

Coverage of Science News in the Three National Dailies

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Abstract

Newspapers cater to the needs of various sections of society and it has a great influence towards the need from the society. It shapes public opinion and influences government to build over policies and decisions to strengthen the democratic nature of the country. In a democratic society, newspaper play the role of the guardian of the rights of the people by giving awareness of particular science news it justifies the role it plays in an individual's life. This study gives a scope towards need of science news and its usability to the readers and helps to identify an outlook structure on how media give importance to science news. It helps to pinpoint the level of preference on science news coverage in three various English newspapers which includes in this study. This research explores the problem by using method of quantitative analysis by finding out factors like comparison of importance of science news than other items are included in the research analysis. This paper is also discussing the factual result of coverage of science news with other news items covered in the daily based on advertisements and sports news. This study will give a

valuable outcome to the society with importance in covering news on science among three major newspapers in India.

Key Words: Science news, Behavior, Coverage, Importance.

1. Introduction

Science as always played an important role in our lives specially for education. Its uses are knowingly or unknowingly present in our regular tasks. What is Science? Famous scientists have quoted science in thoughtful words. Like According to **Isaac Asimov** (Isaac Asimov Speaks' with Bill Moyers in *The Humanist* (Jan/Feb 1989), 49. Reprinted in Carl Howard Freedman (ed.), *Conversations with Isaac Asimov* (2005)) "Science does not purvey absolute truth, science is a mechanism. It's a way of trying to improve your knowledge of nature, it's a system for testing your thoughts against the universe and seeing whether they match". According to **Carl Sagan** (January 31, 2018, from BrainyQuote.com) "Science is a way of thinking much more than it is a body of knowledge". Science at the present age has changed a lot. It consists of vast areas with specialized subjects which include Energy economics, Biotechnology, Information technology, Nanotechnology, Genomics, Proteomics, etc. Science for all now is understood in practical manner rather than theoretically. Its evolution has brought new and helpful developments which has made living much comfortable now. There are daily reports of new findings inventions, technologies, developments resulting in the benefit of people.

According to Wikipedia, (2018, January 18). In *Wikipedia, The Free Encyclopedia*. Retrieved, January 31, 2018) "Science communication generally refers to public communication presenting science-related topics to non-experts. This often involves professional scientists (called "outreach" or "popularization"), but has also evolved into a professional field in its own right. It includes scienceexhibitions, journalism, policy or media production. Science communication also includes communication between scientists (for instance through scientific journals), as well as between scientists and non-scientists (especially during public controversies over science and in citizen science initiatives".

For people to know about the science reporting's media here plays a great role. It is the media who report the complicated scientific researches and delivers it to the common people in a simple manner to understand. Media lets people get to know about new scientific findings and helps to consume them. Honestly, it is the mass media, whichshow the reality of science to people. It plays as a link between scientist and common people. It brings out the relation between science and common people to acquire more knowledge and facts. Nowadays people, mostly depend on media like print, broadcast, online to gain knowledge and information. Hence, media should ensure that they are giving required importance to science and are reporting them in an accurate and regular manner.

Newspapers are one of the mediums still believed and used. Even in this modern era where people are busy with new media, newspapers have not lost their relevance and value. In order to gain knowledge about a particular topic in

detail or improve language and vocabulary or to succeed in a competitive exam it is always first advised to read a national leading paper daily. Newspapers are a prominent part of our life.

The research “Coverage of science news in the three national dailies” tells us the comparison between the three leading newspapers that is The Hindu, The Times of India and The New Indian Express. How much all three newspapers give prominence to Science and how they are presenting it to the common people.

2. Review of Literature

These are the following literature reviews which show that the study “Coverage of science news in three national dailies” has a different aspect. The study done by SnehaVerghese (2016) focuses on the coverage of science events and how much eminence it is given by newspapers. Deccan Chronicle –the chief English paper in Hyderabad city and Times of India –the national level prominent newspaper was the two newspaper taken to conduct the study. This study shows the result that the two newspapers together dedicated 9.57% of their growing news hole to science news. The science coverage in the Times of India was found to be 10.09% and in the Deccan Chronicle 9.05%., which is very low, keeping in mind the everyday progresses in the field of science and technology. The methodology used was, Qualitative analysis and Quantitative content analysis

This study done by Feifei Zhao (2014) states that the amount of Chinese newspaper coverage on genomics medicine has dropped regardless of growing scientific output in educational journals. The future communication of information on genomics medicine in China for the formation of personalized medicine will require better teamwork and collective learning by citizens, scientists, journalists and medical professionals in order to circulate information and facts about genomics medicine in China to much wider audience. This study brought out by UNESCO (2011) discusses the following reasons for the deficiency of science and technology matters in the African media. It is said that Science and technology issues are taken as complex matters or that journalists in Africa lack particular knowledge to cover them. But the fact, that despite the limited capability in many newsrooms in Africa, the media have made little investment in trying to improve the capacity of journalists to allow them give science and technology issues. Secondly, Because of the fear of being misquoted or quoted out of perspective, the scientific community hardly trusts journalists. Also factors like commercialism, sensationalism, and negativity are other reasons for the dearth in reporting of science and technology in Africa.

The research conducted by Vanessa brasil de Carvalho (2014) states that it mainly focused on, over a period of 130 years how the press in Pará had covered scientific stories. They focused on three newspapers which had the lengthiest circulation in the State. The analyses discussed that science has been

reported in a frequent way in the press in Pará since the 19th century. The science stories observed often included issues related to health study. It was taken into concern that there was an effort to contextualize scientific facts and to include scientific background information and fact, which is a prominent feature to encourage these issues within a broader context. The study done by DrMeenu Kumar (2013) focuses on the result that an average of 2.04 percent literature is published on science and technology which is less while comparing to other types of facts. Also it indicates that English newspapers gave 2.34 percent news and Hindi newspapers gave only 1.74 percent news on scientific issues. English newspapers are in lead in imparting bit more knowledge to make people aware about day to day activities and giving details of scientific issues in the form of articles. The study showed that most of the newspapers published more materials on medicine and health backed by environment. BharviDutt and K.C. Garg (2012) discusses the following result that a lot of issues were reported by the newspapers. However, the four dominant topics related to the coverage of environment, space S&T, health and astronomy need to be discussed. Whatever science is covered by the newspapers is overwhelmed by health within life sciences topics as it constituted more than one third of the space and about half of the items.

Another research by Vinay G.P (2016) states that the content analysis gave the exact picture about the present scenario of distribution of science issues in newspapers. The research showed that all four newspapers gave least percentage of coverage to Science and Technology. Also the study reveals a clashing result that Kannada newspapers are giving more science Knowledge than English dailies, whereas previous studies settled that English newspapers are at topmost in publishing S & T material than regional language newspapers. A study by BharviDutt and K. C. Garg (2000) brought out the result that far less than one percent of the total printed area was full by the science and technology items in English-language Indian dailies in the year 1996. Even this low coverage was not systematic and constant. The Pioneer, followed by The Hindu and The Times of India, led the science coverage. Defense and space research, astronomy and Nuclear science and technology were the three subjects that occupied the greatest space, while the least space was occupied by science and industry, ethics in science and technology and science and technology information.

Dr. S. Arulchelvan (2010) states out that Tamil print media is low in S&T coverage. Its only (3.5%). Science and research get low attention and they mainly publish S&T articles related to technology of new products. As compared to other subjects, Tamil newspapers publish more of news related to agriculture. The study shows that Tamil newspapers are very positive in publishing of S&T news nevertheless of the language. Tamil newspapers have published more S&T news which were created from Tamil Nadu. It shows that, regional media gives more importance to the local S&T subjects closer to the society. InduPuri (2006) study states the shortage of the media coverage on

science & technology, as it lacks depth and is generally shallow. Item wise coverage of S&T is not ruthless in Gujarat. An average 3-4 items based on S&T comes in print media every day, in television every fourth item is S&T based and in case radio every seventh item is S&T. But in real terms as observed, duration and size whatever, this coverage is very short for S&T issues in all these media.

The study “Coverage of science news in three national dailies” focuses on finding how much the newspapers are giving importance to science events. There by incorporating quantitative analysis in which it was found that high prominence is given to news on Behavior, then to health, then focusing on technology, then environment and ecology, then comes astronomy and biomedicine. Least amount of news coverage on areas like zoology, food and nutrition, archeology, cell and biology, botany, physics, computing and paleo biology. The study also concentrates on the comparative study between the three leading national dailies that is The Times of India, The Hindu and The New Indian Express of Kochi editions. Through this study it can be seen that which of the national daily gives more importance to science.

Scope and significance

- This study will help to give an awareness on science news values and develop a reading habit on Science news.
- It will also help to improve and increase the value of science news coverage in newspaper based on reader’s preferences.

Objectives

- To study the coverage of Science News in National Dailies like the Times of India, The Hindu and The New Indian Express.
- To analyze the importance given between Advertisements, Sports and Science news.
- To compare and identify which national daily gives more priority to science news.

Hypothesis

- The Science news is not getting much attention.
- The News related to behavior is getting more preference than any other fields in all three national dailies.
- The New Indian Express is the national daily which gives maximum coverage on science news.

3. Methodology

In the study of “Coverage of science news in the three National Dailies” Quantitative analysis and Qualitative Analysis of an in depth interview with a journalist was done.

Theoretical framework

The study integrates Agenda-setting theory. The theory describes that “media has a central role in persuading its audience to adopt in which subject they are interested”. It helps common people to decide what should they concentrate on and on what they shouldn't. If the media for once focuses on science for a while, then readers also take keen interest in reading science. But as the media shifts its focuses to another stream like sports then the audience also follow as such.

Conceptual framework

There were two kinds of analysis adopted –Quantitative and Qualitative analysis. The top most leading three newspapers were taken for the study namely The Times of India, The Hindu and The New Indian Express of Kochi edition.

The main criterion here is the editions are Kerala based and also recent issues were selected for the research.

An analysis of two months and two weeks were taken for quantitative analysis. The period of the study was from October 1 2017 to November 30 2017. And the two weeks' study were from October 1 2017 to October 14 2017. An in depth interview with the senior most editor of The Times of India was conducted as part of Qualitative analysis.

The key measurement for analyzing these newspapers were: -

- Each science news was counted on daily basis.
- The news was then separated on the root of their field.
- A week wise analysis conducted to see which week had more of coverage on science news.
- Then the first two weeks were taken for the comparison between the coverage of Science news to that of Advertisements and Sports news.

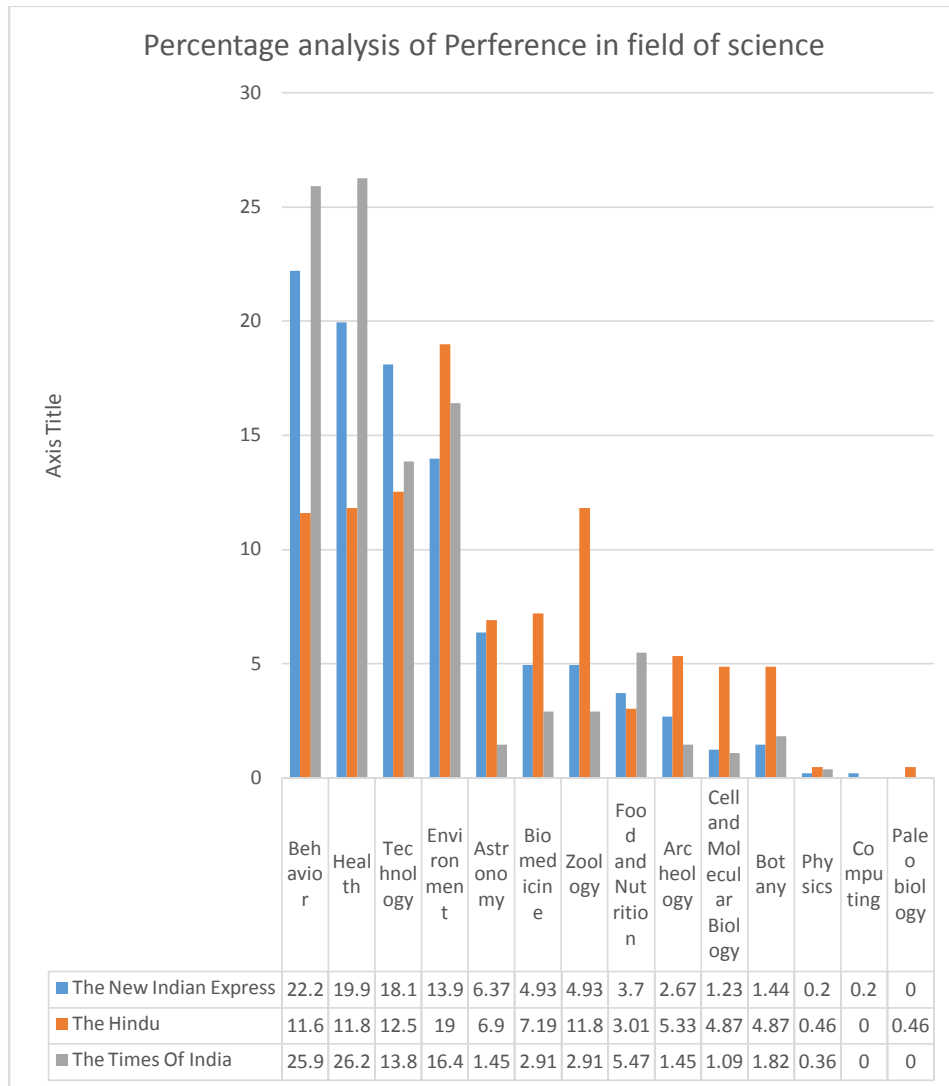
Research problem

The science news and its importance in dailies are getting reduced in Indian newspapers. The Science news will teach and inform the readers about issues and causes which relates to the science. This study identifies the problem in coverage of science news among Indian dailies.

Research questions

- Does science news get the required importance?
- What kind of News is getting more preference than Science news?
- In field of science which type of news is getting more reported?
- In which of the three national dailies gives more coverage to science news?

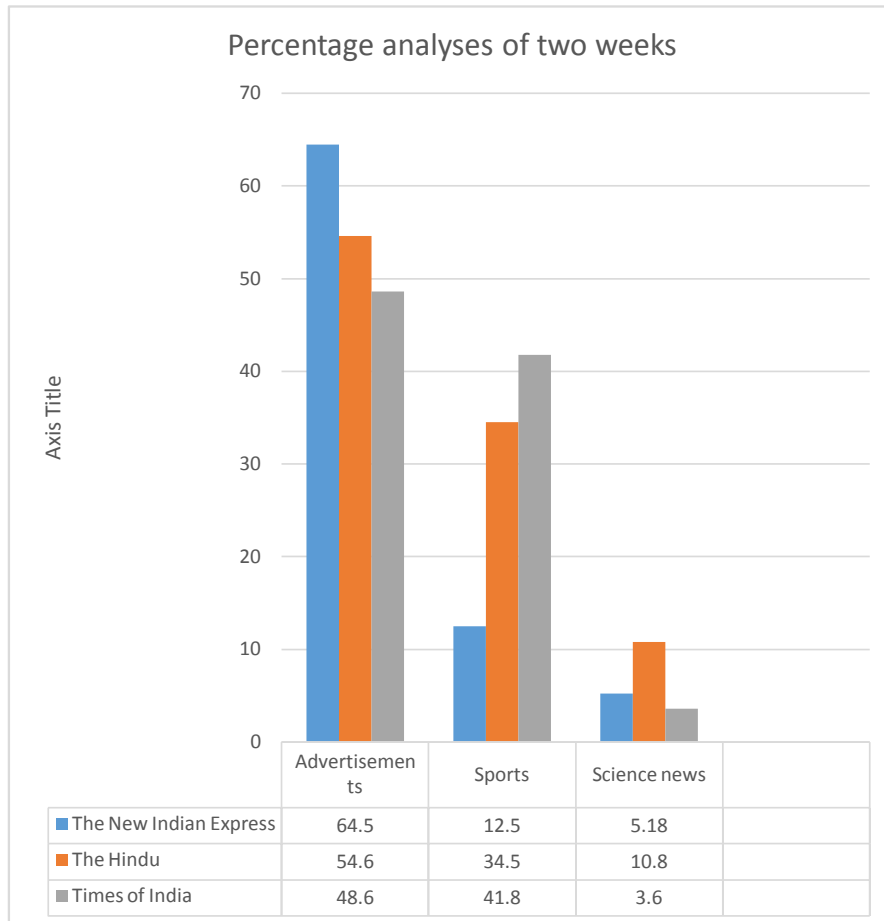
4. Findings



Graph 1:Percentage depiction of Field of science in two months in the coverage of TheNew Indian Express, The Hindu and Times of India

Here the graph depicts the highest preference given between fields of science. The news related to Behavior and to Health gets more priority in The Times of India. The New Indian Express backs up in the coverage of Behavior and health. Technology and Environment news are then given preference in all three national dailies with slight fluctuations.

Coverage of other items in the newspapers- Advertisements and Sports News



Graph 2: Graphical representation of the Comparative study between the coverage of Advertisement, sports with that of science news in the three national dailies in percentage.

The comparison between the coverage of science news with that of Advertisements, sports depicted in the graph shows that there is high prominence given to sports and advertisements than given to science. The New Indian Express shows lead in covering Advertisements. The Hindu shows the maximum coverage in Science news.

5. Discussion

The analysis done with two months shows that there are frequent fluctuations between the coverage of science news of all the three national dailies. The analysis from October 1 to November 30 showed that the level of coverage of

science news kept on changing. However, at the final, The Hindu leads in the coverage of Science news backing up with The New Indian Express and then The Times of India. When coming to preference between field of science news, the reporting's about Behavior is high in The New Indian Express (22.22%), Health related news is high in The Time of India (26.27%) and environment related news is high in The Hindu (19%). The assumption "The News related to behavior is getting more preference than any other fields in all three national dailies" proves to be an alternative hypothesis as only The New Indian express leads on the coverage of behavior and other two national dailies does not. For the comparative study, two weeks that is from October 1 to October 14 was taken for the analysis. The comparison was between the reporting of advertisements and sports with that of science news. It was found that advertisements and sports get more of coverage and science news reporting is low. However, The Hindu leads on the coverage of science news (10.8%) with comparison of the other two national dailies Times of India (3.6%) and The New Indian Express (5.18%). Which also proves the third hypothesis as an alternative hypothesis depicting The New Indian Express does not lead in the coverage of science news.

According to the study done in the "coverage of science news in three national dailies" the needed priority and importance given for science news is very less. That too taking in concern today's day to day advancements and inventions the reporting of science news should be much more than it is given now. In today's world people completely depend on media to know about each and everything. Science is involved in each activity and routine of our life. But it's complex processes and Scientific names makes it difficult for a common person to understand exactly what it means. Here is where media should portray as saviors and become a medium to common people in conveying the complicated science inventions, discoveries and findings into simple language. Media should have a regular based coverage on science news.

In an in-depth interview with the resident editor it was also found that though journalist a lot many events, issues, matters of daily happenings in science but they only report those which are the most important. They are in the opinion that Science and technology have become integral part of our lives. It no more is a value-add to cushion life of the rich. Even people in lower strata use science and technology to enhance their lives. Examples are many. That is WhatsApp is used by fisher folk, carpenters, house maids, etc., to stay connected and boost trade and to know trends and share patterns. To add, everyone knows how a satellite helps improve the speed of internet or help them receive better TV signals. And media has a big role in spreading awareness about these disciplines.

In a comparative study conducted between advertisements and sports with science news reportage, advertisements and sports are more in number than science news. The New Indian Express leads in the coverage of Advertisements

(64.5%). The Times of India leads in sports (41.8%). And The Hindu goes ahead in the reportage of science news (10.8%). However, science news is not covered on a regular basis but advertisements and sports are present in all the national dailies on a daily basis.

The News related to behavior in The New Indian Express is being reported more. As in today's era psychological issues would be at high point because of increase in developments of smartphones and electronic devices. People are facing different types of mental stress like long term depression, emotional distress and anxiety disorders in workplaces, schools, home etc. It is increasing day by day. This can be due to stressful working conditions, pollution, personal issues, peer pressure etc. Due to this many remedies, solutions, way outs are being provided by the print media. Discussions, interviews, seminars, classes, conversations with experts, psychologists, professors, talk shows etc. are being reported now and then. Many types of exercises and yoga postures are being introduced and to connect more with people, chat with celebrities about their lifestyle, how they manage their busy, stressful life by keeping healthy is discussed time to time. The health issues, matters are getting more reportage in The Times of India. Nowadays new kinds of diseases and bacterial infections are to be found. Regular follow ups on new invention of medicines and treatment are being reported for the wellbeing of people. And environment news is getting coverage in The Hindu, than the other fields of science like technology, astronomy, biomedicine, zoology, food and nutrition, archeology, cell and molecular biology, botany, physics, computing and paleo biology. In the in-depth interview when asked that which field of science would add more value to the public than others? - They are in the belief that "medicine, environment, space science and climate change would add value to their lives".

The Percentage analysis of two weeks in field of science shows that The Hindu leads in the coverage of science news followed by The New Indian Express and then the Times of India.

In an in-depth interview conducted with the Resident editor, Time of India, Kochi, Kerala, Manoj. K. Das it was also found that The newspaper gives coverage of science news on basis of their importance, though many events occur time to time. On asking whether journalists lack of knowledge to report science issues meaningful and serious coverage? "Yes, no media institute inculcates import of science reporting. We have a long way to go in this regard". Also when asked is science news treatment fair when compared to all other fields? And Is science news highlighted in a way that it needed to be? He says "No. we have a long way to go".

The study done by SnehaVerghese (2016, December) shows that both the leading newspapers that is Deccan Chronicle of Hyderabad city and national paper Times of India devoted less percentage in coverage of science news. It says that as the nation's 60% population is agrarian but coverage on

developments in farming and agriculture is less. Also it says that news related to pure science is also less.

The study on “coverage on science news in three national Dailies” shows the result that in a comparative study between advertisements and sports coverage with that of science news, science news reporting is very poor. In comparing between the three national dailies The Hindu leads followed by the New Indian Express and then The Times of India. In the field of science Behavior news leads in The New Indian Express and health related news gets more coverage in The Time of India and environment news are at high point in The Hindu. Least coverage goes to astronomy, zoology, food and nutrition, archeology, cell and molecular biology, botany, physics, computing and paleo biology.

6. Conclusion

The findings show the following results even after being the three national dailies, less importance is given to the coverage of science. More of other aspects like advertisements and sports are being reported. The modern era though has a lot of advancements, developments, inventions and discoveries with it, it brings lot of psychological disorders, physical health issues and pollution. Accordingly, the reportage on news related to behavior, health and environment is high. The other issues and matters like astronomy, zoology, food and nutrition, archeology, cell and molecular biology, botany, physics, computing and paleo biology are getting low percentage of coverage.

In the qualitative analysis, the conducted in-depth interview depicted the results that, many science news is acquired by journalist but only the most important one's given for public awareness. Also to add value and for the benefit of the general public, journalist are in the acceptance that news more on medicine, environment, space science and climate change would do good. Journalist also believe that coverage on science is generally less and they have to go ahead than the present condition. Hence, it can be concluded by saying that more space should be allotted to science news in a proportionate way.

Limitations

- The study is only a quantitative analysis and can give only a limited picture of the coverage given to science.
- Cartoon strips, puzzles, quizzes crosswords were not included in the analysis.
- The study is limited to three national dailies, The Times of India, The Hindu and The New Indian Express.
- For the comparison between coverage of science news with that of advertisements and sports only first two weeks were taken that is October 1-October 14.

References

- [1] Arulchelvan, D. (2010, December). Vol 9-No 2 - Indian Science Communication Society (ISCOS). Retrieved January 17, 2018.
- [2] Carvalho, V. D. (2015, December). The science coverage in three newspapers of Para: a ... Retrieved January 17, 2018.
- [3] Dutt , %. (2012, August 31). S&T coverage in English-language Indian dailies. Retrieved January 17, 2018.
- [4] Dutt, B., & Garg, K. C. (2000). An overview of science and technology coverage in Indian English-language dailies. *Public Understanding of Science*,9(2), 123-140. doi:10.1088/0963-6625/9/2/303.
- [5] G.P, V. (2016, December). COMPARISON OF SCIENCE COVERAGE IN ENGLISH AND KANNADA ... Retrieved January 17, 2018.
- [6] Kumar, D. (2013, June). COMPARISON OF SCIENCE COVERAGE IN HINDI AND ENGLISH ... Retrieved January 17, 2018.
- [7] Puri, I. (2006, December). Science & Technology Coverage in Print and Electronic ... Retrieved January 17, 2018.
- [8] U. (2011, October). MEDIA COVERAGE OF SCIENCE AND TECHNOLOGY IN AFRICA - UNESCO. Retrieved January 17, 2018..
- [9] Verghese, S. (2016, December). A COMPARATIVE ANALYSIS OF THE NEWS COVERAGE AND CONTENT OF SCIENCE AND TECHNOLOGY IN TWO ENGLISH DAILIES. Retrieved January 17, 2018.
- [10] Zhao, F., Chen, Y., Ge, S., Yu, X., Shao, S., Black, M. Wang, W. (2014, April). A quantitative analysis of the mass media coverage of genomics medicine in China: a call for science journalism in the developing world. Retrieved January 17, 2018. In Wikipedia, The Free Encyclopedia. Retrieved 09:22, January 31, 2018.

