

Science and
technology
communication for
youth media essay



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There are many controversial scientific issues common to all the developing countries, including Information & Communication Technologies, Education, Health, Environment, and sustainable development issues – which is emerging faster than any other science sector. Science communication is vital to communicate especially the need for sustainable development issues related to Environment and other cutting edge technologies.

How do we Communicate Science?

Everyday, a number of times we come into contact with scientific information. We are bound to use upcoming technologies such as cell phones, DVD players, electronic suitcase, etc. Our kitchen is no more traditional; we use ovens and electric cooker. Today's Newspapers and Magazines are dealing with more scientific headlines and stories and we are forced to make decisions based on these information.

Where do you get the basic understanding of technologies? How do you analyze it and understand? How do you know what to believe? What kind of information causes you to alter your behavior? How do you know whether to trust information or not? What information do you ignore? Why do you ignore it? How do you go about decision making with respect to the information? All these queries will be answered by analyzing the way in which a scientific information is been communicated and for whom it caters to.

In a democratic society like India, the responsibility for communicating and understanding science lies triangularly with the scientific community, journalists and the public. This could be considered as a Communication Model named ' The Triangular Model' of Science Communication.

From the perspective of scientific community, a scientist is the creator of scientific knowledge; he/she is the custodian of knowledge; he/she is the first user of that knowledge for creating new knowledge, technology. A Scientist generally lacks language of public communication.

A Journalist is wholly responsible for developing the Science Communication strategy. The strategies include Definition of overall communication goal(s) and communicate the idea in a best possible manner. Initially, a Journalist has to identify the target audiences; segment audiences and cater to them accordingly. He also has to decide on the key messages to be conveyed; choose the tactics; identify the resources; develop ways to evaluate.

Science concepts and issues could be communicated in many different forms. Both Traditional Media as well as Electronic Media could be used as an effective tool for Science Communication. The communication could be in the form of a Full campaign; through Radio programmes from local to global perspective; Internet – giving more info with links; using Convergent Media; through Print – news that are developed, posters, pamphlets; Magazines – using colour images, scientists' voices, story; TV; Streaming Media; and even through Movies.

But Journalists generally lacks scientific knowledge but he/she knows language of public communication. They look at the news value, media worthiness and also have to follow the newspaper policies.

Thus Scientist and journalist are the major players in several tasks of science communication. When they join together and work, it will ensure better and effective science communication among various target audiences. This could <https://assignbuster.com/science-and-technology-communication-for-youth-media-essay/>

be achieved by conducting Training and motivating scientists/ journalists. Short Term Fellowships could be given to scientists working in media, journalists working in laboratories. A wholesome course on Science Communication could be introduced where in the students could be trained both in Scientific as well as Communication aspects. A Common platform for periodical interaction between both could be provided. Media need to have science desk/ journalists with science background and Scientific organizations need to have press officers with science and media background.

It is the responsibility of each and every one of the public to have an adequate understanding of basic scientific principles and language to navigate in today's science and technology-driven world. Thus, Science Communication can be done based on “ The Triangular Model” of Communication which is presented in the diagram below.

Hence, Science has to be communicated by experts using evidence based communication. Capacity building in Science Communication is crucial. “ We need well informed and qualified people to be communicating, as part of a greater science communication network, to take the results and stories of how science is solving real, everyday problems to the public, as well as to the decision and policy makers.”

Part of the advancement of science can be reached through the development of science communication, and through effective communication, understanding and knowledge. The underlying challenge in Science Communication is the lack of public engagement of science. This

problem could be solved by attracting today's 'Youth' who will be the 'Tomorrow's Leaders' towards Communication of Scientific Issues and Understanding.

Why Youth?

The 2003 Indian National Youth Policy recognizes that in order for the youth to effectively participate in decision-making processes, it is essential that they are better equipped with requisite knowledge, skills, and capabilities.

The policy acknowledges that the objective of providing appropriate education; particularly Science education which enables them to interact with the environment in a friendly manner. Educational curriculum in schools should include information on science related issues such as health issues including reproductive health, HIV-AIDS, and on population issues.

As adaptation of scientific and technological principles and developments, to maximize the use of local resources, is central to empowerment in the quality of life. The Policy recognizes the importance of emerging, modern technologies, particularly in the field of information technology and electronic media, in enabling the youth to achieve their life objectives in all sectors of their interest.

The Policy also recognizes that young scientists and technologists should be extended adequate facilities for research, and that the contribution of the private sector in this field should be encouraged.

The National Youth Policy, therefore, provides the youth for the best and the most positive use of information and communications technology, as well as

all forms of media, including the electronic media, for their development as well as for promoting and protecting the richness of Indian Environment.

Science Communication for Youth

Today, when science plays an increasingly important role in our world, do we give adequate training to youth in our country? School science just provides a formal science education to the young citizens of India. The Interest and Involvement of youth also plays a vital role in science education. In developed countries like India, youth tend to see science as something important for the 'society' but not necessarily for themselves. This lack of personal ownership means that they might be techno-savvy and demand the use of technology such as cell phones, MP3 players and iPods but they are less interested in understanding how the technology works or taking part in its development.

Considering the status of Youth, even today, average Indian youth (in general terms) are not proficient in English; does not have acceptable reading and writing skills; does not have access to good education and/or information and is poor. Hence we need to analyze the target audience and communicate accordingly. The language used for communicating science should cater that audience accurately. The literacy levels of the audience should be taken into account before designing the concept. Focus on practical science – how it is used in their own lives. Science Communication in local language will be effective and region-specific. Contextualize science by placing it into the youth's own contexts. This has educational benefits.

Scientific terms could be simplified and used. Or the explanation of the

scientific term could be given wherever it is required (e. g. hereditary
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disease = “ a disease that goes in the family”). Informal education will always attract youth by all means. Edutainment and Infotainment concepts could be used for effective Science Communication. Using Traditional Media and Electronic Media would have a better reach. Media plays a vital role in Science Communication especially to Youth. The print and audio-visual tools used in media would easily attract the attention of young minds towards the message that is being communicated. In today’s world, Media has the social responsibility in shaping the young minds for Sustainable Development.

Ilaigner Malar: A Case

Youth Malar locally called as ‘ Ilaignar Malar’ is a supplement which is published once in every week along with the Tamil Daily Newspaper Dailythanthi locally called as ‘ Dinathanthi’ in all the districts of Tamilnadu, India. Ilaigner Malar is published on every Saturdays. The supplementary issue wholly targets on youth with varied content.

The issue publishes articles on Science & Technology, Health, Education, Science Facts, Environment, etc. The issue also carries motivational articles for youth for confidence building, skills development, etc. Articles on General Knowledge & Information are also published in Ilaigner Malar.

This study is based on a content analysis of five Ilaigner Malar Issues from Daily Thanthi – a Tamil language daily newspaper in Tamilnadu. The unit of analysis was the individual article, a definition that included “ hard” news stories, feature stories, opinion pieces, and other types of articles. The articles were content analyzed by the author in March 2009. The Five Ilaigner

Malar Issues were taken during the period 14th February to 14th March 2009.

The sampling followed two steps: first, the whole year was divided into 52 weeks and 5 weeks were selected using random sampling. Second, from these 5 weeks, 5 Ilaigner Malar supplementary issues were taken up in order to construct a year. Thus, there were 5 days in the sample. All news stories in the supplementary materials published in each issue on the selected days were coded and analyzed.

The articles were analyzed according to a number of indicators like size; length; number of words; location of the item on a particular page; context; type of news; type of presentation; comprehension; research or invention; photo featured: color or black & white; target specific articles; approach; language; and message appeal.

An effort has been made in this study to look at the content, particularly science coverage in the newspaper somewhat holistically – source of the coverage, placement of the coverage, space allotted, appeal of the coverage, formatting of the coverage and still more important, and the focus of the coverage.

The purpose of the present study is to find the extent to which Science and technology news has been covered in a supplementary issue wholly targeting at youth. What type of Science and technology news has been covered, what is the approach & language used, etc.

In a larger sense, the present study seeks to expand our understanding of how youth perceives the content presented in Ilaigner Malar. In the case of science news, Corbett and Durfee (2004) have pointed out that what is needed is “ a bridge between the journalistic construction of scientific uncertainty and audience perceptions” That is, researchers need to connect what is known about science news coverage (i. e., that it is streamlined) with research examining how news audiences are affected by that coverage (e. g., Does streamlined news coverage invoke anxiety or shape perceptions of the scientific community?). The present study contributes to the latter by measuring audience perceptions to the Science & Technology articles covered in Ilaigner Malar.

On an average, the total number of articles in five issues of Ilaigner Malar for one Month is 117. Of which 50 articles are on Science & Technology. Thus nearly 50% of articles are based on Science & Technology news. With reference to this ratio, the Science & Technology news coverage in Ilaigner Malar was mostly focusing on Health communication, Environmental Communication, Factual Information on Science, Education and Technology related news.

Among the Science & Technology news coverage, 52% of the articles were on Health Communication; 22% on the Factual Information on Science; 12% on Environmental Communication; 8% on Education News; and 6% on Technology News. The rest were Motivational articles & stories for youth such as Aalosnai, Vaarungal vazhikatugirom, etc. Of these, 16% of the articles were based on research and 8% were based on inventions. About

85% of the items were supported by visuals – 60% by black and white pictures and 26% by colored pictures.

The maximum number of science items was pertaining to healthcare/medical health (52%) irrespective of language, size of publication and days of the week. Most (63. 1%) science reporting originated from India and about one fifth from abroad.

About half the coverage (50%) was through featured articles; a little percentage was through news. The remaining items were covered through reports and factual information. Most science items (91. 8%) were easily comprehensible. The majority (81. 1%) of items was written keeping in view Indian readers; however a sizeable number (8. 9%) had general, universal appeal. The items of science coverage often done through featured articles (50%) occupied larger spaces (600 to 800 words). However, science facts and other technology related news occupied smaller spaces (50-70 words).

Date

Total No. of articles

Total No. of Science articles

Type of S&T news

Research / Invention

articles for women

With Photo

Feb 14

6

Edu – 2

Health – 3

Tech – 1

R – 0

I – 2

–

C – 3

BW – 3

Feb 21

21

7

Sci Facts – 4

Health – 3

R – 0

I – 1

–

C – 2

BW – 2

Feb 28

24

15

Sci facts – 5

Health – 7

Env- 2

Tech – 1

R – 4

—

C – 9

BW – 3

Mar 7

25

12

Edu – 0

Health – 10

Env - 2

R - 2

I -1

4

C - 10

BW - 1

Mar 14

25

10

Edu - 2

Health - 3

Environ- 2

Tech - 1

Sci Facts - 2

R - 2

2

C - 6

BW – 4

Table 1: Analysis of Science & Technology Items

In-depth Interviews:

Ms. Kavitha, an undergraduate student in Chennai finds the Ilaigner Malar to be very useful. Each and every news article is informative to the youth, he says. The Supplementary focuses on youth-centric news, for their scientific knowledge up gradation and personal development. Especially, the health tips communicated through this supplementary attracts readers, she adds. Environmental News coverage enables them to understand the nature and the species that surround them. “ The news has to be focused more on the development issues”, she insists.

Mr. Kannan, an engineering student in Chennai says that the presentation of information in Ilaigner Malar is not interesting. They need to use edutainment or infotainment concepts for grabbing the attention of youth. The Scientific terms need to be communicated in a more simplified manner, he adds. Youth Development oriented news could be concentrated more, he insists.

Observations and Findings

The supplementary issues in regional newspapers gave sufficient space to make home the Science & Technology News Coverage.

The content analysis expresses the qualitative nature of the articles published. The highest frequency factor percentage was for the health care / medical health news. The weightage to scientific facts was also significant.

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Some of the factors were neglected such as impact of severe environmental issues, natural disasters, improvement of standard of living, sustainable Development, etc.

The developing countries are no less concerned with the sustainable growth, but this did not get due weightage in the contents published.

It is suggested that science desks should be established in each newspaper where persons with the background of science and technology should man the desk. The newspapers do not give sufficient regular space for disseminating scientific knowledge. They casually report when some convention is held or a Day is observed.

For a youth-centric supplementary, it is necessary to study the youth-preferences to various types of news and disseminate according to their interest.

Framed from a scientific standpoint, a major problem with most science news coverage is that journalists simplify complex information by minimizing or omitting important scientific uncertainties. Stocking (1999) has argued that journalists “ make science more certain than it is” by removing caveats, relying on too few sources, neglecting context, stressing the results over the process, and presenting science as a quest whose future is assured. Angell and Kassirer (1994) offered a similar interpretation of the science news environment.

Lack of trained science communicators is one major challenge for a developing country like India. When there are no training institutions to

specifically train a public science communicator or science journalist then the chances are minimal that there would be a huge community of science journalists and broadcasters. Most of the Journalism students are not from the science background. Hence when they are involved in Science Reporting, they could not simply the concepts and thus the reporting becomes complicated. Introducing courses solely on Science Communication would find a solution for this. There must be a concerted effort to attract and train young people to this area of journalism. These people could also come from other branches of journalism.

Science journalists need the proper academic knowledge and training necessary to attain their goals of increasing public scientific awareness. Hence they need to be trained frequently. This will help build a core group of professionals.