implementation methodology

A methodology is proposed to achieve the right blend of interest and involvement along with listening to the radio broadcast.





### Our implementation

We implemented the concept of Outreach Material for a Science Radio Serial, “Human Evolution” which was broadcast in 17 languages simultaneously all over the country. This was maybe the world’s longest science radio serial and spanned the entire nation.

The registration figures (rounded off) for the different languages are given under:

Assamese	3,000	Urdu	3,000	Malayalam	6,000
Bengali	6,000	Marathi	8,000	Sindhi	1,500
Hindi	40,000	Gujarati	24,000	Konkani	2,000
Oriya	5,000	Tamil	30,000	Manipuri	2,000
Punjabi	3,000	Telugu	4,500	English	5,000
Kashmiri	1,500	Kannada	6,000	Nepali	2,000

More than 1, 75,000 children had registered for this serial. We had conceptualized, designed and produced outreach material, which involved highly interactive and interesting activity kit, which included 12-15 small science oriented activities. Topics ranging from Physics to paleontology were covered in these kits.

The kits were developed in one language and then sent to various language experts to translate into the regional language. The regional broadcast centers were given the kits to distribute as per their requirements. The simplicity with which the complex scientific principles and phenomenon were explained was widely appreciated and acclaimed.

The kits were distributed for 24 weeks and a total of 875, 000 beneficiaries conducted around 10, 500, 000 activities. The kits cost as low as Rs. 10/- per kit. Inclusive of mailing cost. The response from the listeners showed that the Outreach material had left an enduring impression regarding the program and this made the Science Serial on Human Evolution most effective in successfully communicating to the intended masses.

### Current implementation

Currently we have developed outreach material for a science radio serial that is to be launched by National Council for Science and Technology Communication, Department of Science & Technology, Govt. of India and All India Radio from 2<sup>nd</sup> October, 2004.

The outreach material includes Wall posters and Activity Kits involving more than 30 activities related to the subject of Broadcast. The intended audience is spread over the country and hence the kits have been designed such that, it is:

- Cost effective
- Easy to mail
- Interactive
- Informative
- Interesting
- Triggering the thought process

- Catalyzes the idea formation and imagination

By combining these elements we have introduced the dimension of interactivity to complement the benefits of the Radio. Blended approach of this sort shall ensure high involvement and loyal audience which shall make the science communication complete.

### **Result and impact**

A vast geographical area was covered where the non-formal outreach material was highly effective. The element of interactivity ensured that communication overcame the barrier of language to a great extent. Message generated desired impact as could be gauged by the feedback. The radio serial help the people to shape their imagination and satiate their curiosity at the same time trigger the thought process necessary for advancement with help of science.

The innovations introduced helped the participants to correlate science with real life scenarios. The science communication can complete its cycle only when the masses imbibe the science talked about and use it for their benefit. The use of science to reduce drudgery, benefit society and for the overall progress of mankind is the aim of any science communicator and that's what we are striving to achieve.

### **Author**

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