

## **Mythological Storytelling Traditions: A Tool for Enhancing Science Literacy in India**

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### **ABSTRACT**

According to Albert Einstein, “if you can’t explain it simply, you don’t understand it well enough”. Same is the case with science. If we want people to understand science then we must be able to communicate it, and storytelling is one of the ways. The only difference between scientific and non-scientific mass communication is the expression of the emotion. Classical, folk/regional and tribal music, dance and drama have started to come into the limelight but the art of storytelling is getting extinct. Sometimes a scientific concept can be long and cannot be completed in a song or a dance but in case of storytelling it can be divided into episodes. This gives storytelling an edge over other art forms of communication. The second feature of storytelling is that the storytelling tradition allows the emotions to be expressed without distorting the scientific concept. But the basic idea of this project lies in connecting the required scientific awareness with the local storytelling. For this the story or a scientific concept cannot be presented as it is, it needs to be modified and here the focus is a seven-step method “CHANGED” which can be used for modifying an art form for using it in scientainment or for spreading awareness.

**KEYWORDS:** Storytelling, CHANGED, Scientainment, Science communication

### **Introduction**

Mythology is prevalent in remote areas as well as in tribal communities. This gives science a suitable channel to reach the illiterate and the unaware. Mythological stories have a deep

impact on the listener with a sense of identification of science in myth. A typical storytelling act might involve a classical element or a folk element or both which makes it a suitable method for both intellectual and laymen audiences even with a generation gap.

But utilisation of mythological stories for spreading science awareness involves modification of the story or if the story is not modified the storytellers can communicate science in pure form but with the indigenous language and dramatisation of the content.

Can all the regions be benefitted by a storytelling awareness camp? Mythological storytelling is an effective tool for science communication majorly in rural, tribal and less developed areas where literacy and awareness both are a challenge.

So how can a storytelling art form be modified, what are the pre-requisites? In this method of storytelling, a specific regional issue can be connected to a specific storytelling tradition and certain case studies which are relevant to the issue can also be used to sensitise. Stories should have morals and lessons to retain their originality but the theme can be related to the issues pertaining to agriculture literacy among farmers, health literacy among people living in remote and unhygienic areas and other types of issues where scientific awareness is needed. Examples of some of the major art forms that can act as suitable storytelling science awareness devices which will be discussed in this paper are *pandvani*, *baul gaan*, *yakshagana*, *paav kathakali* and *kavad bachan*.

To take just one instance, Bauls are folk singers of Kolkata and majorly dwell in the Gangetic belt of Bengal. The baulgaan has poetry and songs; when incorporated with paintings (as done by some artists) they can be helpful to educate the locals as well as the tourists on the consequences of littering river Ganga and related water concerns with relevant terms like biomagnification, reduction in assimilative capacity of water, BOD, COD and other concepts of aquatic ecosystem.

### **Methodology**

The most significant focus of the methodology is to freshen up the old mythological tales by adding newness to them by

infusing scientific aspects into them and slightly modifying them. So, to turn folk-style storytelling into a scientainment and an awareness tool, the seven-step method “CHANGED” can be used:

- C — Correlate
- H — Harness and preserve the morals
- A — Add urbanness
- N — Narrate and Dramatise case studies
- G — Go local
- E — Employ and Entertain
- D — Diversify media

**Correlate:** The first step in order to include scientific content in a mythological story is to correlate it with a mythological event. For example, the sudden proliferation of the leukocytes (white blood cells) in leukaemia can be correlated to the demon Raktabija whose blood gave rise to his clone and then the causes of sudden mutations which are responsible for cancer can be explained and inferred as equally malefic and harmful as the attributes of the demon.

**Harness and Preserve the Morals:** In many mythological texts, nature and natural resources are considered divine and sometimes it is also witnessed that some trees, water bodies, animals, forests and groves are worshipped. This maintains an equilibrium between the services taken from nature and respect given to it. So it sets the stage for understanding ecological and environmental issues and implementing right solutions for it. Apart from this, there are other lessons which also connect some of the other concepts.

**Add Urbaneness:** With a high rate of urbanisation people are migrating from rural areas to urban areas. So, to urbanise the content, many technical terms can also be added, for example, while explaining antimicrobial resistance terms such as antibiotics, over-the-counter drugs, antimicrobial stewardship can be used. This will add freshness and attract youngsters too. Usage of words and phrases regarding scientific concepts which are heard in day to day life can be used as such instead of translating it into heavy

literature words which will eventually drive away the interests of the general public.

**Narrate and Dramatise Case Studies:** Case studies are another tool that have a dramatic impact on the mind of the audience and are accepted because they are true stories. For example, in many advertisements related to banning tobacco real-life patients are interviewed, this also sensitises the masses because they see the suffering. Similarly in the case of organic farming, environmental problems, health awareness, etc. can be taken to make the common people understand the scientific concept. This serves both the purpose of spreading awareness and sensitising the masses.

**Go Local:** “Language is not always a barrier; it can also be a path in educating the masses.” The idea of going local deals with using specific indigenous culture and language for specific areas. In India, the same story and similar storytelling traditions are explained in different languages and art forms, so the decision of choosing an art form and language should be influenced by how local it is. This makes the people involved. The next aspect to be considered while going local is that the storytelling act should be easily accessible such as educational institutions, public functions, social events, religious places as well as some significant state and national events.

**Employ and Entertain:** “The stories are finding ears and the ears are finding stories, but both never meet each other.” The storytelling art is equally getting endangered as some of the regional art forms are declining, but the masses are still in search of fresh entertainment every time. The feeble numbered audience is a discouraging factor for the artist’s livelihood which is why the number of storytellers is dipping. So the easy way out is to employ them as a part of the awareness programme. Now comes the second aspect of entertaining. The best way to communicate science with entertainment is to involve humour, drama and sometimes a dash of fiction. So, employment will attract the artists and the entertainment will attract the audiences. In fact, making such stories may require a writer.

**Diversify the Media:** Both in the rural and urban world, time does not permit people to go to auditoriums, theatre and other places to see a storytelling act. This means that the

modified story which we are creating needs an accessible medium – that is technology.

The new CHANGED scientainment story act can be expressed via entertainment channels, social media, television and other written and electronic media pathways. This will give both science and folklore a wider exposure as well as give a chance of monetisation to the poor artists and may even divert from the mass and regressive entertainment that we see today.

Some of the art forms that can be modified with the above-mentioned methods are:

1. Pandvani — a storytelling art from Chhattisgarh, it has a narration accompanied by dialogue and music.
2. Baul — a storytelling art from Bengal, in this the story is narrated by singing and dancing.
3. Yakshagaana storytelling art from Karnataka — it consists of vivid costumes and a dramatic enactment of the story.
4. Pattachitra from Odisha — it consists of projecting of diagrammatic cutouts of characters on a cloth with lamp and the music accompanies from the background. This can be used for diagrammatic explanations in science.
5. Kavadi Bachan from Rajasthan — it consists of a Kavadi, a wooden box with coloured images which is handmade. This can be used for diagrammatic explanations in science.

Similarly, there are other art forms also.

### **Discussion**

Indian science is scaling tremendous heights not only in scientific research but also in the establishment of the vast diversity in scientific sub-disciplines. But the way it is communicated, considering the diverse understanding ability of the Indian masses, it has still a long way to go. Intellectual gatherings, research papers, presentations are not something that such a diverse population will enjoy. And there are many more reasons why communicating science is to be taken seriously and sincerely. So apart from the scientific innovation, there is also a need for innovative science communication which is why “Mythological Storytelling” is worth considering.

With advancements in entertainment media, gradually many indigenous art forms are being endangered and bringing these art forms for scientainment requires a sense of freshness to be infused in it. This requires a careful observation of desires of both the artist who is practising storytelling as well as the audience – the “CHANGED” method of modifying the story deals with this aspect. The inclusion of mythology and culture in storytelling will give larger audiences because it is understandable to all as well as many significant cultural events and festivals can host such a scientainment.

So the question is, despite all these factors in favour of this culture of storytelling, why is it still not getting the desired response from the audiences? The answer is the lack of evolution in the communication of these stories in the name of preserving the old methodology. This is why this art form has become confined to a remote social group. “Nothing is constant except the change”. Modifying these art forms while involving current social themes and technology and then adding scientific concept will be more effective.

The next important aspect is the performance. A performance does not only include an artist but also the audience, so the intricacy if portrayed in an art it can be accomplished only when the audience mounts a response to that intricacy. So the scientific concept must be included in such a way that it should not be too high on scientific jargons and it should not have a very high level of classical dance, music and mute drama. For example, in Bharatnatyam there is an enactment of gesture which is known as “Abhinayam”, this is done sometimes with wordless music so interpretation of this act depends on the understanding of the spectator, not everyone can understand it. Similarly sometimes in scientific research that concerns the public, people are also a part of it sometimes as a case study or as a trial subject. So while communicating science to the society one must relate science to the daily life. This makes the people feel involved and encouraged to understand science. India has one of the best communication ways, but it needs to be refined.

Art forms such as storytelling can communicate science and science, in turn, can give it a purpose to survive. So employing

the artists and deploying the art forms can be one of the ways to make the science reach to the people in India.

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