

**Listed in
Ulrich's International Periodicals
Directory, USA**

Research Papers/Articles

Twitter Sentiments: Pattern Recognition and Poll Prediction

Dr. Francis P. Barclay, Dr. C. Pichandy, AnushaVenkat

Role of Media in Capacity Building of Women Panchayath Members:

A Case Study of Bengaluru Urban District
Mamatha K.N., Prof. Onkargouda Kakade

Digital Media and the Young: Need of Parental Mediation

Dr. Rajesh Kumar

Parental Mediation and Attitude towards Children's Television Viewing

BoobalaKrishnan N., Dr. D. Boopathy

Discourses of Development Communication: A Critical Review

Dr. Anindya Deb

The Social Media Language

Dr. Ambika Shankar Mishra

Human Rights and Right to Expression in Mass Media in The Present Times

Dr. Deepak Upadhyaya

Adoption of Information Communication Technology Tools Among Medical Doctors

R. Jayaseelan, Dr. C. Pichandy, N. Boobalakrishnan

Pragyaan: Journal of Mass Communication

Volume 13, Issue 2, December 2015

Patron	Dr. Dilip K. Bandyopadhyay Vice Chancellor IMS Unison University, Dehradun
Advisor	Dr. Vijayan Immanuel Pro Vice Chancellor IMS Unison University, Dehradun
Chief Editor	Dr. Pawan K. Aggarwal Associate Pro Vice Chancellor IMS Unison University, Dehradun
Editor	Dr. Sushil Kumar Rai HOD, School of Mass Communication IMS Unison University, Dehradun
Associate Editor	Mr. Deepak Uniyal Faculty, School of Mass Communication IMS Unison University, Dehradun
Editorial Advisory Board	Prof. Subhash Dhuliya Vice Chancellor Uttarakhand Open University Haldwani, Uttarakhand
	Prof. Devesh Kishore Professor Emeritus Journalism & Communication Research Makhanlal Chaturvedi Rashtriya Patrakarita Evam Sanchar Vishwavidyalaya Noida Campus, Noida- 201301
	Dr. Anil Kumar Upadhyay Professor & HOD Dept. of Journalism & Mass Communication MGK Vidhyapith University, Varanasi
	Dr. Sanjeev Bhanwat Professor & HOD Centre for Mass Communication University of Rajasthan, Jaipur

Copyright @ 2015 IMS Unison University, Dehradun.

All rights reserved.

No part of this publication may be reproduced or transmitted in any form or by any means, or stored in any retrieval system of any nature without prior written permission. Application for permission for other use of copyright material including permission to reproduce extracts in other published works shall be made to the publisher. Full acknowledgment of author, publisher and source must be given.

The Editorial Board invites original, unpublished contributions in the form of articles, case studies, research papers, and book reviews.

The views expressed in the articles are those of the contributors and not necessarily of the Editorial Board or the University.

Although every care has been taken to avoid errors or omissions, this publication is being sold on the condition and understanding that information given in this journal is merely for reference and must not be taken as having authority of or binding in any way on the authors, editors, publishers and sellers who do not owe any responsibility for any damage or loss to any person, a purchaser of this publication or not, for the result of any action taken on the basis of this work. All disputes are subject to Dehradun jurisdiction only.

Panel of Referees

Dr. Girija Shankar Sharma
Dean, Dept. of Journalism and Mass Communication
Dr. Bhim Rao Ambedkar University, Agra

Dr. R. K. Sohane
Director, Extension Education
Bihar Agricultural University
Sobour, Bhagalpur

Dr. Vir Bala Aggarwal
Professor & Chairperson
Dept. of Journalism and Mass Communication
Himachal Pradesh University
Summer Hill, Shimla

Dr. Manoj Dayal
Professor, Dept. of Communication Management and
Technology
Guru Jambheshwar University of Science &
Technology, Hissar, Haryana

Dr. Dev Kumar Pukhraj
Senior Editor
ETV News, Ramoji Film City, Hyderabad, Andhra
Pradesh

Mr. Arun Ashesh
Political Editor
Dainik Jagran, Patna

Mr. Sudhanshu Ranjan
Editor, DD News
Prasar Bharti, New Delhi

Dr. Bandana Pandey
Professor, Dept. of Advertising Management
& Public Relations
Guru Jambheshwar University of Science &
Technology,
Hissar, Haryana

Dr. Tapati Basu
Professor, Dept. of Journalism and Mass
Communication
University of Calcutta, West Bengal

Dr. Harjinder Pal Singh Walia
Professor, Dept. of Journalism and Mass
Communication
Punjabi University, Patiala

Dr. Sunil Kanta Behere
Professor and Head, Dept. of Journalism and Mass
Communication
Berhampur University, Behrampur, Odisha

Dr. N. Usha Rani Narayana
Professor, Dept. of Communication and Journalism
University of Mysore, Mysore

Dr. K. Narender
Professor, Dept. of Communication and Journalism
Osmania University, Hyderabad

Dr. V. Durga Bhavani
Professor, Dept. of Communication and Journalism
Sri Padmavati Mahila Visvavidyalayam
Tirupati, Andhra Pradesh

From the Chief Editor

Mass Communication is one of the most dynamic and challenging disciplines of our times. Pragyaa: Journalism of Mass Communication (Pragyaa: JOMC) is a bi-annual, peer reviewed, open access Journal that aims to be at the forefront of this dynamism by publishing insightful research on new trends in the field. The Journal envisions being a marker of new trends and future prospects in the communication landscape. This issue of Pragyaa: JOMC presents eight research articles covering diverse areas of Mass Communication.

In this issue, first article "Twitter Sentiments..." analyzes the inferential and predictive abilities of twitter during election campaign periods. Second paper on "Role of Media in Capacity Building of Women..." analyzes the role of media in capacity building of women Panchayat members based on a survey of 60 Panchayat women members. Third study on "Digital Media and the Young..." is focused on the need for parental monitoring of internet driven new/digital media use by the young. Fourth paper on "Parental Mediation and Attitude...", examines association between parental mediation and attitude towards television viewing by their children. Fifth study on "Discourse on Development Communication...", attempts to throw light on various alternative communication approaches. Sixth article on "The Social Media Language...", explains the short and simple version of English language that has been evolved by new generation for common communication through social media platform. Seventh paper on "Human Rights and Rights to Expression..." aims to comprehend whether or not the right to freedom of speech and expression is being enjoyed by the masses in the country and the role of mass media in this regard. Last article on "Adoption of Information Communication Technology (ICT)..." is focused on the extent of use of ICT by medical doctors.

We are thankful to the authors for their scholarly contributions to the Journal. We express our gratitude to our panel of referees for the time and thought invested by them into the papers and for giving us sufficient insights to ensure selection of quality papers. Thanks are also due to Dr. Vijayan Immanuel (Pro VC), Dr. Dilip K. Bandyopadhyay (VC), Dr. M. P. Jain (Chancellor), the members of the Editorial Board, and the members of the Board of Governors for their constant guidance and support.

We would like to acknowledge the contributions of Dr. Sushil Kumar Rai (Editor), Mr. Deepak Uniyal (Associate Editor), Dr. Kumar Rajyavardhan (Former Associate Editor) and all the other faculty members of School of Mass Communication in preparing the reader friendly manuscript for the Press.

We welcome submissions based on quantitative analysis as well as sound conceptual and application oriented studies, challenging the boundaries of research in communication, thereby provoking readers to ask new questions, seek new evidence and come to the new conclusions. In this way, the journal continues in its efforts to provide academicians and professionals an avenue to disseminate empirical research and introduce new concepts to its readership.

We hope our readers find the contents, findings and suggestions contained in this issue of Pragyaa: JOMC as informative, stimulating, and of some practical relevance. We welcome comments and suggestions for further improvement in the quality of our Journal.

Dr. Pawan K. Aggarwal
Associate Pro-Vice Chancellor
IMS Unison University, Dehradun.

Pragyaan: Journal of Mass Communication

Volume 13, Issue 2, December 2015

CONTENTS

Research Papers/Articles

1. Twitter Sentiments: Pattern Recognition and Poll Prediction1
Dr. Francis P. Barclay, Dr. C. Pichandy, AnushaVenkat
2. Role of Media in Capacity Building of Women Panchayath Members:17
A Case Study of Bengaluru Urban District
Mamatha K.N., Prof. Onkargouda Kakade
3. Digital Media and the Young: Need of Parental Mediation24
Dr. Rajesh Kumar
4. Parental Mediation and Attitude towardsChildren's Television Viewing32
BoobalaKrishnan N., Dr. D. Boopathy
5. Discourses of Development Communication: A Critical Review39
Dr. Anindya Deb
6. The Social Media Language.....43
Dr. Ambika Shankar Mishra
7. Human Rights and Right to Expression in Mass Media in The Present Times47
Dr. Deepak Upadhyaya
8. Adoption of Information Communication Technology Tools Among Medical Doctors.....55
R. Jayaseelan, Dr. C. Pichandy, N. BoobalKrishnan

Twitter Sentiments: Pattern Recognition and Poll Prediction

Dr. Francis P. Barclay*

Dr. C. Pichandy**

AnushaVenkat***

ABSTRACT

Do public opinion and political sentiments expressed on Twitter during the election campaign period have a meaning and message? Are they inferential, that is, can they be used to estimate the political mood prevailing among the masses? Can they also be used to reliably predict the election outcome? To answer these questions in the Indian context, tweets posted on popular candidates were mined before and during the 2014 Indian elections. Sentiment and time-series analyses were performed to estimate the political trend during the study period—January 26 - May 12, 2014. Correlating Twitter trends with the mandate of the people, the inferential and predictive abilities of Twitter were tested. Finally, the empirical findings were used to theorize on the political roles of the micro-blogging website in the 2014 general election.

1. Introduction

In 2014, Twitter was widely used to post public opinions and political sentiments. On April 30—the day 89 of India's 543 constituencies went to the polls—696,000 election-related tweets were sent (Thane, 2014). After the 7th round of polling, there were 49 million Indian elections-related conversations on Twitter, more than double the 20 million Indian elections-related conversations on Twitter for all of 2013. In 2009, Shashi Tharoor was the lone Indian politician to be on Twitter with 6,000 followers. This time around, there was hardly any major political leader who does not have an account on Twitter. As of June 25, 2014, Tharoor had 2.24 million followers, the second most popular Indian politician on Twitter after Narendra Modi, who had 4.98 million followers. Modi is also the second most popular politician on Facebook with over 18 million fans, with US president Barack Obama leading with over 41 million. It was observed that the online social media platform played a game changer in the 2014 general election (Pansare, 2014) and impacted its outcome (Swamy, 2014).

2014 marked the dawn of a new era in Indian politics—and in the Indian history of online social media. It saw the rise of Twitter as a crucial tool of political propaganda—with the political parties spending huge sums to spread their respective messages on the micro blogging website and

the electorate using the online platform to post their comments. India's 2014 Lok Sabha election was touted to be the world's largest democratic exercise—with about 814.5 million eligible voters—conducted in nine phases from April 7 till May 12, 2014. As many as 8,251 candidates had fought for the 543 Lok Sabha seats.

The Indian National Congress (INC or just the Congress) and the Bharatiya Janata Party (BJP) were the dominant parties contesting the general elections. After its surprise win in the New Delhi Assembly elections at 2013-end, the newly-formed Aam Aadmi Party (AAP) started to nurture national ambitions. Buoyed up by this victory, the party decided to contest the Lok Sabha elections. Arvind Kejriwal led the AAP, while Rahul Gandhi, son of former Prime Minister Rajiv Gandhi and Congress President Sonia Gandhi, was portrayed as the face of INC.

After the BJP nominated Narendra Damodardas Modi as its prime ministerial candidate, it was a historic rise for the 14th Chief Minister of the Indian state of Gujarat, who was once a 'chai wallah' (tea vendor). In December 2013, four legislative Assembly elections resulted in victories for the BJP. Modi was generally credited in the media for the result (Patel, 2013; NDTV, 2013). In the hard-fought election, Narendra Modi-led BJP posted a historic win, decimating the grand old INC party that had dominated Indian politics thus far.

* Journalist-psephologist and news artist.

** Prof. & Head of the Department of Communication, PSG College of Arts and Science, Coimbatore, Tamil Nadu, India.

*** Doctoral scholar, PSG College of Arts and Science, Coimbatore, Tamil Nadu, India.

For the present study, the top parties chosen were the Congress, BJP and AAP, as the prospects of others claiming a majority at the Centre were bleak. Further, this election saw the popularity of party leaders surpass the popularity of the parties. Each of the parties chosen had a dominating face—Congress had the young face of Rahul Gandhi, founder Arvind Kejriwal for AAP and the BJP had its prime ministerial candidate Narendra Modi as its face.

While the Congress party secured 106,935,311 (19.3%) votes, the BJP amassed 171,637,684 (31%). AAP managed a meagre 11,325,635.

Several reasons could be cited for Modi's electoral victory, but the present study attempts to investigate the decisive roles that Twitter played in the run-up to the polls. Content analysing Twitter, this study attempts to theorize on its inferential and predictive abilities. As such, the primary aim of the present study is stated to be:

To describe: The present study intends to analyse and describe the political trend that prevailed on Twitter during the period of study—January 26 to May 12, 2014.

To predict: The present study also intends to establish Twitter trend as a predictor variable by correlating it with the election results.

Twitter and its political roles have been widely studied. Some of them are reviewed and their results are presented below.

Sani and Zengeni (2010), who studied the 2008 Malaysian general elections, observed that the proliferation of social media had ramifications. The researchers noted that the Internet was a conduit for alternative information and democratic values because it helped people to evade the intrusive force of censorship. It increased transparency by facilitating the flow of information about government and promoted democracy, they observed. It also opened up the space for the Malaysian citizens to deliberate political issues and gave the opportunities for the Opposition to utilise in influencing the election result. With the policy of free cyberspace, the social media has huge potential to strengthen the democratisation process and democracy.

As Barclay, et al. (2014; 2015a and 2015b) demonstrated in their studies, social media reflected public mood prevailing at a given time and can be used as an efficient research tool to gauge public mood and opinion on political issues.

Social media turned out to be an alternative to the traditional media as a source of instant information. Furthermore, they have become a platform where

personal opinions on issues could be shared or broadcasted to a wider section of people, a facility that the traditional media do not offer in an efficient way. As people started to post political messages on social media platforms during the 2014 elections, they became ideal research tools.

1.1. Mood, Emotion and Opinion Mining

Twitter is used for various purposes from daily chatter to information sharing and news commentary. Regardless of their content and intended use, tweets often convey pertinent information about their authors' mood status. As such, tweets can be regarded as temporally-authentic microscopic instantiations of public mood state (Bollen, et al., 2011). Bollen showed that events in the social, political, cultural and economic spheres do have a significant, immediate and highly specific effect on the various dimensions of public mood, which can be deduced by analysing Twitter chats. The researchers also speculated that large scale analyses of mood can provide a solid platform to model collective emotive trends and make predictions.

Sentiment analysis, also called opinion mining, is the field of study that analyses people's opinions, sentiments, evaluations, appraisals, attitudes, and emotions towards entities (Liu, 2012). Both the terms sentiment analysis (Nasukawa and Yi) and opinion mining (Dave, Lawrence and Pennock) perhaps first appeared in 2003. Researches on sentiments and opinions, however, had appeared earlier (Das and Chen, 2001; Morinaga et al., 2002; Pang, Lee and Vaithyanathan, 2002; Turney, 2002; Wiebe, 2000). Sentiment analysis and opinion mining mainly focuses on opinions which express or imply positive or negative sentiments (Liu, 2012). Although linguistics and natural language processing have a long history, very little research had been done about opinions and sentiments before 2000. But after the advent of social media, sentiment analysis has become a fascinating field of research, gaining the attention of the media and academicians. But the field offers many challenging research problems, which had never been studied before (Liu, 2012). Thelwall, et al. (2011) observed that an analysis of Twitter gave insights into why particular events resonate with the population. They analysed Twitter sentiments to gauge the popularity of events among the masses.

Opinions and feelings expressed on social media platforms by diverse groups of people can be mined at low cost, and the mined attributes and contents could give an opportunity to discover social structure characteristics,

analyse action patterns qualitatively, and predict future events (Yu and Kak, 2012). Barbosa and Feng(2010) proposed an approach to automatically detect sentiments on Twitter from biased and noisy tweets. Bifet and Frank (2010) saw Twitter as a challenging new source of information for data mining techniques.

1.2 Predicting with Twitter

As social media content is user-generated, it should, in a way reflect public mood and sentiments prevailing at the given time (Barclay, et al., 2014). Several attempts had been made to predict the future with social media content. In 2010, Asur and Huberman ventured to predict the future with social media. In a content-analytic study, the researchers used the chatter from Twitter to forecast box-office revenues for movies. They built a simple model using the rate at which tweets were generated about particular topics and found that it outperformed market-based predictors. They further demonstrated how sentiments extracted from Twitter can be further utilised to improve the forecasting power of social media.

Bollen, et al. (2011) used Twitter mood to predict the stock market. The researchers measured collective mood states using large-scale Twitter feeds and found their correlation with the value of the Dow Jones Industrial Average over time. Their conclusion was that collective public mood as expressed on online platforms was an economic indicator and predictor.

Zhang, et al. (2011), too, reported that the stock market can be predicted with Twitter feeds. In their content analytical study of sentiments, they observed that checking on Twitter for emotional outbursts gives a predictor of how the stock market will be doing the next day. Bandari, et al., (2012) used Twitter to predict the popularity of news items with 84% accuracy. Yu and Kak (2012) discussed the realms which can be predicted with online social media

As people started using Twitter and Facebook for extensive political debate and discourse, especially during election times, it started gaining the attention of researchers and news organisations who viewed it critically worldwide. Some of them attempted to use these online social networking platforms to predict elections in different ways.

Tumasjan, et al. (2010) was one among the first to test the ability of social media in predicting election outcomes. They used the context of the German federal election to investigate whether Twitter is used as a forum for political deliberation and whether online messages on Twitter validly mirror offline political sentiment. They found that the mere number of messages mentioning a party reflected

the election result. Moreover, joint mentions of two parties were in line with real world political ties and coalitions. The researchers also found correlation between the tweets' political sentiment and positions of parties and politicians indicating that the content of Twitter messages plausibly reflected the offline political landscape. Bermingham and Smeaton (2011), Franch (2013) and Barclay, et al. (2014) also used Twitter and Facebook to track political sentiments and successfully predict election outcomes.

What makes Twitter an ideal tool for propaganda and political research. Using the micro-blogging website, anyone can instantly broadcast a message to the world with ease and without expense-a power hitherto rested only with the corporate media houses. It also helps a user to anonymously spread messages and avoid backlash. Reviewing the past studied, it can be noted that a handful of studies have attempted to predict election results with Twitter-mostly reporting positive results using basic statistical models and lacking theory.

Furthermore, time-that is an important aspect of communication-has been ignored in those studies. But the present study employs reliable methodologies to study the political trend on Twitter and track its shift over time to predict the election outcome.

2. Research Questions

At this stage, to bring in some focus to the study, the following research questions are asked:

RQ1. Which political leader is popular on Twitter and to what extent?

RQ2. Is there a shift in political popularity on Twitter during the study period?

RQ3. If yes, the shift is in favour of which leader and to what extent?

RQ4. Is Twitter popularity associated with the election results?

The political trend of Twitter can be estimated by counting the number of tweets (Twitter messages) posted on the parties and analyzing their political polarities.

2.1 Hypothesis Building

The present study aims to test the primary hypothesis that "Twitter's political trend can be a predictor of election results because it reflects public mood and/or affects the masses".

However, to verify this hypothesis a secondary hypothesis is formed: "More popularity on Twitter means more votes in the election".

Popularity can be defined in many ways. Even the number of mentions of a party name or its leader could be used to estimate popularity. But the present study is focused on studying latent content rather than manifest content as the former is considered more meaningful.

Popularity can be positive or negative. Hence the hypothesis is altered to form the tertiary hypothesis: "More positive popularity on Twitter means more votes in the election".

2.2 Research Hypothesis

More tweets on a party means more votes for that party in the election.

On Twitter, when preliminary tests were conducted before the start of the research, there were more tweets recorded on the politicians representing a party than the party itself. Hence, instead of the tweets on parties those on the leaders who are the faces of the contesting parties are analyzed. Hence, the above hypothesis is altered into:

More tweets on the representative of a party means more votes for that party in the election.

Tweets can be positive, negative or neutral. Hence, two more hypotheses are proposed to take into account the positive and negative tweets posted on Twitter:

More number of positive tweets on the representative of a party means more votes for that party in the election.

More number of positive tweets and comparatively lesser number of negative tweets on the representative of a party means more votes for that party in the election.

This hypothesis can be reduced into...

More positivity for the representative of a party on Twitter means more votes for that party in the election.

Taking time into account...

More increase in positivity for the representative of a party on Twitter means more votes for that party in the election.

3. Method of Research

For the content analysis of Twitter, tweets that had the mention of the terms 'Rahul', 'Modi' and 'Kejriwal' were collected on a daily-basis from January 26 till May 12, 2014- the period of study. The unit of analysis is a tweet. Each of these terms was chosen to represent one of the three parties considered for this study. A random sampling procedure was applied to choose the tweets for analysis. That is, using the search API of Twitter; tweets were mined at different random time periods during a day. For each of

the three terms, 500 tweets were collected and a sentiment analysis was performed on them to classify them as positive, negative or neutral. During the study period, tweets with the mention of the top political candidates were posted in the tens of thousands on a daily-basis, sometimes the number of valid tweets even crossing one-lakh mark. Since gathering and analyzing the multitude of political tweets generated during the election period would require massive storage capacity and sophisticated software leading to a steep hike in research cost, the researcher decided to rely on secondary data collected from Topsy. It provides the number of "valid" tweets generated on specific search terms for a limited period. Using this application, the volume of tweets posted on the three terms were found out. Then using the sentiment analysis performed, the number of positive and negative tweets posted on each of the three terms was calculated.

A common formula was applied to each of the tweets in this comparative study to mitigate any inherent bias in the data analysis.

3.1 Scoring Guidelines for Polarity

For tweets with the mention of each of the three terms, three categories were chosen for categorization—positive, negative and neutral. Being an analysis of latent content, the polarity of a tweet was determined using the judgment of the expert coders, who looked for adjectives and smileys among other indicators. Human coding is both the most preferred and tricky. On the brighter side, the coder would recognize sarcasm and context that a computer program may not. While dealing with an issue or controversy, if a tweet presented the view or statement of the candidate or the views that favor his party or the candidate, then the tweet was classified as positive for that candidate. In the case of multiple views, the dominant view was considered.

If a tweet was found to be damaging the image of that candidate, it was rated as negative. If a tweet was based on his political campaign, then it was classified as positive for him. Positive and negative statements were tracked to decide the polarity. Even if a tweet mentions more than one candidate, it was taken under the term under which it was sourced. A tweet that did not exhibit a perceivable political polarity was categorized as neutral.

Independent variables for Twitter are the terms which represent the parties and 'time', while the dependent variable is the political polarity of the tweets, which were measured in ratio points. Political trend of Twitter was tracked based on the number of positive and negative tweets posted under each of the search terms. Calculation was done daily to track the trend over time. For the

independent variable time, the unit of measurement was one day. Political trend of Twitter was calculated for the whole study period to conclude which party was popular on Twitter and to what extent. Political trend was determined using the positivity scores that is the difference between the number of positive and negative tweets on a single term.

The data were collected and analysed using Microsoft Excel spreadsheet and a portable version of the SPSS statistics software. For the time-series analyses, linear and quadratic regression models and SPSS Expert Modeler were employed.

3.2 Validity and Reliability

To ensure internal validity, the operational measures were set to match the concepts. To measure the political trend that prevails on Twitter, that is which party was favored on Twitter and to what extent, the unit of analysis chosen was a tweet. Both qualitative and quantitative approaches were employed to analyze latent content. The categories chosen to analyze and rate the tweet were mutually exclusive. An 'a priori' coding scheme describing all the measures was created and the scoring guidelines were served to the coders, who were trained with samples before the study period. Since a human coding method was employed, the meaning and content of the news items were better analyzed to estimate the political trend.

Cohen's κ was run to determine if there was agreement between two coders using a sample of 50 tweets. There was almost perfect agreement between the two coders, $\kappa = .832$ (Std. error .059), $p < .0005$. To improve inter-subjectivity, the two most popular online social media platforms were chosen. Further, an 'a priori' design was used to boost objectivity. All decisions on variables, their measurement, and coding rules were made before the observation began, because an inductive approach which measures variables after they have been observed leads to major biases and invalidity. The coding principles were already set and exploratory work was done before the final coding scheme was established for the content analysis. Besides, the coding principles were evenly applied to all the chosen three terms and the tweets sourced under them.

3.3 Scope and limitations

For the content analysis of Twitter, political tweets with the mention of the terms 'Rahul', 'Modi' and 'Kejriwal' were segregated and subjected to analysis. Each of these terms represents each one of three chosen parties. Before the actual study commenced and observations were made, a trial study was conducted to choose the terms. Various

terms were tried for each of the parties like 'Congress', 'BJP', 'Gandhi', 'Narendra', 'Arvind' 'Advani', 'Manmohan' so on and so forth. The idea was to find a term for each of the three parties chosen with the maximum number of hits. The more the number of mentions the more accurate the study will be. That way, the three terms were chosen. Other terms related to a party could also have been taken into consideration. But since the study stretches across months, it was unviable. However, through Google Search trends, too, it was observed that the party leaders were more popular than the parties and the chosen terms represented the parties better than others. The study period, January 26 to May 12, 2014, only represented part of the election campaign period. But it was long enough comprising 107 days and a crucial time to study the political trend on Twitter.

4. Findings

RQ1. Which political leader is popular on Twitter and to what extent?

Using Topsy, the volume of 'valid' tweets posted on the three chosen terms was recorded. The search terms used for Twitter analysis in this study are 'Rahul', 'Modi' and 'Kejriwal'. Further, to estimate the political trend on Twitter, a sentiment analysis was performed on samples of tweets with the mention of the three chosen terms mined from Twitter on a daily basis using the search API. The sentiment analysis segregates tweets as positive, negative and neutral, that is, identifies their political polarities. But only the percentages of positive and negative tweets are used for further analyses. The daily volume of tweets posted with the mention of the three chosen terms during the study period and the results of the sentiment analysis are presented in Table 1.

Using the volume of tweets with the mention of the three chosen terms 'Rahul', 'Modi' and 'Kejriwal', the popularity of the three parties BJP, the Congress and the AAP were deduced on Twitter. Besides, the results of the sentiment analysis as presented in Table 1 were also used to determine the political popularity on Twitter. Further, both the volume and polarity scores were multiplied and those scores were used to determine the Twitter political trend. Using the percentage scores of positive and negative tweets, the positivity scores were derived by subtracting the negative scores from the positive percentages. Since most of the positivity scores were negative, 100 was added to the scores to make them positive. To find if there was any significant difference among the parties with regard to the volume and positivity scores, one-way Anova tests were performed and the results are presented in Table 2.

Table 1: Daily Tweet Volume and Percentages of Political Polarity

DATE	MV	MP%	MN%	RV	RP%	RN%	KV	KP%	KN%
26/01/2014	14698	45.45	27.27	5967	59.46	8.11	13798	12.12	48.48
27/01/2014	33064	72.27	11.34	118841	62.65	25.29	12889	22.22	66.67
28/01/2014	21638	68.89	17.78	48289	63.08	33.85	9286	40.82	51.02
29/01/2014	19875	48.36	6.56	23107	18.18	61.36	10447	17.65	58.82
30/01/2014	13912	45.00	16.67	17612	64.71	21.18	12049	20.00	66.00
31/01/2014	15148	59.17	10.83	12698	32.73	49.09	20184	30.43	54.35
01/02/2014	17218	68.42	10.53	7572	66.67	21.30	11962	21.67	58.33
02/02/2014	13685	76.09	10.87	7216	16.67	71.43	7107	21.28	68.09
03/02/2014	25544	74.07	20.37	9594	60.00	36.00	11315	43.75	43.75
04/02/2014	14262	81.63	2.04	12501	59.57	25.53	15002	25.00	58.33
05/02/2014	27551	65.22	27.54	5263	15.38	76.92	6323	37.21	46.51
06/02/2014	15061	80.00	16.00	7441	36.92	61.54	7039	56.82	27.27
07/02/2014	16935	85.11	2.13	7677	44.00	50.00	13827	42.00	50.00
08/02/2014	22319	59.80	31.37	22319	53.03	28.79	6897	28.15	62.96
09/02/2014	29717	52.98	13.91	13869	61.33	24.00	14453	22.63	70.80
10/02/2014	32824	52.00	33.33	15348	33.33	39.13	16391	20.41	77.55
11/02/2014	35389	67.31	7.69	12961	10.45	29.85	19010	39.53	46.51
12/02/2014	32896	75.76	3.03	9504	59.38	21.88	11432	11.29	48.39
13/02/2014	22403	43.59	20.51	17279	23.19	31.88	12079	43.59	48.72
14/02/2014	22718	63.53	14.12	6838	53.75	20.00	17146	23.08	61.54
15/02/2014	19675	52.63	15.79	21454	62.00	24.00	42002	30.95	47.62
16/02/2014	33768	56.00	10.00	12929	30.00	28.00	20056	18.00	30.00
17/02/2014	20773	81.08	2.70	16221	36.59	53.66	22300	26.19	59.52
18/02/2014	33761	57.69	25.00	7028	151.06	74.47	12010	34.15	48.78
19/02/2014	26292	44.64	17.86	9853	27.45	31.37	10243	46.00	42.00
20/02/2014	23072	60.00	16.00	7326	18.00	60.00	6948	37.93	43.10
21/02/2014	26105	65.22	21.74	9936	29.73	54.05	11695	29.17	52.08
22/02/2014	35455	60.00	22.00	7695	144.90	71.43	10253	30.77	51.28
23/02/2014	39947	67.31	13.46	16899	17.54	38.60	18765	36.00	50.00
24/02/2014	24133	54.55	7.27	19025	53.33	51.11	12358	15.22	47.83
25/02/2014	7589	64.71	13.73	22378	6.00	38.00	24188	22.00	40.00
26/02/2014	6196	50.00	16.00	13012	50.00	32.00	28144	20.00	34.00
27/02/2014	6626	48.00	14.00	9460	8.00	30.00	41122	16.00	28.00
28/02/2014	7585	69.44	16.67	16033	70.21	36.17	25744	32.61	50.00
01/03/2014	12648	64.81	12.96	9028	80.00	36.00	31601	26.92	55.77

(Contd.)

DATE	MV	MP%	MN%	RV	RP%	RN%	KV	KP%	KN%
02/03/2014	20971	60.00	2.00	6305	14.00	30.00	44957	30.00	50.00
03/03/2014	9335	64.29	17.14	4321	52.27	27.27	27710	33.33	60.74
04/03/2014	22107	52.88	25.96	24070	32.69	59.62	30178	25.58	55.81
05/03/2014	51318	78.13	9.38	12096	92.06	7.94	51318	55.17	34.48
06/03/2014	45897	58.24	19.78	19549	51.72	34.48	47276	29.25	51.89
07/03/2014	64946	61.19	26.87	14338	24.69	71.60	57453	13.04	79.71
08/03/2014	28008	75.90	18.07	7418	48.08	42.31	49793	35.59	54.24
09/03/2014	43837	63.22	26.44	14814	54.17	35.83	38011	35.21	47.89
10/03/2014	26811	79.49	15.38	25805	14.93	83.58	32024	20.69	70.69
11/03/2014	24058	48.06	38.76	23493	68.81	30.28	44215	5.83	85.00
12/03/2014	51129	41.53	44.07	9485	24.76	60.95	28137	12.87	79.21
13/03/2014	49511	59.62	35.58	8164	29.82	65.79	26307	13.11	81.97
14/03/2014	61307	69.61	22.55	10299	22.32	69.64	38591	5.50	91.74
15/03/2014	73438	52.42	29.03	9994	9.60	74.40	26029	18.70	66.67
16/03/2014	55114	49.19	36.29	16323	21.21	54.55	44876	21.31	60.66
17/03/2014	53757	54.69	23.44	13825	15.22	61.59	18230	6.61	83.47
18/03/2014	59866	59.71	18.71	10199	23.08	56.92	16889	14.60	69.34
19/03/2014	46326	55.91	25.98	11701	21.43	59.52	17614	20.97	60.48
20/03/2014	41500	59.52	21.43	10091	36.73	42.86	10828	19.20	64.00
21/03/2014	42597	59.63	21.10	8000	45.81	42.58	10774	26.72	58.78
22/03/2014	61729	46.00	22.00	12094	28.00	40.00	13544	22.00	52.00
23/03/2014	700205	54.00	14.00	5456	18.00	50.00	11475	8.89	77.78
24/03/2014	86153	70.00	10.00	9117	22.00	32.00	31880	20.00	36.00
25/03/2014	99960	59.63	21.10	18815	45.81	42.58	53188	26.72	58.78
26/03/2014	95559	60.00	16.00	15063	20.00	48.00	33957	12.00	56.00
27/03/2014	68612	61.54	17.31	15654	41.38	37.93	17182	16.67	59.26
28/03/2014	66097	24.00	46.00	15637	6.00	32.00	16472	10.00	46.00
29/03/2014	67585	59.62	15.38	14312	38.46	32.31	11466	16.39	54.10
30/03/2014	60111	50.00	32.00	11466	8.00	68.00	12028	14.00	40.00
31/03/2014	70855	45.61	14.04	17842	52.38	19.05	18942	28.07	49.12
01/04/2014	65761	75.47	16.98	17537	55.56	36.11	10938	31.25	56.25
02/04/2014	78810	48.00	8.00	13356	14.00	62.00	8261	28.00	30.00
03/04/2014	76258	48.39	38.71	8379	33.33	21.21	23196	24.14	51.72
04/04/2014	71110	64.00	10.00	11287	20.00	54.00	11287	8.00	42.00
05/04/2014	65986	58.00	18.00	9864	6.00	64.00	25647	6.00	30.00
06/04/2014	60934	54.55	27.27	8629	64.29	17.14	30987	18.18	54.55

(Contd.)

DATE	MV	MP%	MN%	RV	RP%	RN%	KV	KP%	KN%
07/04/2014	56583	55.28	34.96	7137	21.15	73.08	34354	16.22	74.32
08/04/2014	66364	46.60	48.54	6681	19.61	68.63	50422	16.82	69.16
09/04/2014	90199	67.59	32.41	10363	40.59	53.47	13128	16.51	79.82
10/04/2014	88044	43.55	53.23	15829	30.43	62.61	13979	18.52	66.67
11/04/2014	78901	55.65	39.13	38104	18.52	70.37	12726	34.34	63.64
12/04/2014	121291	58.82	32.35	38104	10.68	85.44	12971	22.00	60.00
13/04/2014	84513	68.22	24.30	18547	19.27	77.98	13899	32.08	65.09
14/04/2014	66308	44.63	50.41	21410	22.55	74.51	15202	22.77	73.27
15/04/2014	75063	37.14	48.57	17598	12.73	81.82	12772	14.56	70.87
16/04/2014	82920	65.66	30.30	12676	16.00	73.00	8943	20.91	71.82
17/04/2014	66537	64.86	30.63	11536	25.42	63.56	13776	33.66	63.37
18/04/2014	64778	63.11	28.16	11457	12.73	81.82	12769	49.06	32.08
19/04/2014	70349	62.75	34.31	10359	24.77	73.39	11368	34.31	60.78
20/04/2014	89921	69.90	27.18	12307	23.53	67.65	12421	27.93	68.47
21/04/2014	88656	34.69	61.22	14213	75.00	17.31	14375	80.00	17.78
22/04/2014	100573	51.02	34.69	13926	79.59	12.24	22723	5.00	32.50
23/04/2014	116449	51.72	41.38	9501	27.50	40.00	21197	42.11	52.63
24/04/2014	71334	68.00	20.00	10799	34.38	50.00	8793	31.03	55.17
25/04/2014	66698	62.16	21.62	21487	59.26	29.63	7541	23.08	61.54
26/04/2014	80413	44.44	31.11	21997	58.82	23.53	7532	18.33	61.67
27/04/2014	93534	59.26	33.33	18561	25.81	58.06	8232	40.79	51.32
28/04/2014	94695	58.70	21.74	13153	24.32	54.05	10042	22.50	50.00
29/04/2014	104227	52.63	42.11	11083	20.45	34.09	6515	37.70	40.98
30/04/2014	87240	44.44	26.67	12030	25.81	32.26	7169	26.15	55.38
01/05/2014	74216	50.00	36.84	12793	26.47	41.18	8615	28.57	61.90
02/05/2014	68559	71.21	22.73	19704	22.22	71.43	6287	44.44	53.70
03/05/2014	73428	65.57	26.23	21118	23.08	76.92	6144	39.19	54.05
04/05/2014	92304	60.61	21.21	25327	21.43	57.14	5968	36.21	43.10
05/05/2014	85531	62.50	25.00	28594	13.64	68.18	8379	31.82	50.00
06/05/2014	84248	66.04	32.08	41516	18.18	72.73	6418	42.19	54.69
07/05/2014	137553	74.07	18.52	27818	24.53	75.47	18218	43.14	49.02
08/05/2014	139059	70.00	28.00	24613	17.95	76.92	24382	31.03	51.72
09/05/2014	85310	67.31	28.85	34321	14.29	81.63	26123	48.21	44.64
10/05/2014	61119	61.29	16.13	32237	36.51	44.44	11610	30.00	43.33
11/05/2014	60487	60.00	17.14	12717	5.56	92.59	22903	36.84	52.63
12/05/2014	73945	72.73	16.36	12777	2.04	91.84	11502	10.87	76.09

Notes:

MV – Volume of tweets with the mention of 'modi'
 MP% - Percentage of 'modi' tweets with positive polarity
 MN% - Percentage of 'modi' tweets with negative polarity
 RV – Volume of tweets with the mention of 'rahul'
 RP% - Percentage of 'rahul' tweets with positive polarity
 RN% - Percentage of 'rahul' tweets with negative polarity
 KV – Volume of tweets with the mention of 'kejriwal'
 KP% - Percentage of 'kejriwal' tweets with positive polarity
 KN% - Percentage of 'kejriwal' tweets with negative polarity

There is a statistically significant difference among the three chosen parties with regard to the average volume of tweets posted on them each day during the period of study as determined by the one-way Anova ($F(2,320) = 115.35, p < .0005$), refer Table 2. A Tukey post-hoc test revealed that the volume of tweets posted on Narendra Modi was more than those that had the mention of Rahul Gandhi and ArvindKejriwa on Twitter. There was no statistically significant difference between the average volume of tweets posted on Rahul and Kejriwal.

Similarly, there was a significant difference among the parties with regard to the average daily positivity scores scored by them during the period of study as determined by the one-way Anova ($F(2,320) = 150.138, p < .0005$), refer Table 2. Modi scored more than Rahul and Kejriwal, with the latter scoring the least amount of positivity scores. When the volume and positivity scores were multiplied to take into consideration the volume and sentiments of the

tweets posted on the parties, there was a significant difference among the parties as determined by the one-way Anova ($F(2,320) = 180.372, p < .0005$). The average score of Narendra Modi was more than Rahul Gandhi and Arvind Kejriwal as presented in Table 3.

One-way Anova results have shown that Narendra Modi (BJP) was more popular on Twitter than Rahul Gandhi (Congress) and Arvind Kejriwal (AAP).

RQ2. Is there a shift in political popularity on Twitter during the study period?

RQ3.If yes, the shift is in favour of which leader and to what extent?

Using data gathered over the study period January 26 to May 12, 2014, time series analysis is performed to understand the political trend that prevailed on Twitter. In time-series analysis, the first step would be to plot the data, to acquire a basic understanding of the nature of the time-series and which models and type of analysis would best suit them. The daily volume of tweets is plotted in Figure 1, the daily positivity scores plus 100 is plotted in Figure 2, and the volume*positivity scores are plotted in Figure 3.

Analysing Figure 3, it is observed that the curves exhibit seasonal fluctuations hiding the underlying trend. Hence, all of the original curves are subjected to time-series analysis using the linear and quadratic regression models to find out the best fit.

For both the linear and quadratic curves for Modi, the F-Test significance is $< .0005$, which means that the variations observed did not occur due to chance.

Table 2: One-way Anova Results: Party vs. Volume, Positivity and Volume*Positivity

	Sum of Squares	df	Mean Square	F	Sig.
Volume	98135507954.71	2	49067753977.36	115.350	.000
Positivity	249980.90	2	124990.45	150.138	.000
Volume*positivity	2475095716825730	2	1237547858412870	180.372	.000

Table 3: Table of Means

	Volume		Positivity		Volume*positivity	
	Mean	Std. Error	Mean	Std. Error	Mean	Std. Error
Modi	54667.19	2988.10	136.48	1.95	7247261.71	396072.28
Rahul	16050.13	1241.27	86.33	3.83	1382019.15	162804.96
Kejriwal	19318.91	1207.10	71.18	2.20	1331889.89	94804.87
Total	30012.07	1507.40	98.00	2.24	3320390.25	212922.62

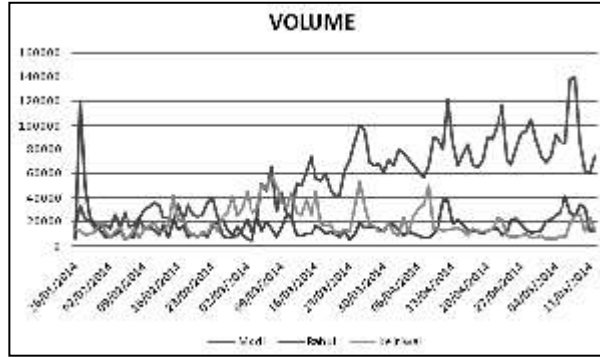


Figure 1. Time-series Plot for Tweet Volume

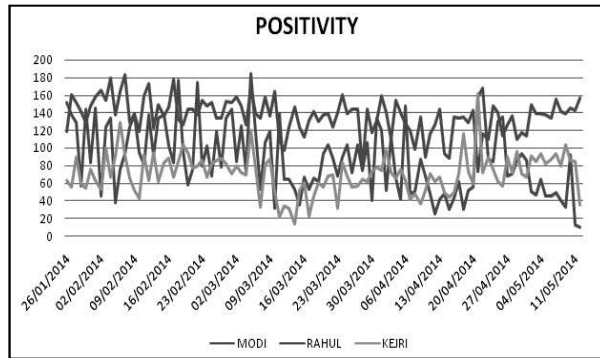


Figure 2. Time-series Plot for Daily Positivity Scores Plus 100

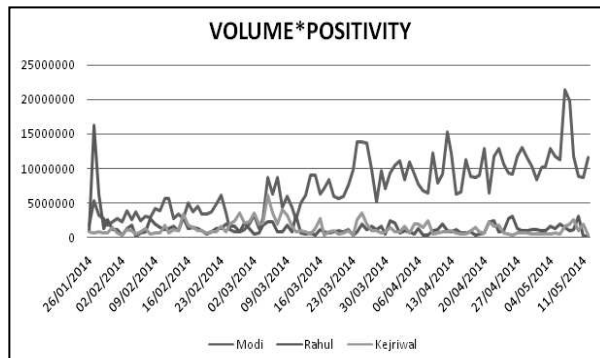


Figure 3. Time-series Plot for Volume*Positivity

Moreover, the R-Square value for both the curves is 0.626, which indicates exemplary fitness of the curves. However, a visual observation of the linear and quadratic plots would provide further insights (Figure 4).

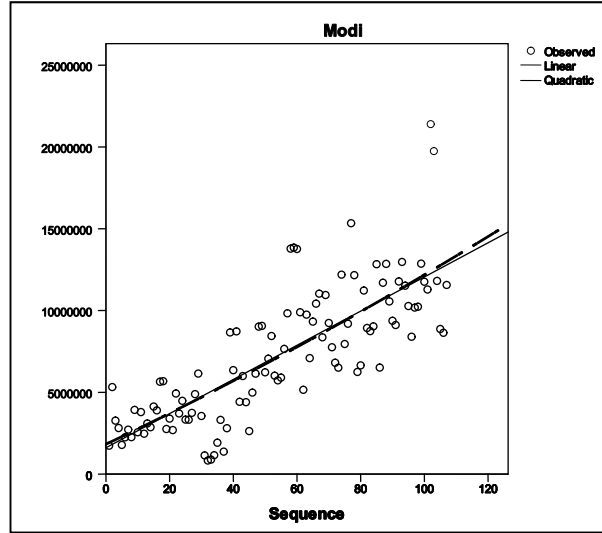


Figure 4. Time-series Plot for Linear and Quadratic Curves – Modi

Further, for both the linear and quadratic curves for Modi, the coefficients are positive, see table 4. The formula to build the linear curve is $Y_t = 1608327.715 + 104424.704 * t$ and for the quadratic curve is $Y_t = 1828244.579 + 92319.188 * t + 112.088 * t^2$, where $t = 1, 2, 3, \dots$

Observing the plots, it can be inferred that both the linear and quadratic curves fit the observed values. However, the quadratic curve has an edge over its linear counterpart as it accounts for the values spotted above the trend line in the first quarter. Using the linear plot as a reference for explanation, it can be stated that the quadratic curve exhibits a positive and upward trend.

For both the linear and quadratic curves for Rahul volume*positivity, the F-Test significance is $< .05$, which means that the variations observed did not occur due to chance (refer Table 5). Meanwhile, the R-Square value for the linear curve is 0.045 and the quadratic curve is 0.113, which indicates that the latter has a better fit.

Table 4. Curve Fit for Modi Volume*Positivity – Linear and Quadratic

Equation	Model Summary					Parameter Estimates		
	R Square	F	df1	df2	Sig.	Constant	b1	b2
Linear	.626	175.452	1	105	.000	1608327.715	104424.704	
Quadratic	.626	87.095	2	104	.000	1828244.579	92319.188	112.088

Table 5: Curve Fit for Rahul Volume*Positivity – Linear and Quadratic

Equation	Model Summary					Parameter Estimates		
	R Square	F	df1	df2	Sig.	Constant	b1	b2
Linear	.045	4.892	1	105	.029	2000325.347	-11450.115	
Quadratic	.113	6.655	2	104	.002	3012466.005	-67164.279	515.872

Table 6: Curve Fit for Kejriwal Volume*Positivity – Linear and Quadratic

Equation	Model Summary					Parameter Estimates		
	R Square	F	df1	df2	Sig.	Constant	b1	b2
Linear	.012	1.303	1	105	.256	1520846.347	-3499.194	
Quadratic	.089	5.089	2	104	.008	898480.646	30759.469	-317.210

However, a visual observation of the linear and quadratic plots, Figure 5, would provide further insights. Further, the linear curve for Rahul has a negative coefficient, predicting plain decline. But the quadratic curve exhibits a better fit accounting for the dip during the middle of the study and a rise towards the end, with a positive constant, negative linear arm and a positive quadratic arm. The formula to build the linear curve is $Y_t = 2000325.347 - 11450.115 * t$ and for the quadratic curve is $Y_t = 3012466.005 - 67164.279 * t + 515.872 * t^2$. Observing the plots, too, it can be inferred that the quadratic curve exhibits a better fit.

Using the linear plot as a reference for explanation, it can be stated that the quadratic curve exhibits a negative and downward trend at the start and later exhibits positive trend and bounces back at towards end period of the study.

Only the quadratic curve for Kejriwal is validated by the F-Test, significance = 0.008. (Table 6) Meanwhile, the R-Square value for the quadratic curves is 0.089. However, a visual observation of the linear and quadratic plots, Figure 6, would provide further insights. Further, the linear curve for Kejriwal has a negative coefficient. But the quadratic curve exhibits a more realistic fit-with a positive constant and linear arm and a negative quadratic equation. The formula to build the quadratic curve is $Y_t = 898480.646 + 30759.469 * t - 317.210 * t^2$, where $t = 1, 2, 3...$

Observing the plots, too, (Figure 6) it can be inferred that the quadratic curve exhibits a better fit, accounting for the declining values at the end. Using the linear plot as a reference for explanation, it can be stated that the quadratic curve exhibits a positive or upward trend at the start due to the positive constant and linear arm, which are over time overpowered by the quadratic decline and thereon the curve starts to level out indicating saturation.

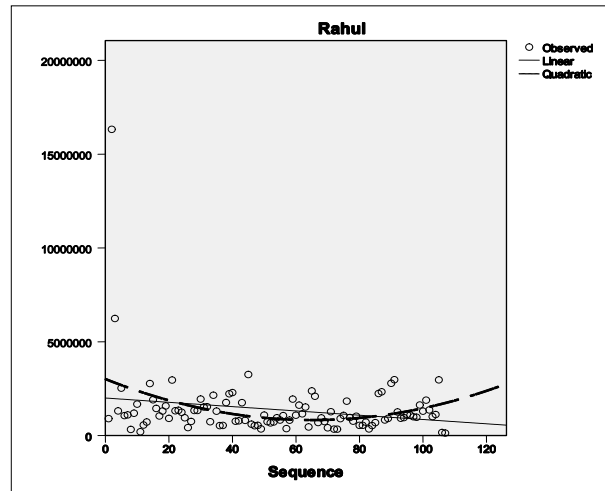


Figure 5. Time-series Plot for Linear and Quadratic Curves – INC Actual

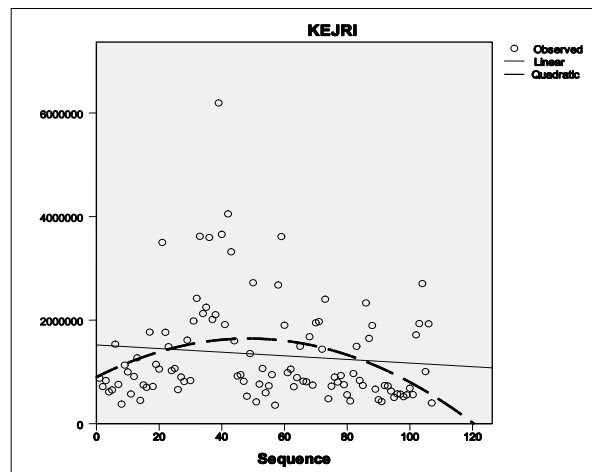


Figure 6. Time-series Plot for Linear and Quadratic Curves – Kejriwal Actual

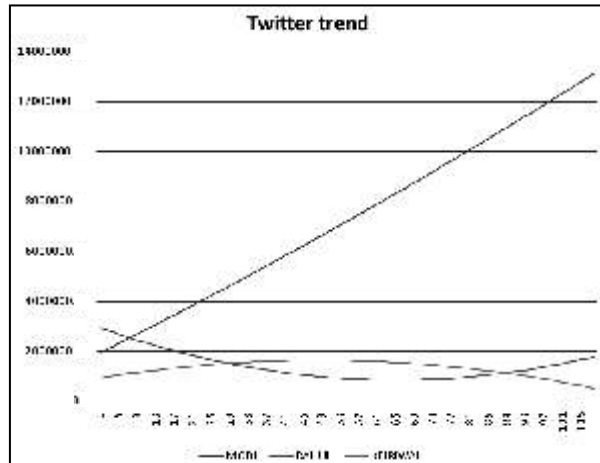


Figure 7. Plots for Quadratic Curves – Volume*Positivity

From Figure 7, it can be inferred that Narendra Modi maintains a lead. The quadratic models deduced from the daily volume*positivity scores are helpful in understanding the political trend on Twitter during the study period. Narendra Modi maintained a lead throughout the study period. While it was a decline in popularity for Kejriwal towards the end of the study period, for the Congress party, it was a rise over Kejriwal in April.

However, both the popularities of Kejriwal and Rahul Gandhi were subdued by the Modi phenomenon. With the help of time-series analysis, the political trend for the three chosen parties during the period of study is summarized in Table 7.

Table 7: Political Trend on Twitter

	BJP	CONGRESS	AAP
STARTING VALUE	1920675.86	2945817.60	928922.90
LOWEST	1920675.86	826346.60	520567.73
HIGHEST	13106112.58	2945817.60	1644083.68
ENDING VALUE	13106112.58	1775853.62	520567.73

The political trend on Twitter is defined here by the average of the starting and ending values of the three curves (BJP - 7513394.22; Congress - 2360835.61 and AAP - 724745.315). Examining Table 7, it can be inferred that BJP was the most popular, followed by the Indian National Congress during the study period. The Aam Aadmi Party recorded the least amount of popularity on Twitter. This shows there was a shift in political popularity on Twitter during the study period and that the shift was in favor of the

Opposition BJP.

RQ4. Is Twitter popularity associated with the election results?

The total party-wise volume of tweets, the overall positivity scores recorded during the period of study and the time-series analysis results are used to find an association between Twitter political trends and election results, see Table 8.

To measure the strength and direction of association that exists between Twitter's trends and elections results, Spearman's rank-order correlation coefficient was calculated and the test results are presented in Table 9. The coefficients will provide a nonparametric measure of association between the political trends on Twitter and poll results, and will be used to test the hypothesis that Twitter popularity is positively associated with election results.

A Spearman's rank-order correlation was run to determine the relationship between the political trends on Twitter and election results. There was a strong, positive correlation between them, which was statistically significant ($r_s = 1.000$, $p < .01$). There is no significant rank-correlation between the volume of tweets and election results. Therefore, the hypothesis that more tweets on the representative of a party means more votes for that party in the election is not tenable.

But the election result has a statistically significant and strong rank correlation with the positivity scores that the parties secured on Twitter, positivity*volume scores and the times-series analysis results. Hence, the hypothesis that more positivity for the representative of a party on Twitter means more votes for that party in the election is tenable. Similarly, the hypothesis that more increase in positivity for the representative of a party on Twitter means more votes for that party in the election is also tenable.

5 . Discussion

Going by the study results, it is evident that the political trend on Twitter during the election campaign period was highly in favor of the Opposition BJP. As many as 5,849,389 (60.72%) tweets were posted on Narendra Modi, who represents the BJP, while 1,717,364 (17.83%) were posted on Rahul Gandhi and 2,067,123 (21.46%) on Arvind Kejriwal. In the elections, the BJP secured 171,637,684 votes (59.21%), while the Congress bagged 106,935,311 votes (36.89%) and the AAP, 11,325,635 votes (3.91%). Though the volume trend was in line with the vote share of the BJP, it is not an able predictor of election results as shown by the Spearman's rank-correlation test ($\rho = 0.333$). Besides, it is merely quantitative.

Table 8: Political Trend on Twitters and Election Results

		Actual scores	Percentage
Volume	BJP	5849389	60.72
	Congress	1717364	17.83
	AAP	2067123	21.46
Positivity	BJP	14603.68	46.42
	Congress	9237.69	29.37
	AAP	7616.43	24.21
Volume*positivity	BJP	775457003.28	72.76
	Congress	147876049.40	13.87
	AAP	142512218.38	13.37
Time-series analysis results	BJP	7513394.22	70.89
	Congress	2360835.61	22.27
	AAP	724745.32	6.84
Election results	BJP	171637684	59.21
	Congress	106935311	36.89
	AAP	11325635	3.91

When positivity scores were derived based on the political polarities of the tweets and the political trend on Twitter was deduced using those positivity scores, a strong positive correlation was observed between the Twitter trend and

election results, denoting that Twitter trend can be a predictor of election outcome. It was a qualitative analysis of latent Twitter content. Multiplying the volume and positivity scores, the political trend was deduced and

Table 9: Spearman's Correlation Results: Twitter Trends vs. Election Results

			Volume	Positivity	Volpos	Time	Vote
Spearman's rho	Volume	Correlation Coefficient	1.000	.500	.500	.500	.500
		Sig. (1-tailed)	.	.333	.333	.333	.333
	Positivity	Correlation Coefficient	.500	1.000	1.000**	1.000**	1.000**
		Sig. (1-tailed)	.333	.	.	.	.
	Volpos	Correlation Coefficient	.500	1.000**	1.000	1.000**	1.000**
		Sig. (1-tailed)	.333	.	.	.	.
	Time	Correlation Coefficient	.500	1.000**	1.000**	1.000	1.000**
		Sig. (1-tailed)	.333	.	.	.	.
	Vote	Correlation Coefficient	.500	1.000**	1.000**	1.000**	1.000
		Sig. (1-tailed)	.333	.	.	.	.

** . Correlation is significant at the 0.01 level (1-tailed).

Volume —Volume of tweets on the chosen three terms;

Positivity – Overall positivity scores for the three parties;

Volpos—Volume*positivity; Time – Time-series analysis results; Vote – Election results

correlated with the election results. It is more meaningful as it employs both qualitative and quantitative paradigms. The political trend on Twitter that was estimated by multiplying the volume and positivity scores exhibited a strong rank correlation with the vote share of the parties, indicating that Twitter popularity can be used to predict election results, when both the volume and polarity of the tweets are taken into account. The BJP scored 775457003.28 (72.76%), while the Congress scored 147876049.40 (13.87%) and the AAP, 142512218.38 (13.37%).

The present study also considered time as an important factor. Since the volume and political polarities of the tweets were not stable and varied on a daily-basis, the study wanted to track the trend-that is the change in volume and polarities of the tweets on the chosen terms over time. Though the daily scores showed high amounts of seasonal fluctuations hiding the underlying trends, time-series analysis using linear and quadratic regression models was used to estimate the political shift over time. Time-series analysis results [BJP - 7513394.22 (70.89%); Congress - 2360835.61 (22.27%) and AAP - 724745.32 (6.84%)] had a perfect rank correlation with the election results. Hence it can be concluded that the political trend on Twitter, deduced by taking into account volume and political polarities of tweets and their shift over time, can be a pointer to election outcome-that is, it can predict the winner of the polls.

6 . Conclusion

Several past studies have predicted election results using Twitter content, but most of them lacked a theoretical framework and statistical significance. The present study provides a reliable statistical method to recognize political patterns of sentiments on Twitter and predict election outcome. As micro-blogging gains popularity in India, Twitter becomes a critical communications research tool to study public opinion. It provides a wealth of data and can be helpful in gaining insights into the mood and mindset of the masses-all free of cost. It is turning out to be a cost-effective alternative method of poll prediction, reaching the accuracy levels of traditional methods. But more importantly, what makes Twitter an able predictor?

Twitter is a media of mass communication. Its content is user-generated. Initial assumption that led to the hypothesis that Twitter's political trend can be a predictor of election results was that it (Twitter trend) reflects public mood and/or affects the masses. As the study has produced positive results that it indeed is a predictor, it

lends credence to the theory that Twitter trend reflects public mood and/or affects the masses. Twitter is both used for sharing content and gaining information. Hence, its political content should reflect the popular perception of the people. Furthermore, that popular perception is read by other users and it affects their political perceptions. Hence, Twitter content is both a pointer to the present mindset of the people and an indicator to future behavior of the electorate. This theory must hold good for other media of mass communication as well. However, Twitter should be a better political predictor than other mass media as its content is user-generated and readily available, free of cost.

As hundreds of thousands of political tweets were posted during the election period and read by millions of voters, Twitter has major political implications and has played a decisive role in the 2014 election. As the popular public opinion was in favor of the Opposition BJP, the political trend on Twitter could have had an impact on the voters inducing them to align towards the BJP as the election approached. A positive result correlating Twitter trends and election results lends credence to this theory. Furthermore, the Twitter political trend analysis shows that BJP's positivity was witnessing a steady rise as the election approached. This could be a result of the cumulative effect caused by the multitude of tweets posted in favor of the BJP.

With this, it can be concluded that Twitter, in India, has emerged as a major political tool for propaganda, opinion mining and poll prediction research. References

References

1. Asur, Sitaram and Bernardo, A. Huberman (2010). Predicting the future with social media. Web Intelligence and Intelligent Agent Technology (WI-IAT), 2010 IEEE/WIC/ACM International Conference, vol. 1, pp. 492-499. IEEE.
2. Bandari, Roja, Sitaram, Asur and Bernardo, A. Huberman (2012). The Pulse of News in Social Media: Forecasting Popularity. ICWSM.
3. Barbosa, Luciano and Junlan, Feng (2010). Robust sentiment detection on twitter from biased and noisy data. Proceedings of the 23rd International Conference on Computational Linguistics: Posters, 36-44. Association for Computational Linguistics.
4. Barclay, Francis P., Pichandy, Chinnsamy and Priyadarshni, Pichandy (2014). Political Opinion Expressed in Social Media and Election Outcomes – US Presidential Elections 2012. GSTF International

- Journal on Media & Communications (JMC), 1(2): 15-22.
5. Barclay, Francis P., C. Pichandy, Anusha Venkat and Sreedevi, Sudhakaran (2015a). India 2014: Facebook 'Like' as a Predictor of Election Outcomes. *Asian Journal of Political Science*, 23(1): 1-27. Routledge.
 6. Barclay, Francis P., C. Pichandy and Anusha, Venkat (2015b). India Elections 2014: Time-Lagged Correlation between Media Bias and Facebook Trend. *Global Journal of Human-Social Science: A; Arts & Humanities – Psychology*, 15(2):29-41. Global Journals Inc. (USA).
 7. Bermingham, Adam and Alan, F. Smeaton (2011). On using Twitter to monitor political sentiment and predict election results. *Proceedings of the Workshop on Sentiment Analysis where AI meets Psychology (SAAIP), IJCNLP 2011*, pages 2–10.
 8. Bifet, Albert and Eibe, Frank (2010). Sentiment knowledge discovery in twitter streaming data. *Discovery Science*, 1-15. Springer Berlin Heidelberg.
 9. Bollen, Johan, Huina, Mao and Alberto, Pepe (2011). Modeling public mood and emotion: Twitter sentiment and socio-economic phenomena. *Proceedings of the Fifth International AAAI Conference on Weblogs and Social Media*.
 10. Das, Sanjiv and Mike, Chen (2001). Yahoo! for Amazon: Extracting market sentiment from stock message boards. In *Proceedings of the Asia Pacific finance association annual conference (APFA)*, vol. 35, p. 43.
 11. Dave, Kushal, Steve, Lawrence and David, M. Pennock (2003). Mining the peanut gallery: Opinion extraction and semantic classification of product reviews. In *Proceedings of the 12th international conference on World Wide Web*, pp. 519-528. ACM.
 12. Franch, Fabio (2013). (Wisdom of the crowds) 2: 2010 UK election prediction with social media. *Journal of Information Technology & Politics*, 10(1): 57-71.
 13. Liu, Bing (2012). *Sentiment Analysis and Opinion Mining*. Morgan & Claypool Publishers.
 14. Morinaga, Satoshi, Kenji, Yamanishi, Kenji, Tateishi and Toshikazu, Fukushima (2002). Mining product reputations on the web. In *Proceedings of the eighth ACM SIGKDD international conference on Knowledge discovery and data mining*, pp. 341-349. ACM.
 15. Nasukawa, Tetsuya and Jeonghee, Yi. (2003). Sentiment analysis: Capturing favorability using natural language processing. In *Proceedings of the 2nd international conference on Knowledge capture*, pp. 70-77. ACM.
 16. NDTV (2013). Narendra Modi's contribution to BJP win: the big debate. NDTV.com. December 8. Retrieved March 27, 2014, from <http://www.ndtv.com/article/assembly-polls/narendra-modi-s-contribution-to-bjp-win-the-big-debate-456036>
 17. Pang, Bo, Lillian, Lee and Shivakumar, Vaithyanathan (2002). Thumbs up? sentiment classification using machine learning techniques. In *Proceedings of the ACL-02 conference on Empirical methods in natural language processing-Volume 10*, pp. 79-86. Association for Computational Linguistics.
 18. Pansare, Prashant (2014). How social media played game changer for election 2014 in the world's largest democracy. DNA. Published June 11. Retrieved June 13, from <http://www.dnaindia.com/blogs/post-how-social-media-played-game-changer-for-election-2014-in-the-world-s-largest-democracy-1994841>
 19. Patel, Aakar (2013). Congress and the Modi juggernaut. Deccan Chronicle. Published December 08. Retrieved February 11, 2014, from <http://www.deccanchronicle.com/131208/commentary-columnists/commentary/congress-and-modi-juggernaut>
 20. Sani, Mohd Azizuddin and Knocks, Tapiwa Zengeni (2010). Democratization in Malaysia: The impact of social media in the 2008 general election. 18th Biennial Conference of the Asian Studies Association of Australia, Adelaide.
 21. Swamy, Rohan (2014). Did Social Media Really Impact the Indian Elections? NDTV. May 20. Retrieved June 25, from <http://gadgets.ndtv.com/social-networking/features/did-social-media-really-impact-the-indian-elections-527425>
 22. Thane, Richard (2014). Twitter's India head: The people now have power. Quartz India. May 14. Retrieved June 25, from <http://qz.com/209158/twitters-india-head-the-people-now-have-power/>
 23. Thelwall, Mike, Kevan, Buckley and Georgios Paltoglou (2011). Sentiment in Twitter events. *Journal*

- of the American Society for Information Science and Technology 62(2): 406-418.
24. Tumasjan, Andranik, Timm, Oliver Sprenger, Philipp, G. Sandner and Isabell, M. Welppe (2010). Predicting Elections with Twitter: What 140 Characters Reveal about Political Sentiment. ICWSM 10: 178-185.
 25. Turney, Peter D. (2002). Thumbs up or thumbs down? semantic orientation applied to unsupervised classification of reviews. In Proceedings of the 40th annual meeting on association for computational linguistics, pp. 417-424. Association for Computational Linguistics.
 26. Wiebe, Janyce (2000). Learning subjective adjectives from corpora. In AAAI/IAAI, pp 735-740.
 27. Yu, Sheng and Subhash, Kak (2012). A survey of prediction using social media. arXiv preprint arXiv:1203.1647.
 28. Zhang, Xue, Hauke, Fuehres and Peter, A. Gloor (2011). Predicting stock market indicators through twitter 'I hope it is not as bad as I fear'. Procedia-Social and Behavioral Sciences 26: 55-62.

Role of Media in Capacity Building of Women Panchayath Members: A Case Study of Bengaluru Urban District*

Mamatha K.N.**
Prof. Onkargouda Kakade***

ABSTRACT

The Constitution of India has provided a legal space for women to participate in the process of decentralization through the 73rd Amendment with 33% reservation. Women are actively participating in the process by utilizing their space in the political sphere. But, women in India still lack education and skills and there is a considerable economic dependency on men in the rural areas. The existence of patriarchy in the society has posted control over women by limiting her active participation in the process of decision making. Government of India has taken measures to improve the performance and build the capacity among elected women members through various projects. Various strategies have been used to improve the political awareness and rights among women representatives. In due course, media is also playing a sensitive role in capacity building of Panchayath Members. Coverage of Panchayath issues by media has sensitized alertness and it has helped women to improve their skills required to perform as panchayath members. With this background the present study is an attempt to analyze the role of media in capacity building and which media is reaching and influencing women members to perform their role effectively. The primary data was collected by surveying 60 panchayath women members. The study reveals that TV is supporting them to build their capacity in their day to day work.

Key Words: Panchayath, Women Panchayath Members, Capacity building, Media

1. Introduction

The 73rd Constitutional Amendment 1993 of India has created a vibrant space to intensify the democratization at grass root level in the country. The Amendment focuses on encouraging economic development and promoting social justice through Panchayati Raj Institutions. To implement the respective programmes and policies of the government, considerable measures have been taken to reach out the targeted mass through various programs and projects. In order to build the required capacity among elected members of Panchayath, both Central and State governments conduct training programmes on regular basis. Capacity building is an ongoing process in the PRI system to emphasize the quality.

In a broader sense, capacity building means any facilitating scheme for the effective implementation of this

protocol, in particular the strengthening and/or development of trained human resources and institutional capacities in terms of techniques and skills necessary to carry out the assessment and management of risks associated with living modified organisms or products thereof, and to implement the procedure of advance informed agreement.

Ministry of Rural Development gives emphasis on capacity building of rural development functionaries and other stakeholders to enhance the effectiveness of implementation of various rural development programs across the different regions in the country. Further, action research and research activities are also undertaken to accomplish the task of assessing the grass-root realities, trends of rural development, impact of rural development programs and related issues. Ministry of Rural

* The paper was presented at National Conference on Human Rights: Dalit Women Rights and Gender Sensitization, Jointly Organized by Department of Political Science and Directorate of SC/ST, Karnataka State Women's University, Vijayapura – 586 108.

** Junior Research Fellow, Dept. of Journalism and Mass Communication, Karnataka, Women's University, Vijayapur.

*** Chairperson, Dept. of Journalism and Mass Communication, Karnataka, Women's University, Vijayapur.

Development has an autonomous apex training institution, National Institute of Rural Development (NIRD), Hyderabad for enabling capacity development of various stakeholders including elected representatives of Panchayati Raj Institutions (PRIs) and rural development functionaries, bankers, CBOs, and functionaries of various development departments. State Institutes of Rural Development (SIRDs) and Extension Training Centres (ETCs) of the States are also actively involved in this endeavor.²

Other than Government set Institutions there are many independent organizations which are continuously working to empower women on skills and knowledge. Training, Workshops, Documentary Screening, Street Plays and Film Shows are the major tools used to impart information. It has been observed that reaching the groups through media is most effective and easy to arrive at the goal. Irrespective of all these, media has a participatory role in strengthening the capacity of women Panchayath members in all aspects. This study is an attempt to identify the role of media in capacity building of Women Panchayath Members.

2. Review of Literature

Review of literature helps in constructing a broader understanding on the selected topic and building the perceptive. Following are some of the literature review which supports the study and tries to structure out perspective on different grounds.

Anonymous: It has been reported that building the capacities of women's collectives has contributed immensely in developing leadership qualities among them. While the focus of most of the interventions was on building the capacities of EWRs, interventions also need to be scaled up to develop the capacities and skills of women's collectives and women leaders. This will ensure that the collectives form a support structure for EWRs and contribute to women's agency and their participation in governance structures.

Anonymous: It has been suggested to use mobile to provide training content through SD/Mini SD/Micro SD/Flash memory cards on demand basis to allow them to use whenever they have time. Further, it has also suggested using e-learning concept and Multimedia effectively to pass on the information immediately.

It has been observed that not much research is done on this subject. There are reports and articles on how training is being given and its impact but there are no specific studies related to role played by media in the whole process.

3. Objectives

Numerous methods and tools have been used in capacity building among elected women members since the inception of Panchayath Raj as an Institute. Media being the strongest channel to inform and educate people of different strata it is important to know and find out if the media is playing an imperative role in addressing the issues related to Panchayath and capacity building among women members. Thus, the study entitled 'The Role of Media in Capacity Building of Women Panchayath Members' has been taken with the following objectives:

- (i) To study the socio personal characteristics of Women Panchayath Members.
- (ii) To find out the media habits among Women Panchayath Members.
- (iii) To know the role of media in capacity building among Women Panchayath Members.
- (iv) To study the sources of information of Women Panchayath Members.

4. Research Design

Multi stage sampling method has been used to select the sample. Bengaluru Urban District has been selected for the study wherein two Taluks as Anekal and Bangalore South are included in the sample. From each Taluk three Gram Panchayath and from each Gram Panchayath, ten women members are selected for the study. The primary data is collected from the respondents through personal interview with the help of questionnaire. A sample of 60 respondents has been taken for the present study. The Special Package for Social Sciences (SPSS) has been used to perform statistical analysis.

5. Findings and Discussion

The findings are presented in two parts. First part deals with awareness and the extent of usage of media by the respondents and the second part deals with the media content and its role in capacity building.

5.1 Media usage Habits of Respondents

Table 1 shows the age groups to which the respondents belong. It clearly shows that the majority 23 (38.3%) of the respondents belong to the age group of 36 – 45, followed by 21(35%) of the members belonged to 25 – 35 group that is a clear indication that lot of youngsters are showing interest in politics. Further, 14 (23.3%) respondents belong to the group of 46 – 55 and just 2 of the respondents were above 56.

Table 1: Distribution of Respondents by Age Group

Age Group	No. of Respondents	Percentage
25-35	21	35.0 %
36 – 45	23	38.3 %
46 – 55	14	23.3 %
Above 56	2	3.3 %
Total	60	100 %

The qualification of the respondents as given in Table 2, indicates that the majority 36 (60%) of them have completed just primary and secondary, followed by 12 (20%) of them have completed College, further just 6 (10%) of the respondents are Graduates and 6 (10%) of them are illiterates. It is very important to have qualified people in the Panchayath Institutions to reach out the goal and this would enhance the confidence of women to perform their role better without any support. The gradual increase in literacy rate of women has improved the participation of women in the local governance comparatively.

Table 2: Classification of Respondents by Qualification

Categories	No. of Respondents	Percentage
Illiterate	6	10 %
Primary and Secondary	36	60%
College	12	20 %
Under Graduation	6	10 %
Total	60	100 %

Table 3 shows access of the respondents to media. It is interesting to know that all the selected 60 (100%) respondents own both Television and Mobile, followed by 57 (95%) of the respondents subscribing newspaper. Further, 24 (40%) of them own radio and 8 (13.3%) of them have access to internet.

Table 3: Access of Respondents to Media

Media	Accessible by No. of Respondents	Percentage
TV	60	100 %
Newspaper	57	95 %
Radio	24	40 %
Mobile	60	100 %
Internet	8	13.3 %

Table 4 indicates the newspaper reading habit, frequency and categories of newspapers read by the respondents. Among the 60 respondents, 54 (90%) of them read newspaper and 6 (10 %) do not. The important observation here is that all the literate respondents have the habit of reading newspaper. Further, among 54 readers, 20 (37%) read regularly, 23 (42.6%) read occasionally and 11 (20.4 %) of them read it rarely. The last part of the table indicates the categories in which 54 (90%) of them read Political News, 30 (55.6 %) read Crime News, 45 (83.3%) read text (news) related to Cinema, 40 (74.1%) read Rural and Local News, 10 (18.5 %) read about Sports, 8 (14.8 %) read Human Interest Stories and 6 (11.1%) of read on Business related issues.

Table 4: Newspaper Reading Habit of Respondents

Reading	No. of Respondents	Percentage
Yes	54	90 %
No	6	10 %
Frequency		
Regularly	20	37 %
Occasionally	23	42.6 %
Rarely	11	20.4 %
Total	54	100 %
Categories		
Political News	54	100 %
Crime News	30	55.6 %
Cinema	45	83.3 %
Rural and Local News	40	74.1 %
Human Interest stories	8	14.8 %
Sports	10	18.5 %
Business	6	11.1 %

The table 5 indicates the TV Viewing Habits of the respondents. The first part shows that all the respondents i.e., 60 (100%) watch Television, and 50 (83.3 %) of them watch regularly and remaining 10 (16.7 %) watch occasionally. Further, with respect the categories, majority 54 (90%) and 53 (88.3%) of the respondents watch News and Soap Operas respectively, followed by 47 (78.3%) watch Songs, 45 (75 %) of them Religious programs, 26 (43.3%) of them watch Cinema, 21 (35 %) of them watch Reality Shows, and 5 (8.3 %) of the respondents watch Discussion and Agriculture Programs. This clearly shows that Television is a popular medium.

Table 5: Television Viewing Habit of Respondents

Viewing	No. of Respondents	Percentage
Yes	60	100 %
No	-	
Frequency		
Regularly	50	83.3%
Occasionally	10	16.7%
Rarely	-	-
Total	60	100 %
Categories		
News	53	88.3%
Crime	37	61.6%
Soap Opera	54	90%
Reality Shows	21	35%
Discussions	5	8.3%
Cinema	26	43.3%
Songs	47	78.3%
Sports	3	5%
Religious	45	75%
Science and Tech	2	3.3%
Agriculture	5	8.3%

Table 6 reveals the Radio Listening Habits of the respondents. 26 (43.3%) of the total respondents listen to Radio and 17 (65.3%) of them listen regularly and 9 (34.7%) listen to it occasionally. It is very important to note that 21 (80.7%) of the respondents listen to Filmy Songs and 2 (9.5%) of them listen to News. Private FM stations are the reason behind this as these stations are given license just for entertainment. The listeners of Aakashvani that airs highly informative programs related to developmental and social issues are rare.

Table 7 indicates the Mobile usage among respondents. The first segment of the table indicates that all the respondents use mobile, and 37 (61.7%) of the respondents use it regularly and 23 (38.3%) use occasionally. The last section of the Table specifies the purpose for which mobile is used. All the 60 (100%) respondents said that they use mobile to talk to relatives and friends that is quite natural. While 43 (71.7%) use it to talk to officers, 24 (40%) of them use it to listen to Public Problems, and 21 (35%) of them use it to obtain important information. It signifies that mobile is used widely and for

Table 6: Radio Listening Habits of Respondents

	No. of Respondents	Percentage
Yes	26	43.3%
No	34	56.7%
Frequency		
Regularly	17	65.3%
Occasionally	9	34.7%
Rarely	-	-
Total	26	100%
Categories		
News	2	9.5%
Regional News	-	-
Discussion	-	-
Agriculture	-	-
Drama	-	-
Chintana	-	-
Yuva Program	-	-
Children's Program	-	-
Interview	-	-
Folk songs	-	-
Filmy songs	21	80.7%

Table 7: Mobile Usage among Respondents

Usage	No. of Respondents	Percentage
Yes	60	100%
No	-	-
Frequency		
Regularly	37	61.7%
Occasionally	23	38.3%
Rarely	-	-
Total	60	100%
Purpose		
Talk to relatives and friends	60	100%
To listen to Public Problems	24	40.0%
Talk to officers	43	71.7%
Get Information	21	35.0%

various purposes. This communication application has made the communication much easier comparatively and again, the concept of Globalization, Liberalization and Privatization has made dissemination of the information much faster. Most of the women get calls from the public regarding problems and this has allowed the members to talk to officers and get information on various matters related to Panchayath Raj.

Table 8 indicates the usage of Internet among respondents. It may be noted that just 5 (8.3 %) of the respondents use Internet, and 2 (40%) of them use regularly and 3 (60 %) of them use it occasionally. Further, all the 5 (100 %) respondents said that they use Internet to get information, followed by 4 (80%) who use it for entertainment and 3 (60%) use it to share information. Though there is lot of technological development, still women are away from the technology. Women are yet to learn and use Internet but among those who use opine that it is very useful to get information immediately.

Table 8: Internet Usage among Respondents

Usage	No. of Respondents	Percentage
Yes	5	8.3
No	55	91.6
Frequency		
Regularly	2	40
Occasionally	3	60
Rarely	-	-
Total	5	100
Purpose		
To get information	5	100
Share information	3	60
Entertainment	4	80

5.2 Media Content and its Role in Capacity Building

The respondents were posed some questions related to the role of media in Capacity Building. Firstly, they were asked the media which gives them the required information related to Panchayath and contribute to their capacity building. 49 (94.2 %) of them said that Television gives them the required information followed by Newspaper with 44 (84.6 %), 5 (100%) of them said they get through Internet (Table 9).

Table 9: Media which gives the Required Information

Media	No. of Respondents	Percentage
TV	49	94.2
Newspaper	44	84.6
Radio	2	3.8
Internet	5	100

Further, the respondents were asked which media helps them to play an effective role as member. Majority 47 (90.4%) of them said Television helps to play an effective role followed by Newspaper with 39 (75 %), while 17 (32.7 %) of them said Mobile also helps them to perform. Among 5 Internet users, 4 (7.7%) of them said Internet also helps them. 2 (3.8 %) of the respondents said Radio, also helps them to perform their role (Table 10).

Table 10: Media Helping to Play Role as a Member

List of Media	No. of Respondents	Percentage
TV	47	90.4
Newspaper	39	75
Radio	2	3.8
Mobile	17	32.7
Internet	4	7.7

Table 11 indicates the media which gives more information about Rural Schemes. Noticeably, 48 (88.8%) of the respondents said it is Newspaper from which they get information about Rural Schemes followed by 45 (86.5%) who opined as Television. Further, 4 (80%) of them said that they get from Internet and 4 (7.7%) said from Radio.

Table 11: Information about Rural Schemes

Media	No. of Respondents	Percentage
TV	45	86.5
Newspaper	48	88.8
Radio	4	7.7
Internet	4	80

As would be noted from Table 12, 47 (90.4%) of the respondents said that they get information about Rural Problems through Television followed by Newspaper with 44 (84.6%), while 6 (11.5%) by radio, 5 (9.6%) from Mobile and 3 (60%) said through Internet.

Table 12: Information about Rural Problems

Media	No. of Respondents	Percentage
TV	47	90.4
Newspaper	44	84.6
Radio	6	11.5
Mobile	5	9.6
Internet	3	60

Further, the respondents were asked which media has influenced them to increase their Administrative and Communication Skills. 48 (92.3%) of them said it is Television, 41 (78.8%) said through Newspaper and 32 (61.5%) said it is through Mobile, while none of the respondent mentioned Radio or Internet (Table 13).

Table 13: Administrative and Communication Skills

Media	No. of Respondents	Percentage
TV	48	92.3
Newspaper	41	78.8
Radio	-	-
Mobile	32	61.5
Internet	-	-

The respondents were asked about Political Awareness. 49 (94.2%) of them said they get Political Awareness from Television, 42 (80.8%) said Newspaper, 4 (80%) of these Internet users said Internet, and no respondent mentioned Radio (Table 14).

Table 14: Political Awareness

Media	No. of Respondents	Percentage
TV	49	94.2
Newspaper	42	80.8
Radio	-	-
Internet	4	80

The respondents were also asked about Social Awareness. Over and again majority 47 (90.4%) of the respondents said that Television creates Social Awareness, 42 (80.8%) of them said Newspaper and 2 (40%) of them said through Internet. No respondent opted for Radio (Table 15).

Table 15: Social Awareness

Media	No. of Respondents	Percentage
TV	47	90.4
Newspaper	42	80.8
Radio	-	-
Internet	2	40

The respondents were asked through which media they get information about Rights and Duties of a Member. Majority 47 (90.4%) said through Television, followed by 41 (78.8%) through Newspaper and 1 (1.9%) of the respondent said through Radio and 5 (100%) of them said through Internet (Table 16).

Table 16: Rights and Duties of a Member

Media	No. of Respondents	Percentage
TV	47	90.4
Newspaper	41	78.8
Radio	1	1.9
Internet	5	100

Furthermore, the respondents were asked which media has improved their overall Personality. 45 (86.5%) of the respondents said Television followed by 34 (65.4%) Newspaper, 4 (66.6%) said Internet and just 3 (5.8%) said Radio (Table 17).

Table 17: Improve overall Personality

Media	No. of Respondents	Percentage
TV	45	86.5
Newspaper	34	65.4
Radio	3	5.8
Internet	4	80

The respondents were asked about their Source of Information. From Table 18, it would be noted that majority 52 (98.1%) of the respondents said that their Source of Information is Officer. Followed by 47 (90.4%) Television, 42 (80.8%) said Trainings, 41 (78.8%) said Newspaper, 17 (32.7%) said Mobile, 5 (100%) said Internet and 5 (9.4%) said Radio. Very important thing to notice here is the main Source of Information for the Members is Officers, Television, Training and Newspaper. It is very obvious to keep Training and Officers as Source of Information by Members as their mere job is to empower and build required capacity to discharge the duties as a member of local governance. However, media being a social catalyst, it plays a very crucial role in capacity building of Women Panchayath Members.

Table 18: Sources of Information

Media	No. of Respondents	Percentage
TV	47	90.4
Newspaper	41	78.8
Radio	5	9.4
Mobile	17	32.7

Internet	5	83.3
Training	42	80.8
Officers	52	98.1

6. Conclusion

It is evident from the overall study that media has a very significant role in Capacity Building among Women Panchayath members. The findings have clearly revealed that Television and Newspaper are the popular medium to get information apart from training officers. Very important thing to observe here is that there are just 5 members who use Internet and all have felt that Internet is very handy and immediate and it has been mentioned that it is their source of information which clearly indicates that in the future internet is going to be a highly used media. The increased exposure to the media is building the overall personality by influencing the very minute issues of any group or community of the society. There may not be clear cut or direct role to identity but the content of media as a whole triggers and influences the Panchayath Women Members to perform their duties effectively.

References

1. Dictionary [Available at http://dictionary.babylon.com/capacity_building]
2. Training and Capacity Building (2012). [<http://rural.nic.in/sites/downloads/programmes-schemes/Training%20and%20Capacity%20Building.pdf>]
3. Anonymous, Capacity Building of Elected Women Representatives and Functionaries of Pachayati Raj Institutions.
4. Anonymous, Capacity Building: Beyond NCBF (National Capacity Building Framework) [Available at: www.nird.org.in/brgf/doc/note%20on%20NCBF%20Rev3.doc]
5. Palanithurai, G. (2014), Role of Support Agency for Elected Women Representatives: A Narration of Two Decades Experience in Women Empowerment, Indian Journal of Public Administration, 490 / Vol. Lx, No. 3.
6. Promoting women's Political Leadership and Governance in India and South Asia [<http://www.unwomensouthasia.org/>]

Digital Media and the Young: Need of Parental Mediation*

Dr. Rajesh Kumar**

ABSTRACT

With increasing access and uses of internet enabled services in India, the social ramifications of the uses of these technological tools and services are at the center stage of discussion. Today, the internet driven new/digital media is not only an information resource or an entertainment tool but also a virtual platform or assembly forum of people. People form online groups to discuss issues, chat and socialize among themselves, anonymously at times. This may be enriching and convenient for social interactions, business & marketing, but certain age group, particularly the young between the age group of 14-18 years are vulnerable to such platforms. Parental mediation becomes important here. Parental monitoring may be for solicitation for better and beneficial uses, counseling and intervening in the use of technological tools and services to ensure the young one's online safety. This study puts an analysis of parental monitoring of internet driven new/digital media by the young. While referring to different studies and experiences around the world, an attempt has been made to explain the need for parental monitoring in internet uses by the young. The study concludes that the young users need some form of parental monitoring in their uses of new/digital media tools and services.

Key Words: Social media and youth, Parental monitoring, New/Digital media, Internet

1. Introduction

Today, the young (age 14-18 years) grow in a media rich environment and use of internet enabled new/digital media is very much a part of their lives while they grow. These kids born after 1990 grew in the laps of ICT driven media environment. Palfrey and Gasser (2008) call them 'Digital natives'. They attribute their arrival to the human civilization at the time when social digital technologies such as Usenet and bulletin board systems came online. The 'digital natives' have access to networked digital technologies and they possess innate ability to use them. Teenagers are connected to one another by a common major cultural aspect of their lives --- social interactions, friendships and their social activities are mediated by digital technologies. They have created a 24x7 network that blends the human beings with the technology to a degree never experienced before. It is perhaps transforming human relationships in fundamental ways.

Proponents of digital media may argue that it helps to express opinion over issues, helps bridge down the geographical distance and connect with people on social networking platforms and fora. Yet, it goes without saying that there are possible threats as well. Berg and Leenes (2011: 211-232) opine that social network sites lack a common mechanism used by individuals in everyday interactions to manage the impressions they leave on others and protect their privacy/audience segregation. The lack of this mechanism significantly affects the level of users and control over their self-presentation in social network sites. They emphasize that audience segregation is not only important in real life, but vital, yet currently undervalued and overlooked for the protection of one's self images and privacy in social network sites. Having such observations, one might ask what possible measures could be taken to ensure welfare of one's children. Parental intervention in some form is imperative.

* This paper is based on the report of a major project of this author sponsored by Indian Council of Social Science Research (ICSSR), N. Delhi, India. Initial version of this paper has also been presented at an International seminar at IMS Noida, UP.

** Associate Prof., School of Communication, Doon University, Dehradun, Uttarakhand, India.

2. Parental Monitoring: Global Experiences

Parental mediation of children involves the regulation of children's internet use by parents in order to maximize benefits and in particular to minimize the negative impact of the internet on children. It has been identified that when mediating children's digital media uses, parents primarily favour social mediation over technical restrictions and restrictive rule making. While using social mediation they prefer talking about the children's online activities subsequently by staying nearby or sitting next to children while they are online. And if they use technical restrictions filtering software is more popular than monitoring software. Also, when making rules on internet use, parents favour restrictive rules to instructive rules and more educated parents do not use technical software because they trust their children. However, less educated parents may not know how to use such softwares. Rules governing children's online activities are more guided by moral issues and economic reasons than by the awareness of which online activities carry which form of risk? Parents prefer multiple mediation strategies to single ones. Parental mediation depends upon parent's characteristics i.e. parental role, education, and internet use, for example, mothers engage in all types of parental mediation more than fathers (Livingstone and Helsper, 2007: 619-643; Livingstone and Helsper, 2008: 581-599). Also, Mendoza (2009: 28-41) examines three strategies of parental mediation-co-viewing, restrictive mediation, and active mediation-in order to make connections, challenge, and raise questions for media literacy. Co-viewing, whether it is intentional practice, or whether it functions to promote media literacy, is debated by Mendoza. Restrictive mediation, how it connects to protectionism, and whether restriction serves as a form of media literacy are also debated.

Having mentioned various parental mediation/intervention practices involved in the exercise to ensure the welfare of children, one must also look at it with the dimension of family involvement. As mothers engage themselves more in parental mediation, one question becomes pertinent. Is it the gender attribute only which plays a significant role in the mediation practices at home? To ensure the wellbeing of the children, there has to be an equal effort on the part of the parents. Furthermore, Lim & Soon (2010: 205-216) find that consistent with their counterparts in other countries, Chinese and Korean mothers played significant role in technology domestication because they typically ran the household; they were their children's primary caregivers and were thus

intensively involved in raising and nurturing them. Principally, they had some influence over product acquisition and were responsible for supervising the children's ICT use. Notably however, cultural conceptions of motherhood and maternal responsibility, the premium placed on academic achievement by children, as well as the two societies' highly positive outlook on technology greatly influence how Chinese and Korean mothers co-use and supervise their children's use of ICTs. Findings of this study also suggest the strengths and limitations of domestication theory when applied to Asian settings and the ever-changing media environment. When considering the family dynamics, we shouldn't leave aside the fears of children being bullied when not been assisted by their parents. Even if they are at home, there is a greater need for them to socialize with their peers. On several counts, this socialization may not same way we expect it to be. Patchin & Hinduja (2006: 148-169) find that many children have easy access to technological devices such as computers, Skype, cameras, the Internet, and cellular telephones. These technologies can be used for productive reasons, but have recently become a means for children to become bullies and use the technology to make threats against other children. Cyber bullying has become a serious problem, inflicting psychological, emotional, and social harm to many victims. Ybarra and Mitchell (2004: 1308-1316) found that 20-25 percent of offenders and victims used cigarettes or alcohol, and 50 percent of the victims or offenders reported that their parents poorly monitored their online activities.

3. Euro Barometer Studies

The Euro barometer can be considered as one of the rigorous and exhaustive research endeavors undertaken to investigate the mediation practices in European countries. Data from Euro barometer in 2008 on parents' awareness of risk issues regarding their children online activities confirms most findings from the EU Kids Online project but also raises new issues for some European countries. In Portugal (and other southern European countries), parents' concern regarding their children's online activities is now one of the highest in Europe.

There is apparently an intricate relation between perceptions, attitudes and actual practices when it comes to online activities and risks. As the Euro barometer points out, risk perception does not necessarily lead to the adoption of any specific measures, but that doesn't mean either that parents don't take any measures. Additionally, parents own internet experience seems to matter in their assessment of online risks (but not as clearly as one could

imagine) on what they actually do. Children's age also seems to play an important role in explaining not only parents' perceptions but also the way they seem to set rules or attempt different mediation strategies (Barbosa et al. 2011).

Results show that the presence of mediators varies according to the location of the child's use of the Internet, the household being the most frequent location of access. Despite the fact that one third of Brazilian children aged 5 to 9 use the Internet unsupervised, when he/she is not alone, the mother is supposed to be overseeing them. Results also reveal that household socio-economic status and mediation strategies are not independent variables. Brazilian parents favour social mediation strategies rather than technical ones. Furthermore, parents who use internet are more likely to be present during the child's Internet use, implying the importance of media literacy for parents. Public school teachers also perceive that their level of ICT skills are not up to the mark and this is a barrier for greater use of technologies in the school environment. This necessitates the importance of the promotion of media literacy among teachers also. Therefore, addressing issues related to media literacy among educators and parents is essential to promote a safe use of new interactive digital media.

4. Need of Parental Mediation: Studies and Findings

Extensive use of online communication elicits mixed reactions among adults. Scholars and practitioners have expressed concern that online communication leads to shallow relationships, and risks of online solicitation and cyber-bullying. In contrast, it has also been argued that online communication provides opportunities for identity exploration, access to social support and information, and the opportunity to develop meaningful relationship. Children and teens are frequent users of online communication. A study in the U.S. showed that 79 percent of youth aged 12 to 17 had sent messages to friends in the previous week using a social networking site, 69 percent had sent a text message, 56 percent had sent instant messages (IM) to friends, and 44 percent had sent E-mails. A study of 29 European countries found that 62 percent of children aged 9 to 16 use instant messaging, 11 percent write or read a weblog and 59 percent have a social networking profile. Online communication has become an integral part of the culture of children and youth. Its widespread diffusion is associated with the network effect, indicating that the extensive use of E-mail, instant messaging and social

networking sites by teens is a result of its diffusion through social networks (Mesch, 2013: 287-288).

Parents are under increasing pressure to monitor their children's online behavior and practices. This reflects a neoliberal regulatory regime that places the burden of protecting children on parents. Data protection legislations in some countries purports to give parents control by requiring web sites that target children to solicit parental consent before collecting, using and disclosing personal information from children (that is, less than 13 to 18 years of age, depending on the legal jurisdiction). This in effect creates a binary switch. Parents either consent or their children cannot participate in the online community. In addition, online companies have been active promoters of media education initiatives that promote parental surveillance. Companies like Microsoft, Google and Verizon routinely sponsor public education sites that link parents directly to monitoring software and urge them to use online filters and other technical controls to protect their children (Steeves, 2012: 356).

Recently, it has been reported that 21.3 percent Africans, 31.7 percent of Asians, 68.6 percent of Europeans, 84.9 percent of North Americans, 67.5 percent of Australians and 49.3 per cent of Latin Americans have access to the internet. And the world average stands at 39.0 per cent. Asia has the largest number of internet users and number of internet users in India ranks third in the world (Internet World Stats, 2013 Q4). In its original form, the internet looked very different from how it looks today. Rather than being a space where people could engage in social networking, date or surf the web, it was intended to be a tool via which data could be moved around more easily (Abela and Walker, 2013).

A study of 222 children in Korea by Lee & Chae (2007: 640-644) investigated the effect of four parental mediation techniques. Evaluative mediation measured as parents recommendation of web sites and co-use of the internet were related to children's use of the Internet for educational purposes. Restrictive mediation, such as time limits and web site restrictions was not related to the type of Internet use by the young.

Lwin, Stanaland and Miyazak (2008:205-217) emphasize that the online environment is potentially harmful to children of various ages, from preteens to older teens. Further, in a dismissive fashion, they reject any defense against this unsafe online environment. However, in their opinion this issue has received a significant attention in the popular press and from public policymakers; no academic research has examined how children react to proposed

website safeguards, and how parental mediation strategies may moderate those reactions. In their findings they identified two quasi-experimental studies which find definite evidence that, although website safeguards can be useful in curtailing the children's willingness to disclose personal identifying information in an online environment, the effectiveness of those safeguards is moderated by the type of parental mediation experienced by the child.

Whatever the negative effects of media on children, they can be mitigated, and perhaps even redirected to become positive changes, through positive interaction and dialogue in the home. Such parental mediation, as it is called, can take any of three general forms. Active mediation involves talking with children about the media. This mediation may be either positive (e.g., endorsement of content) or negative (e.g., criticism of content). It may be fully intended as mediation (strategic mediation) or thought of by those doing it only as incidental conversation (non-strategic mediation). Restrictive mediation involves setting rules and limits on media use or screen time, a strategy used by most parents, at least occasionally. This could come in the form of preventing viewing certain programs, websites, or disallowing media use outside certain allowed hours. In other families, it takes the form of limits on overall TV/Media viewing or screen time. The final form of parental mediation is co-viewing, that is, watching television/media content with children. Most scholars agree that co-viewing TV with young children is very helpful, though admittedly not always realistic, especially as the child grows older (Harris and Sanborn, 2013).

There exist differences in mediation practices among different countries. A study on parental mediation shows those parents from Northern European countries such as Norway, Sweden, Denmark, Finland and the Netherlands to above average active mediation of use but below average restrictive mediation. Eastern European countries such as Lithuania, Estonia or Romania are characterized by below average active and restrictive mediation. Especially in Turkey, Austria, Italy and Belgium, parents do more restrictive mediation and less active mediation than the European average. High active and high restrictive mediation is characteristic of some Southern European countries (such as Portugal, Spain and Greece) and is also found in big European countries - France, Germany and the UK (Duerager and Livingstone, 2012).

While considering the development of the child vis-à-vis the concern of their development in the context of their ICT and Internet usage, we must look at the micro systems in

which our children are growing. Johnson (2010) argues that the presence of digital technologies in children's immediate environments is increasing day by day and these environments are rooted in our homes, schools and communities. She further suggests the need for an ecological techno-micro system. The ecological techno-micro system situates the developing child in the context of Internet use in home, school, and community environments. In her empirical study, she finds that these techno elements are a part of our everyday use and reality. She notes down the concept of Ecological systems theory (Bronfenbrenner, 1977: 513-531) which was developed much before the arrival of the Internet, dealt with the then available technology i.e. Television, and situates it in the context of the modern technological tools and devices ordinarily found in our households. Her empirical findings suggest that as children's age and grade increased, Internet use tended to increase; correlation strength was strongest for school-based Internet use. Johnson (2010) further establishes that emotional development and physical development were not related to any type of Internet use in any context (i.e., home, school, or community). However, her findings also indicate that cognitive development as rated by teachers was found related to Internet use at home and exchanging emails and visiting websites at school. Findings were significant correlations between specific uses of the Internet in specific contexts and specific measures of child development and thus support the theoretical utility of the ecological techno-microsystem. The developmental consequences of Internet use varied as a function of elements of the microsystem (e.g., home and school characteristics) and elements of the technology (e.g., instant messaging versus email).

Leung and Lee (2011: 1-21) examined how demographics, addiction symptoms, information literacy, parenting styles and internet activities can predict 'internet risks'. Data were gathered from a probability sample of 718 adolescents and teenagers, aged 9-19 in Hong Kong, using face-to-face interviews. Their results showed that adolescents who are often targets of harassment tend to be older boys with a high family income. They are targets probably because they spend a lot of time on social networking sites (SNSs) and prefer the online setting. With respect to parenting styles, the findings referred above provide strong bivariate support for the hypotheses which predicted that stricter rules, more involvement and more mediation exercised by parents would be linked to children and adolescents being less targeted for harassment, suffering less from privacy risks, and being less likely to be

exposed to pornographic or violent content. The multivariate regression results indicate that strict parental rules, involvement, and mediation had no or few effects on suffering from harassment and privacy risks. This suggests that adolescents may or may not be the target of harassment and may be having private information solicited at home. They may be experiencing these risks in school or at friends' houses since the internet is a ubiquitous medium. Therefore, even if parents have the strictest rules and mediation in the use of the internet at home, adolescents may still be targets – neither parental supervision nor the use of filtering technology would decrease the solicitation risk. One interesting fact is that most teens today are often the household experts in computer use, which disrupted the parents' guiding role. Another sensitive concern most parents have is the easy access to pornographic and violent content online, which may present a tremendous negative impact on the psychological development of children and adolescents. Therefore, parents who exercise strict rules and provide guidance and mediation at home, generally reduce the seductive influence of pornography and violent content online.

Monitoring (tracking and surveillance) of children's behavior is considered an essential parenting skill. Numerous studies show that well-monitored youths are less involved in delinquency and other norm breaking behaviors, and scholars conclude that parents should track their children more carefully. Stattin and Kerr (2000: 1072-1085) point out that those monitoring measures typically assess parents' knowledge but not its source, and parents could get knowledge from their children's free disclosure of information as well as their own active surveillance efforts. In their study of 703 14-year-olds in central Sweden and their parents, parental knowledge came mainly from child disclosure, and child disclosure was the source of knowledge that was the most closely linked to broad and narrow measures of delinquency (norm breaking and police contact). These results held for both children's and parents' reports, for both sexes, and were independent of whether the children were exhibiting problem behavior or not. They however, conclude that tracking and surveillance is not the best prescription for parental behavior and that a new prescription must rest on an understanding of the factors that determine child disclosure.

Clark (2011: 323-43) describes the theory of parental mediation, which has evolved to consider how parents utilize interpersonal communication to mitigate the

negative effects that they believe communication media have on their children discussing the strengths and weaknesses of this theory as employed in the socio-psychologically rooted media effects literature as well as socio-cultural ethnographic research on family media uses concluding by suggesting that in addition to the strategies of active, restrictive, and co-viewing as parental mediation strategies, future research needs to consider the emergent strategy of participatory learning that involves parents and children interacting together with and through digital media.

In recent years, there has been increasing interest in the processes through which parents facilitate the development of their adolescent children. Jacobson and Crockett (2000) identify how parental monitoring ensures children's development and welfare. Through their empirical research, they support the association between parental monitoring and a variety of adjustment indicators such as grade point average, lower levels of adolescent depression, and lower levels of adolescent sexual activity and minor delinquency. For example, higher levels of parental monitoring have been associated with lower levels of adolescent depression and lower levels of adolescent sexual activity and minor delinquencies. In their empirical study, they identify that bivariate correlations indicate that parental monitoring has strong associations with all indicators of adjustment for both boys and girls, with a rare exception of boys' depression (Jacobson and Crockett, 2000: 65-97).

Bean et al. (2006) examined the relationships between adolescent functioning (i.e., self-esteem and academic achievement) and parental support, behavioral control, and psychological control in European American and African American adolescents. Hierarchical regression analysis indicated that supportive behaviors of African American mothers toward their adolescent children positively predicted both self-esteem and academic achievement. In addition, among European American adolescents, behavioral control was a significant predictor of academic achievement and self-esteem. This study provides support for the methodological value of examining the parenting dimensions independently as opposed to combining them to form parenting styles.

Media violence poses a threat to public health inasmuch as it leads to an increase in real-world violence and aggression. Research shows that fictional television and film violence contribute to both a short-term and a long-term increase in aggression and violence in young viewers (Huesmann and Taylor, 2006). Television news violence

also contributes to increased violence, principally in the form of imitative suicides and acts of aggression. Video games are clearly capable of producing an increase in aggression and violence in the short term, although no long-term longitudinal studies capable of demonstrating long-term effects have been conducted. The relationship between media violence and real-world violence and aggression is moderated by the nature of the media content and characteristics of and social influences on the individual exposed to that content. Still, the average overall size of the effect is large enough to place it in the category of known threats to public health.

Kimberly Young (1996:237-244) writes that anecdotal reports indicate that some on-line users are becoming addicted to the Internet in much the same way as others became addicted to drugs or alcohol which resulted in academic, social, and occupational impairment. However, there is no unanimity among the sociologists, psychologists, or psychiatrists upon addressing and identifying the addictive use of the internet as a problematic behavior. Her study investigated the existence of Internet addiction and the extent of problems caused by such potential misuse. Kimberly identifies 396 dependent internet users (Dependents) and a control group of 100 non-dependent internet users (Non Dependents) based upon the adapted version of the criteria for pathological gambling defined by the Diagnostic and Statistical Manual of Mental Disorders - Fourth Edition (DSM-IV; American Psychiatric Association, 1994); the qualitative analyses of this study suggests significant behavioral and functional differences in internet usage between the two groups.

5. Summary and Suggestions

It is evident from the study, research and experiences referred above that the young ones do need parental monitoring in some form in their ICT uses. The form and process of mediation may differ depending upon socio-cultural and demographic variations, but undoubtedly, it is the need of the time. This is so, particularly because the young children are vulnerable to content coming on this largely 'ungoverned' digital space; and they most often fail to understand how this content may impact them psychologically, socially and even culturally.

It is also required from parents that they remain honest and open in the conversations with their children about how cyber bullies attack others and why it is important that they (parents) stay involved to help them (young ones) in difficult situations. The parents should make it clear that these are the only reasons they will be monitoring their children's cell phones and social networking sites. The

parents must assure their children that they are not interested in their personal information, rather they need to be there in case their children get caught in a difficult online situation that they don't know how to handle. The parents' first thought when it comes to monitoring social media might be: "Watching over my child's shoulder is prying into their personal life and is none of my business". Therefore, it must be noted that the parents while monitoring should not become a cyber-stalker or a cell phone spy by going on their children's sites or by scrolling through their text messages without their knowledge. If they do so, they risk losing their children's trust in them, which could ruin their relationship forever. Instead, the parents should take the following measures to defend against online harassment and for better utilization of digital tools and services:

- i. First and foremost, the Indian parents should constantly update/upgrade their knowledge and skills about information and communication technology and services. It has been found in several studies that parents' limitations in this field are the biggest impediment in effective monitoring of their children.
- ii. Parents should set up a Google Alert for child's name and make sure to set the content filter to "strict" and include "all online searches".
- iii. They should regularly and openly monitor all social media accounts until their children are mature enough to socialize online without supervision.
- iv. They should see that their children obey the age limits that social networking sites have set for users.
- v. They should empower their children to Ignore/Block/Report.
- vi. Parents must understand that online image protection, damage control, and proactive content monitoring are parental obligation and responsibility.
- vii. Parents should be prepared to restrict mobile devices or Internet privileges when necessary.
- viii. Parents should not be sneaky when monitoring – be straight and honest about what they are doing and how they are doing it.
- ix. Parents should teach their children to have respect for other online users.
- x. Parents must advocate and attend school programs or any other such programs that provide education and awareness about ICT uses social media policies etc.

'Digital India' project planned by the present government of India aims to connect every citizen through broadband services, more so through Smart phones which is a gadget used in privacy and isolation. Though it is a highly commendable initiative, but it also makes parental monitoring and intervention in ICT uses by the young more challenging. This aspect of the newly emerging scenario must also be taken into consideration while empowering citizens with easy access to digital technology and services as envisioned in the 'Digital India' project.

References

1. Abela, A. and Walker, J. (Eds.) (2013). *Index, in Contemporary Issues in Family Studies: Global Perspectives on Partnerships, Parenting and Support in a Changing World*, John Wiley & Sons, Oxford. doi: 10.1002/9781118320990.index
2. Barbosa A.F., Canela, J., Cappi J. and Jereissati, T. (2011). *Brazilian Children And The Internet: Challenges In Mediation*. Available at: <http://www.lse.ac.uk/media@lse/research/EUKidsOnline/Conference%202011/Barbosa.pdf> (accessed on 28th February, 2014).
3. Bronfenbrenner, U. (1977). *Toward an experimental ecology of human development*. *American Psychologist*, 32: 513-531.
4. Berg, Van den B. & Leenes R.E. (2011). *Keeping up appearances: Audience segregation in social network sites*. In S. Gutwirth, Y. Pouillet, P. de Hert, & R. Leenes (Eds.), *Computers, privacy and data protection: An element of choice*. Dordrecht | Heidelberg: Springer. pp. 211-232.
5. Bean, R.A., Barber, B.K. and Crane, D.R. (2006). *Parental Support, Behavioural Control and Psychological control among African American youth*. *Journal of Family issue*, 27(10): 1335-1355.
6. Clark, L.S. (2011), *Parental Mediation Theory for the Digital Age*. *Communication Theory*, 21(4), pp.323-343.
7. Duerager, A. and Livingstone, S. (2012). *How can parents support children's internet safety?* Available at: <http://www.lse.ac.uk/media@lse/research/EUKidsOnline/EU%20Kids%2011/Reports/ParentalMediation.pdf>
8. Harris, R.J. and Sanborn, F.W. (2013), *A Cognitive Psychology of Mass Communication*. Routledge, NY.
9. Huesmann, L.R. and Taylor, L.D. (2006), *The Role of Media Violence in Violent Behavior*. Available at: <http://www.thepci.org/articles/The%20Role%20of%20Media%20Violence%20in%20Violent%20Behavior.pdf>
10. Internet World Statistics, 2013 Q4. Available at: <http://www.internetworldstats.com/stats.htm> (accessed on 1st August, 2014).
11. Jacobson, K.C. and Crockett, L.J. (2000), "Parental Monitoring and Adolescent Adjustment: An Ecological Perspective". Faculty Publications, Department of Psychology. Paper 231, *Journal of Research on Adolescence*, 10(1): 65-97, Lawrence Erlbaum Associates, Inc. Available at: <http://digitalcommons.unl.edu/cgi/viewcontent.cgi?article=1230&context=psychfacpub>
12. Johnson, J.M. (2010). *Internet Use and Child Development: The Techno-Microsystem*, *Australian Journal of Educational & Developmental Psychology*. Vol 10, pp.32-43. Available at: http://espace.library.curtin.edu.au/cgi-bin/espace.pdf?file=/2011/03/01/file_1/153133.
13. Lee, S. & Chae, Y. (2007). *Children's Internet use in a family context: Influence on family relationships and parental mediation*. *Cyber Psychology & Behavior*, 10, pp. 640-644.
14. Livingstone, S. and Helsper, E. (2008). *Parental mediation of children's Internet use*. *Journal of Broadcasting & Electronic Media*, 52, pp.581-599.
15. Livingstone, S. and Helsper, E.J. (2007) *Taking risks when communicating on the internet: The role of offline social-psychological factors in young people's vulnerability to online risks*. *Information, Communication and Society*, 10(5): 619-643.
16. Lim, S.S. & Soon, C. (2010). *The influence of social and cultural factors on mothers' domestication of household ICTs - experiences of Chinese and Korean women*. *Telematics and Informatics*, 27 (3), 205-216. Available at: <http://profile.nus.edu.sg/fass/cnm/iss/2010-social%20cultural%20factors%20domestication%20of%20icts-postprint.pdf> (accessed on 28th September, 2014)
17. Lwin, M.O., Stanaland, A.J.S. and Miyazak, A.D. (2008), *Protecting children's privacy online: How parental mediation strategies affect website safeguard effectiveness*. *Journal of Retailing* 84 (2), Elsevier: 205-217
18. Leung, L. and Lee, Paul S.N. (2011), *The influences of information literacy, internet addiction and parenting*

- styles on internet risks. *New Media and Society*, 14(1) Sage UK, pp. 1-21
20. Mesch, G.S. (2009), *Parental Mediation, Online Activities and Cyberbullying*. *Cyber Psychology & Behavior* 12(4), Mary Ann Liebert Inc., New York, pp. 387-393. Available at: <http://soc.haifa.ac.il/~gustavo/manuscriptc&B.pdf>
 21. Mendoza, K. (2009). *Surveying parental mediation: Connections, challenges, and questions for media literacy*. *Journal of Media literacy Education*, 1, pp.28-41.
 22. Patchin, J. W. & Hinduja, S. (2006). *Bullies Move Beyond The Schoolyard: A Preliminary Look at Cyber bullying*. *Youth Violence and Juvenile Justice*, 4(2): 148-169.
 23. Palfrey, J. and Gasser, U. (2008). *Born Digital Understanding the First Generation of Digital Natives*, Perseus Books Group, New York. Available at: http://pages.uoregon.edu/koopman/courses_readings/phil123-net/identity/palfrey-gasser_born-digital.pdf
 24. Steeves, V. (2012). *Surveillance of young people on the internet*. In David Lyon, Kirstie Ball, Kevin D. Haggerty(ed) *Routledge Handbook of Surveillance Studies*. New York, p.356
 25. Subrahmanyam, K. and Smahel, D. (2010). *Digital Youth: The Role of Media in Development*, Springer, New York, p. 208.
 26. Stattin, H. and Kerr, M. (2000), *Parental Monitoring; a reinterpretation*, *Child Development*, Volume 71, Issue 4, published by Wiley-Blackwell on behalf of the Society for Research in Child Development, pp.1072-1085
 27. Ybarra, M.L. & Mitchell, K.J. (2004). *Online aggressor/targets, aggressors, and targets: A comparison of associated youth characteristics*. *Journal of Child Psychology and Psychiatry*, 45(7), 1308-1316. Available at: <http://bienestaryproteccioninfantil.es/imagenes/tablaContenidos03SubSec/CV75.pdf>(accessed on 19th January, 2014)
 28. Young, K.S. (1996). *Internet Addiction: The Emergence of a new Clinical Disorder*. *Cyber Psychology and Behavior*, Vol. 1 No. 3. pp. 237-244. Also available at: <http://netaddiction.fusionxhost.com/articles/newdisorder.pdf>

Parental Mediation and Attitude towards Children's Television Viewing

BoobalaKrishnan. N.*
Dr. D. Boopathy**

ABSTRACT

Diverse range of factors have been found to be associated with children television viewing, parents and the home environment are particularly influential. It is observed that children watch television with parental mediation in different styles used at home. The intention of this study is to examine the various mediation styles (active mediation, restrictive mediation, co-viewing) practiced by parents and their attitude (positive and negative) towards the television effects on children. The aim of this study was to examine associations between parental mediation and attitude towards child television viewing. Parents of children aged 5-14 years reported usual duration of their child's television viewing. Factorial analysis confirmed the mediation factors, and exploratory factor analysis explored the attitude of parents towards television effects.

Key Words: Parental mediation, TV viewing, Active mediation, Restrictive mediation, Co-viewing

1. Introduction

Technology is the force of today's ever-evolving world, and television is at the heart of it. While experiencing its own evolution and advancement, TV has maintained a constant presence Block (2001). The evidence supports that the effects of television viewing on children are harmful in terms of both immediate and long term negative effects. Children should be encouraged to play outside, take up a sport, read a book, and engage in creative thinking. Families can spend more time together playing games, cooking or doing/ building a project. Parents need to take it upon themselves to limit television exposure and seek out quality programming for their children and view it with them whenever possible. There are numerous studies on the impact of television (on school performance, family communication and the inducement of certain content to violence) that have tried to study the effects in an isolated manner and have ignored such important issues as the role of the family as a reception context for children's television viewing.

It is necessary, therefore, to understand the television environment as a stimulating environment that transmits information in new ways, and to analyze the various

mechanisms and modalities in which the culturally-mediated information is presented". In the context of television viewing, parents are potentially the socialization agents that are closest and more direct to children and for this reason "it is not possible to properly understand the television-children relation if we overlook the family place as a natural space for this relation".

In India, before the arrival of TV, cinema and radio were very popular even among the villagers. Among all media, the cinema was the most popular medium of entertainment and understanding of the society. Though TV was introduced on 15 September 1959 as experimental basis for ten years, in view of its potential for development communication, it soon turned out to be an entertainment medium and its spread was more in cities than in villages. But now it is available in every household in India. Many scholars have expressed their concerns on the negative effects of TV on children's learning and their socialization. Besides this, the cable television was introduced in 1991 and it changed the viewing patterns of its audience. Now we have more than 500 western, Indian, regional and Govt. television Channels. Overall, there is a large section of viewers of western television programs.

* Assistant Prof., Dept. of Visual Communication and Electronic Media, PSG College of Arts & Science, Coimbatore, Tamil Nadu, India

** Associate Prof., Dept. of Journalism and Mass Communication, PSG College of Arts & Science, Coimbatore, Tamil Nadu, India

Television occupies a major position in the entertainment and media industry. The Indian television system, which provides coverage to over 90% of Indians, is one of the most dynamic and extensive systems in the world. TV households are growing at a staggering rate of 4% per annum. The number of TV households far exceeds the number of telephone-connected homes. The share of cable television households is growing at a remarkable rate of 4% per annum. Cable and satellite homes are expected to grow at a rate of 8-10%.

Watching television varies with the age group of the children in India. As children grow up they watch more television. Most of the children prefer watching programs with fighting scenes and music. Children often imitate the life style and fashion of their favorite hero and heroine. Children with middle class background are found to be light viewers when compared with the children of higher and lower economic background. One of the findings is that children lacking in parental care are more affected by TV (Unnikrishnan and Bajpai, 1996). In India, children either do not have a room of their own or, if they have a room, they do not have a separate television for themselves. Since the family sizes are relatively larger (than developed countries) and the number of rooms is limited, most of the family members, including children, watch television together (in the sample, the average number of individuals per room per household was 3.3). So, the question of small children watching "R-rated" programs or adult programs becomes irrelevant. To be specific, watching adult programs (together) is a taboo in India and the television is normally kept in a common room where everybody can watch it. Therefore, it is highly improbable that children would be able to watch "R-rated" programs. Also, children in developed countries have multiple choices (other than watching television, for example, piano lessons and hobby classes), some of which might be superior to watching television, for spending their leisure time. Unfortunately, the same is not true for the majority of children from developing countries. Therefore, the relationship between television exposure and academic skills of children should be examined in proper context and the present study is an attempt in this direction.

From this point onwards, the research focuses on parents as potential mediators in the children television viewing. "It is important to acknowledge the causal relation between television, family and children", without forgetting the schools where parents seek support for the media education of their children.

In India, the family is the most important institution that has survived through the ages. India, like most other less

industrialized, traditional, eastern societies is a collectivist society that emphasizes family integrity, family loyalty, and family unity. Hui and Triandis (1986) defined collectivism, which is the opposite of individualism as, "a sense of harmony, interdependence and concern for others". More specifically, collectivism is reflected in greater readiness to cooperate with family members and extended kin on decisions affecting most aspects of life, including career choice, mate selection, marriage and its continuity. The family has been and continues to be one of the most important elements in the fabric of Indian society. The bond that ties the individual to his family, the range of the influence and authority that the family exercises make the family in India not merely an institutional structure of our society, but accords it a deep value. The family has indeed contributed to the stability of Indian society and culture.

Most of the studies investigating the effects of television viewing among children and adults have, in secluded manner, relation to school performance, family communication and the inducement of certain content to violence, but have not analyzed the important issues related to the role of the parents and other family members. There are no serious studies about the impact of parental mediation among children's television watching. The mediation may be of any style depending on the context of the family and individual. We begin with presenting reviews of parental mediation theory.

2. Literature Review

Numerous studies are conducted in the last couple of decades on adult mediation of children's television viewing (e.g., Austin, 1993; Bower, 1973; Dorr, Kovaric, & Doubleday, 1989; Fry & McCain, 1980; Mohr, 1979). These studies, probably, reveal that mediation is far from a universal practice. However, explanations as to why only some parents supervise children's viewing remain elusive. Several recent studies (Austin, Bolls, Fujioka, Engelbertson et al., 1999; Valkenburg, Krcmar, Peeters, Marseille et al., 1999; Vander Voort, Nikken, van I-ijl, et al., 1992) have reconnoitered factors that influence parents' mediation of television viewing.

Scholars define parental mediation as recognizing parents' active role in managing and regulating their children's experiences with television (Dorr, Kovasi & Doubleday, 1989; Kaye, 1979; Lin & Atkin, 1989; Logan & Moody, 1979; Nathanson, 1999; Valkenburg, et al., 1999). Three researchers, Bybee, Robinson and Turow, were the first to develop a multidimensional concept of mediation, calling them as restrictive, evaluative and unfocused. Various researchers might have used diverse definitions and

measures of mediation, but a number of researches indicated these three patterns of mediation as "any strategy parents use to control, supervise, or interpret content" (Warren, 2001).

A few other researchers, Nathanson (2002) and colleagues (Nathanson and Botta, 2003) provide people with a clearer and more reliable definition of a three-dimensional framework of parental mediation, categorized as either co-viewing, restrictive mediation, or active mediation. According to Valkenburg et al. (1999) research articles related to parental mediation of children's TV viewing can be classified into three categories: antecedents of parental mediation of TV, its occurrence, and its effects. Parental concerns of TV's negative effects (Bybee et al., 1982; Valkenburg et al. 1999), parents' negative attitudes toward TV (e.g., Warren et al., 2002), and certain demographic factors are some of the major issues that contribute to parental mediation.

Among various types of research on the subject, the first variety consists of research assessing the occurrence of television mediation at home and identified different types of parental mediation styles and their frequencies (Austin, 1993; Bybee, Robinson & Turow, 1982; Dorr, Kovari & Doubleday, 1989; Huston & Wright, 1996; Mohr, 1979; St. Peters, et al., 1991; Weaver & Barbour, 1992). In most of the previous researches the three dimensions of parental mediation of television viewing: instructive mediation, restrictive mediation and co-viewing (e.g., Valkenburg et al., 1999, Borzekowski and Robinson, 2007) have been widely acknowledged. Several investigations documented how often parents monitor their children's viewing: the duration of parents' constraint over their children's TV viewing (e.g., Bybee et al., 1982).

A few other researchers, Nathanson (2002) and colleagues (Nathanson and Botta, 2003) provide people with a clearer and more reliable definition of a three-dimensional framework of parental mediation in their research, categorized as either co-viewing, restrictive mediation, or active mediation. Stacey et al. (2011) in their exploratory research, conducted an online survey with 457 parents as respondents to identify factors associated with parents' intentions to allow their children to watch 18 common television scenes. The results of an exploratory factor analysis indicated that, with some exceptions, parents recognize the scenes as three different factors indicating violence, nudity and sexuality-related and family-oriented content. Further, results from hierarchical multiple regression analysis reveals that mediation style explained a greater portion of the variance in parents' mindset to permit their children to watch that

content than either family communication patterns (FCP) or relevant demographic characteristics.

A good deal of survey evidence shows that parents are concerned with the violent and sexual content of television, although this concern is extended by only some of them to worry about the amount of time their own children spend watching television. (Gunter et al. 1994.)

American researchers have asked parents about their encouragement of television as well as their limiting of its use. Many parents were found to encourage children to watch particular programs that they considered educational or good entertainment for children. Such encouragement apparently reflects selectivity on the part of parents, which is not the reverse of regulation of viewing (Dorr, et al., 1989).

The literature indicates that attitudes toward television are a consistent predictor of mediation, in some cases (e.g., Valkenburg et al., 1999) better than demographic predictors. One consistent influence on parental mediation is parents' attitudes about television's effects on children. Perceived effects of television include a belief that parent concerns about television viewing with aggression and violent behavior, food and snack choices, television-induced knowledge and learning content of television, accelerates the desire for immediate gratification, enhances buying behavior, and decreases reading and creativity. Parents would be more inclined to mediate when they believed that TV could impact their children (Dorr et al., 1989).

The effects of parental mediation have been the dominant part of mediation research (e.g., Ball & Bogatz, 1970; Cantor & Wilson, 1984; Collins, 1983; Collins, Sobol, & Westby, 1981; Corder-Bolz, 1980; Corder-&Bryant, 1978). (Dorr et al., 1989; Vander et al., 1992) concluded that viewing rules and co-viewing were more prevalent among parents who strongly believed in TV's effects on children.

It seems logical, then, to explore the nature of parental attitude and mediation in children television viewing. Parental attitudes toward children television viewing would predict parental television mediation.

3. Methodology

The present investigation aims to identify and analyze the parental mediation and attitude towards children television viewing among a cross section of the people in Coimbatore, Tamil Nadu, India. In this endeavor, the primary task of the researcher has been to apply appropriate technique to identify the individuals who

would constitute the sample for the present study and develop a reliable instrument to measure the perception of the respondents towards the mediation and attitude towards children television viewing.

The present investigation has focused on the urban parents and researcher intended to include all those individuals who were residing in the city of Coimbatore of the state of Tamil Nadu. Importance has been accorded to those individuals who are parents of children. However, considering the vastness of the area, multistage stratified random sampling method was adopted by the researcher to identify the eligible respondents, who are included in the sample for the present investigation.

After expounding the concept of parental attitudes toward television, researcher reviews the findings on the predictive factors and claims that parental mediation takes place specifically with the context of parental attitudes toward television. Researcher made an attempt to test the direct and indirect relationships involved in parental mediation (restrictive mediation, active mediation, and co-viewing) parental attitudes (positive and negative attitude) toward television effects. RQ1: What dimensions of attitude will

parents perceive in relationships with their children television viewing?

RQ2: How is parental attitude towards television effects related to mediation of television viewing?

4. Measures

Parental mediation: This study employed the typology developed by Valkenburg et al. (1999). Fifteen Likert-scale items (1 = never, 5 = almost always) measured the frequency with which parents co-viewed, restricted, and discussed television viewing with their children (see Table 1). To replicate previous tests of these scales, the items were subjected to a principal components analysis with Varimax rotation, which confirmed the existence of three components: (a) Restrictive mediation (i.e., viewing rules), (b) Co-viewing, and (c) Instructive mediation. This three-factor solution accounted for 66.1% of the variance. It was then summed the scores on each component's items to form factor scores ranging from 5 to 25. Cronbach's alpha tests (n = 504) showed that the restrictive mediation (alpha = .83, M = 19.90, sd = 4.77), co-viewing (alpha = .84, M = 18.01, sd = 5.33), and instructive mediation (alpha = .86, M = 16.99, sd = 5.76) scales were all reliable.

Table 1: Rotated Factor Solutions for Parental Television Mediation

Parental active mediation: How often do you-----	Factor 1	Factor 2	Factor 3
(i) Try to help your child to understand what he / she sees on Television?	.844	-.269	.136
(ii) Point out any program on television to be good/bad?	.578	-.065	.217
(iii) Point out the characters performances on television to be good / bad	.631	-.041	.048
(iv) Explain the motives of Television characters	.844	-.269	.136
(v) Explain what seeing on Television really means Parental Restrictive Mediation	.779	-.192	.111
(vi) Tell your child to turn off TV when he/she is watching an unsuitable program	-.415	.590	.033
(vii) Set specific viewing hours for your child	-.674	.613	-.029
(viii) Restrict your child to watch certain programs	-.674	.613	-.029
(ix) Restrict the amount of time for your child in viewing television	-.388	.485	.066
(x) Specify in advance the programs that may be watched Parental Co-viewing	-.237	.602	.011
(xi) Watch your favorite program together with your children?	-.049	-.736	.509
(xii) Watch television together because of a common interest in a program?	.125	-.026	.916
(xiii) Watch television together just for the fun?	-.049	-.736	.509
(xiv) Watch your favorite program together?	.356	-.395	.511
(xv) Laugh with your child about the things you see on TV?	.169	-.010	.915

Parental attitude towards television: This survey measured two dimensions of parental attitude. Parents perceived distinct dimensions of their perception towards children television viewing. Because it was uncertain that these items would be inter-correlated with both younger and older children, we subjected the 19 effect items to a principal components analysis with Varimax rotation. The factor loadings (see Table 2) showed that two components accounted for 44.3% of the variance. Seven items on negative effects (wrestling programs motivate children to imitate; alcohol use, drug use, sex influence to indulge; less time for interaction with family members; not expressive in sharing their feelings; showing people beating up and fighting stimulate to repeat the action; become passive person; and tend to work less on their homework) loaded onto one factor. The scores were summed to form a negative attitude scale (scores ranging from 7 to 35) which proved to be reliable (alpha = .90). Seven items on positive attitude (facilitate to communicate effectively; educational programs helps in reading books; educational programs help to score higher grades; programs with subtitles strengthens reading ability; book version programs motivate to read those books; aware with latest in various fields; and reality shows facilitates learning experience) loaded onto the other factor. The summed scale of positive attitude proved reliable with all three items (alpha = .71). It was then retained the seven-item negative (M = 26.70, sd = 8.31, n = 504) and

seven-item positive (M = 24.91, sd = 5.30, n = 504) attitude scales for further analysis. The remaining items were eliminated.

The survey measured the relationship between the mediation practice by parents and the parental attitude of television effects towards television viewing. As can be seen from the Table 3, intercorrelation worked out between parental mediation and attitude reveals that the intercorrelation value is high and significant at .001 levels in most of the factors.

Hence, it can be inferred that the mediation and attitude complement each other and are meaningful to be included for further analysis in the study. The active mediation and restrictive mediation relates negatively by its nature, as the active mediation increases the restrictive mediation decreases. Similarly, co-viewing related positively to the active mediation and negatively to restrictive mediation. Active mediated parent's attitude towards the television effects is positively related to the positive and negatively towards negative. In the case of restrictive mediation related negatively to the positive attitude and positively towards the negative attitude.

Earlier studies have shown that parental remarks and interpretations of television content have been shown to positively affect children's attitudes toward non-traditional gender roles (Corder-Bolz, 1980), can improve children's

Table 2: Rotated Factor Solutions for Parents' Television Attitude

Parental Attitude: Perceived effects due to television viewing...	Factor 1	Factor 2
(i) Wrestling programs motivate children to imitate	.966	.019
(ii) Alcohol use, drug use, sex influence to indulge	.966	.019
(iii) Less time for interaction with family members	.966	.019
(iv) Not expressive in sharing their feelings	.590	-.158
(v) Showing people beating up and fighting stimulate to repeat the action Parental Attitude: Become passive person	.966 .524	.019 -.034
(vi) Tend to work less on their homework	.531	-.003
(vii) Facilitate to communicate effectively	.032	.518
(viii) Educational programs helps in reading books	-.060	.610
(ix) Educational programs help to score higher grades	.050	.578
(x) Programs with subtitles strengthens reading ability	-.089	.579
(xi) Book version programs motivate to read those books	.039	.637
(xii) Aware with latest in various fields	-.079	.559
(xiii) Reality shows facilitates learning experience	-.087	.551

Table 3: Parental Mediation Relation to Parental Attitude towards Children's Television Viewing

Parental Mediation and Parental Attitude		Active Mediation	Restrictive Mediation	Co-viewing	Positive Attitude	Negative Attitude
Active Mediation	Correlation	1	-.605**	.385**	.108	-.320**
	Sig. (2-tailed)		.000	.000	.015	.000
	N		504	504	504	504
Restrictive Mediation	Correlation		1	-.399**	-.119**	.482**
	Sig. (2-tailed)			.000	.007	.000
	N			504	504	504
Co-viewing	Correlation			1	.045	-.188**
	Sig. (2-tailed)				.308	.000
	N				504	504
Positive Attitude	Correlation				1	-.066
	Sig. (2-tailed)					.139
	N					504
Negative Attitude	Correlation					1
	Sig. (2-tailed)					
	N					504

** . Correlation is significant at the 0.01 level (2-tailed).

* . Correlation is significant at the 0.05 level (2-tailed).

learning from educational programs (e.g., Ball & Bogatz, 1970), modify children's attitudes toward TV violence (for example, Corder-Bolz & O 'Bryant, 1978) and stimulate children's knowledge of art and culture (Valkenburg et al., 1998). Parental interpretation and remarks on television content, according to studies, have proved to positively affect children's attitudes toward non-traditional gender roles. Parents are required to be in a position to mediate the potential negative influences of violent and sexually-oriented television content and agrees to guide their children's media use and perception directly as well as indirectly (Austin, 2001; Warren, 2005).

References

- Allen, M., N. Burrell, and L. Timmerman (2006). Impact of parental mediation on children: A meta-analysis. Paper presented at the National Communication Association annual conference, San Antonio, TX.
- Austin, E. W. (1993). Exploring the effects of active parental mediation of television content. *Journal of Broadcasting & Electronic Media*, 37, 147-158.
- Bachen, C. M. (2007). Just part of the family? Exploring the connections between family life and media use. In *20 Questions about Youth & the Media*, ed. S. F. Mazarella, 239-252. New York, NY: Peter Lang.
- Baumrind, D. (1971). "Current Patterns of Parental Authority." *Developmental Psychology Monograph*, 4(1), 1-103.
- Berey, Lewis A. and R. W. Pollay (1968). The Influencing Role of Child in Family Decision-Making. *Journal of Marketing Research*, 5 (February), 70-72.
- Belch, G., M. A. Belch, and G. Ceresino (1985). Parental and Teenage Influences in Family Decision-Making. *Journal of Business Research*, 13 (April), 163-176.
- Buckingham, D. (2002). Media education. A global strategy for development. A paper presented at the UNESCO Seville Seminar, February 14-17, 2001.
- Buijzen, M., and P. M. Valkenburg (2005). Parental mediation of undesired advertising effects. *Journal of Broadcasting & Electronic Media*, 49, 153-165.

9. Bybee, C., Robinson, D., & Turow, J. (1982). Determinants of parental guidance of children's television viewing for a special subgroup: Mass media scholars. *Journal of Broadcasting*, 26, 697-710.
10. Chaffee, S., McLeod, J. M., & Atkin, C. K. (1971). Parental influences on adolescent media use. *American Behavioral Scientist*, 14, 323-340.
11. Chaffee, S., McLeod, J., & Wackman, D. (1973). Family communication patterns and adolescent political participation. In J. Dennis (Ed.), *Socialization to politics: Selected readings* (pp. 349-364). New York: John Wiley.
12. Chan, K., and J. U. McNeal (2003). Parental concern about television viewing and children's advertising in China. *International Journal of Public Opinion Research*, 15, 151-132.
13. Dorr, A., P. Kovari., and C. Doubleday (1989). Parent-child covieing of television. *Journal of Broadcasting & Electronic Media*, 33, 35-51.
14. Fujioka, Y., and E. W. Austin (2002). The relationship of family communication patterns to parental mediation styles. *Communication Research*, 29, 642-666.
15. McQuail, D. (1994). *Mass communication theory*. (4th ed). London: Sage Publications.
16. Nathanson, A. (2001). Parent and child perspectives on the presence and meaning of parental television mediation. *Journal of Broadcasting & Electronic Media*, 45, (2). Retrieved November 12, 2001, from <http://www.ll.proquest.com/html>.
17. Nathanson, A. (1999). Identifying and explaining the relationship between parental mediation and children's aggression, *Communication Research*, 26, (2). Retrieved November 12, 2001, from <http://www.ll.proquest.com/html>.
18. Pavleen, Soni, and Raghbir, Singh (2012) Mediation of TV advertising to children: An empirical study of Indian mothers, *Society and Business Review*, Vol. 7(3), 244-259
19. Rideout, V., Vandewater, E. & Wartella, E. (2003). *Zero to six: Electronic media in the lives of infants, toddlers and preschoolers*. Menlo Park, CA: Kaiser Family Foundation.
20. St. Peters, M., Fitch, M., Huston, A. C., Wright, J. C., & Eakins, D. J. (1991). Television and families: What do young children watch with their parents? *Child Development*, 62, 1409-1423.
21. Valkenburg, P., Krcmar, M., Peeters, A. & Marseille, N. (1999). Developing a scale to assess three styles of TV mediation: Instructive mediation, Restrictive mediation, and Social co-viewing, *Journal of Broadcasting & Electronic Media*, 43, (1), 52-66.
22. Vander Voort, T. H. A., Nikken, P., & Van Lil, J. E. (1992). Determinants of parental guidance of children's television viewing: A Dutch replication study. *Journal of Broadcasting and Electronic Media*, 36, 61-74.
23. Wiman, Alan R. Parental Influence and Children's Responses to Television Advertising, *Journal of Advertising Research*, 12, 18-26.

ABSTRACT

This study is a critical review of the various discourses of development communication including Western literature on development communication. This elaborates the concept of development and its etymology. Further, it has clearly delineated the bipolar view of modernisation theories and tried to critically review those prescribed Western theories and models in congruence with the Indian context. The validity of Westernised models is always debated upon as far as their relevance is concerned. Westernisation is not modernisation, copying blindly western values and thoughts cannot be the panacea for development in Third World Countries. Therefore, what exactly is the role of communication for development in these countries is a matter of concern for different communication scholars. The article has made a serious attempt to put light on various alternative communication approaches suited to these countries and also discussed the existing dichotomy, contestation between Western and Eastern societies regarding the applicability of dominant paradigm and denigration to it.

Key Words: Alternative communication approaches, Bipolar theories of modernisation, Development discourse, Development communication, Dominant paradigm.

1. Introduction

The concept of development is centuries old and originated in Turkey. Mostly we consider development as economic development; however, the real concept of development came on to the scene after the Second World War. Thus, after the Second World War, many countries of the world decolonised and gained their political independence and autonomy. Their immediate need was to have economic development and to remove illiteracy and poverty from their respective countries. President Harry Truman thought of development as a panacea for all the Third World Countries. In fact, the very concept of development is given by the Western countries to the developing countries. Development as all of us know is measured in economic terms. In fact many economic theories that have been dealing with developmental concepts are prescribing various methods, approaches and strategies for national development especially in Asia, Africa and Latin America. How to develop is the biggest question for the countries that suffer from poverty and illiteracy. Poverty has got its own vicious circle and to come out of this vicious circle there has to be a national policy

and here the real issue comes what exactly is the role of mass media for development. In fact, it was in India, the first attempt was made to use mass media for development. Wilbur Schramm, the noted communication scholar came to India at the invitation of Pandit Jawaharlal Nehru, the then Prime Minister of India, to suggest methodologies for using mass media for national development. In fact Wilbur Schramm has written a monumental book called the 'Role of Mass Media in National Development' in which he has given the strategies to be adopted, the methods to be followed for the use of mass media in national development.

2. Dominant Patterns of Thought and Development Discourse

Mostly we talk of several concepts related to development communication and as a matter of fact it was development journalism in India but not development journalism that was the originator. But, later on, when the electronic media became powerful it was supposed to be used for development. The All India Radio was under the control of the Union Government and it was supposed to play a

* Assistant Prof., Central University of South Bihar.

developmental role in the country and reaching out to the masses which were scattered in remote corners of the country. The question of addressing the issue of poverty, superstition or even the issue of illiteracy are to be dealt with and media are considered to be the very powerful tools of changing the society. Therefore, the scholars from developed nations prescribed many theories for the development of underdeveloped nations. In this process, they reiterated the unique Western model especially in western societies. And all those strategies are under scanner and got severe criticism regarding their relevance in these developing societies. Simply replicating western strategies like process of industrialisation, vast investment of capital, application of science and technology blindly cannot be the right path for development. Western models prescribed the concept of modernisation but it does not mean westernisation by adopting western values, accepting western cultures, and imitating their way of living, and copying their standard of living implies modernisation of thinking process, education and technology. Hence, improving GDP, as one of the indicators of development cannot be the true indicators of development. It is most abominable, dreadful condition if people in developing societies go to bed in the night without food; the day-to-day existence is a million dollar questions for those people who cannot afford a single meal in a whole day. How to give them the basic needs should be the major topic for discussion in development discourse and possible solution for it should be the holistic model for development in these Third World Countries. The Western prescription of a consumerist society is debated upon as far as their relevance in developing nations. They suggest more production, consumption and profit. The gap between rich and poor will widen further because the tradition and cultures of these societies are not in a position to adopt western models of development. Thus, culture of the people plays a very significant role in preparing any developmental strategies and policies because avoiding cultures of the people one cannot prepare developmental strategies and policies. And these developmental strategies are to be changed, revised and fine-tuned to meet the aspirations of the people.

2.1 Polarised Notion

A critical review of several bipolar theories of modernisation which forayed into the discipline of development communication can be mentioned here for the better understanding of the dichotomy between these two societies as Maine (1907) pointed out the difference between two societies as 'Status versus Contract' and Durkheim (1933) mentioned the contrast between two

societies as 'mechanic vs. organic solidarity', Tonnies (1957) *Gemeinschaft versus Gessellschaft*, Lerner (1958) posited 'traditional versus modern society' and Redfield (1965) outlined 'folk versus urban societies'. In all these theories, the first stage was the traditional society characterizes a small, mostly rural population where everybody is known to each other, where interpersonal relationship is strong with other groups and affinity prevails whereas in urban society, interpersonal relations are impersonal, no affinity among persons, and loose association of people and in which traditional norms, values has no implication over these societies (Melkote, 1991). Moreover, other western models like 'Evolutionary Universals' (Talcott Parsons, 1964) prescribed for underdeveloped countries as the tools of modernisation. The universals were bureaucratic organisation, money, markets, democratic association and common legal system considered to be the path to societal development (ibid). But eastern critics argue that these indicators appeared to be incorrect because for the Third World Countries, these 'evolutionary universals' were nothing new (Melkote, 1991).

The debates of development in the arena of development communication give impetus to the current discussion when dominant patterns of thought were introduced which were successful in western societies and suggested it to the developing nations for development. Chief among those were the Rostow's economic growth theory where he developed a five-stage model of economic growth where transition from traditional to modern economy: the stages are the traditional society, preconditions for take-off, drive to maturity, and the age of high mass consumption. He assumed that every society would essentially pass through these five stages to attain the final stage the age of high mass consumption. But eastern critics rightly captured the wrong postulation of Rostow's assumption and its relevance in underdeveloped nations. Abraham (1980) criticised that it is extremely unusual that underdeveloped nations with their previous history of colonisation, ongoing population explosion and multifarious nature of geographical and cultural variations would pass through the passage of growth which developed nations achieved.

It is individual psychological attitudes which are important not the character of society necessarily prerequisites for modernisation, and David McClelland (1966) was interested in identifying the modernising variables because when he enquired as to why did some countries achieve high economic growth while others still vying to attain that phase? In fact McClelland was interested in finding the impulse responsible for economic growth and

modernisation. He introduced a mental virus which is the deciding factor to make people behave in an energetic way. This virus according to David McClelland is called as n-Ach or need for achievement. Research shows that there is direct causal relationship between virus with economic growth. An experiment was conducted in India by McClelland in the city of Hyderabad where a group of businessmen were injected with the virus i.e., a ten-day self-development course and findings reveal that these men were more serious in their work, became more innovative and the desire to outshine increased considerably (Melkote, 1991).

The very concept of n-Ach was criticised by Abraham (1980). According to him n-Ach may not be a predictor variable but a dependent variable, & dependent on sanctions and varied politico-economic interest group that is existing in a society. He noted that it is highly institutionalised function of a system which deal with motivation differently. Portes (1976) points out several maladies from the role such highly motivated persons play. A highly motivated person may try to move abroad leading to the common concept of brain drain (ibid). Therefore, it requires bundle of pages to discuss about the dominant patterns of thought and its criticism. Let us now move on to the communication approach enunciated for development.

3. Communication Channels and Dominant Paradigm

Earlier, whether it was magic bullet theory or two-step flow theory, mass media had a powerful and dominant effect in disseminating media messages to the passive people. There is a hypothesis that people who are exposed to media would be influenced and those who are not would be unaffected. The effect was direct, uniform on individuals and successfully utilised to manipulate people's perception, opinion and behavioural pattern because of individuals' passivity and defenceless stereotype nature. Therefore, mass media, through opinion leaders creates favourable climate in knowledge generation in terms of adopting new practices, ideas and to persuade the target audience which ultimately helps people to adopt new innovations. This led to the birth of 'diffusion of innovation' theory by Everett Rogers. Any idea or innovation according to Rogers has to pass through five stages: Awareness, Interest, Evaluation, Trial and Adoption which further in academic literature is known as AIETA model. Rogers (1962) asserted after many diffusion studies that mass media is more effective and influential at the awareness stage while interpersonal and localite sources of

information like close friends, neighbours, peers and other members of the society appears to be more effective routes of information at the evaluation and adoption stage. Further diffusion research established the role of communication in the modernisation process and it was firmly thought that the mode of development of an individual from traditional to modern was the adoption of new ideas and innovations (Melkote, 1991).

Communication channels or mass media can serve as catalytic agents for modernisation in the developing nations. Lerner (1958) emphasised that mass media are the ideal vehicles for transferring new ideas, new innovations from developed to developing nations. In his language, mass media can be dubbed 'magic multipliers' as it has power to bring the climate of modernisation for development in Third World Countries. Both Lerner and Schramm have demonstrated through their research that a significant correlation exists between the mass media and modernity: more developed the nation, higher was the availability and exposure to mass media platforms. The reverse is equally true (ibid).

There are two major criticisms to mass media communication. Lerner (1958) asserted that individuals from developing nations when exposed to mass media, images of modernity and prosperity from West not only infuse the modern values and consumption pattern but also lead to the emergence of a new concept 'the revolution of rising expectations'. And interestingly this faulty syndrome is not congenial to Indian conditions. Mediated modern images, symbols through the mass media creates a pseudo-hope among the individuals in the Third World which compels the people to behave irrationally (Fjes, 1976). The crisis occurs between want/get ratios emerging out of pseudo-expectations. The mass media was champion in showing the westernised dreams to developing nations but the governments were not able to fulfil the new aspirations of society. This syndrome lead to the anomie, chaotic and violence in the society and further development of another concept that Lerner termed as 'the revolutions of rising frustrations'.

4. Alternative Communication Approaches to Development

People in developing societies are always resistant to changes, new ideas and innovations. Development of innovations is very important because we have to take people into confidence to understand the developmental messages, when we discuss about participatory model of development. It means we have to design messages to reach out to people so that they can understand

developmental messages properly. We also call this approach of development as organic model of development where people can help themselves. The communication process is bottom-up and two-way. Their way of finding solution to the problem is not symptomatic unlike mechanistic model rather it is aimed at elimination of root causes. Moreover, this organic model denigrates top-down, big-media centred government-to-people communication system. Rather it supports and focuses on co-equal, little-media-centred government-with-people communication. This is also called development support communication which mediates between technical experts and their beneficiaries. Hence horizontal knowledge-sharing of communication between benefactors and beneficiaries is encouraged by denigrating authoritarian mode of communication.

5. Concluding Remarks

Western models are severely criticised as their developmental models and concepts are always enunciated in view of their own societies and cultures. The criticisms of western models are very simple and straightforward because it is consumer oriented. Moreover, western prescription of usage of bits and bytes for developmental revolution is not the right methodology. When we talk of using technology, it should be appropriate technology. In fact, Western models of development almost exhaust all the resources of the planet and ultimately future generations may not have anything to deal with. This kind of developmental models are criticised by scholars like Beltran, Majid Tehranian and other scholars. They said that the consumer oriented developmental models were consumption oriented models and are not what we require. What we require is holistic development, a development which encompasses all aspects of human life. Majid Tehranian has given several important developmental concepts like 'time-consuming acceleration' which means even if we use communication means, and all the logistical support system to go fast, attaining the speed takes its own time.

Similarly, the kind of development suggested by western countries to the developing countries will also take time. Therefore, the debate of development revolve around or perhaps may continue endlessly because the very nature of development in Indian context is still to be designed as per the needs of the people, of course, keeping in mind the aspirations and sentiments of people.

References

1. Melkote, R. S. (1991). *Communication for Development in the Third World. Theory and Practice*. New Delhi: Sage Publications.
2. Mody, B. (2007). *Designing Messages for Development Communication*. New Delhi: Sage Publications.
3. Mody, B. (2003). *International and Development Communication: A 21st –Century Perspective*. California: Sage Publications.
4. White, A. S., Nair, S. K., & Ascroft, J. (2008). *Participatory Communication. Working for change and development*. New Delhi: Sage Publications.
5. Das N. S. and Gupta, V. K. (1995). *Social Values among young adults: A changing Scenario*. New Delhi: M D Publications Pvt. Ltd.
6. Keller, R. (2013). *Doing Discourse Research: An Introduction for Social Scientists*. London: Sage
7. White, S. A., Nair, K. S. and Ascroft, J. (eds). (2003) *Participatory Communication: Working for Change and Development*, pp. 49–59. New Delhi: Sage Publications.
8. Rogers, E. M. (ed.). (1976). *Communication and Development*. Beverly Hills: Sage Publications
9. Rogers, E. M. (1962). *Diffusion of Innovations*. New York: Free Press.
10. Ashcroft, B., G. Griffiths and H. Tiffin (1998). *Key Concepts in Post-Colonial Studies*. London: Routledge.

ABSTRACT

The social media as a new technology and as a new platform of communication is quite democratic and is highly powerful and popular platform of communication. This platform being a modern platform is highly popular among the youth and after the developments in modern mobile and internet technology communication by social media has gone handy. Language as a medium of communication is used to communicate a message from one user to another in the platform of communication but due to the modern fast life style and the eagerness to communicate faster in an easier mode, the users of social media have started modifying the language of communication. They have started making it short and simple but at the same time this habit has brought changes in the original language. The new generation is on the way of bringing transformations to the English language which is more talkative and meaningful for them. Though they appreciate the traditional form of classroom English but they are no more interested to use it in their common communications through social media platform. So a new form of language is evolving.

Key Words: Social media, Technology, Language, Youth

1. Introduction

Neha, a 1st year Mechanical engineering student, was asked by her father to wish good night to her brother who was staying outside. Immediately, using whatsapp she wrote "Gud Ni8 bro". Similarly Mukesh B.Com third year guy wrote to his father "1/2E Birthday father" on the birthday of his father on face book. Social Media in the form of Face book, hike, whatsapp, Google+ have already become a part of our life. These forums being creative and having opportunities of making people to reach all over the world have brought big changes in present scenario. Communication as a process of human experience connects people with each other, and the developments in communication technologies have fascinated people a lot. The rise of social media within last two decades and the rapid growth of mobile technology have changed the communication scenario completely by establishing a new platform of communication. The social media as a new technology and as a new platform of communication is quite democratic and is highly powerful and popular platform of communication. This platform being a modern platform is highly popular among the youth and after the developments in modern mobile and internet technology communication, social media has

gone handy. Language as a medium of communication is used to communicate a message from one user to another in the platform of communication but due to the modern fast life style and the eagerness to communicate faster in an easier mode, the users of social media have started modifying the language of communication. They have started making it short and simple but at the same time this habit has brought changes in the original language.

Language as a medium of communication helps to communicate and has many uses. According to Pandey (1997), the author of the book 'Teaching Communication', we use language to communicate for various purposes as follows:

We use language to inform: Language as a medium of communication carries information and knowledge from one person to another in encoded manner.

We use language to persuade: In case of persuasive communications strategic arrangement of words help to communicate the message in an effective manner and it ultimately helps to achieve the goal.

We use language to entertain: Fun and entertainments are a part of human life. They release stress and make life easy. For example, language as a tool of communication through books, novels, songs, jokes and riddles.

* Assistant Professor, Centurion University of Technology and Management Paralakhemundi, Odisha)

We use language to hide: Language is sometimes used to hide facts and information from others; here we use language in a coded manner.

We use language to substitute actions: Language is sometimes used to substitute actions. That is to express our feelings in a particular situation; here we use language to substitute action.

As the basic purpose of language is to communicate, a systematic arrangement of signs and symbols helps in communication. It helps us to communicate in a proper coded manner in which others will be able to understand us. Of the three subsystems of language, the second subsystem of language that is syntactic helps to talk about grammar and the laws of grammar for a particular language. In traditional use of language the three subsystems of language are given proper respect and the language is used to communicate. But the advent of social media has changed the scenario completely.

The social media which is a highly interactive and talkative platform of modern communication system has brought a radical change in the language used all over the world. The language has completely changed to a more and more talkative form and the rules of grammar are rarely applied for language used in case of social media. The social media users have already defined their unwritten law for language and the law is "do not worry about the uses of words or laws of grammar rather just communicate that to me that I will be able to understand. The concept is also not bad as the basic purpose of language is to communicate and the task of language as a medium of communication is to carry the encoded message from one end to other which if decoded should denote the same meaning to both the users. The language of social media has gone so standardized among youth that they are able to encode and decode that very easily. The language in case of use of social media is becoming short, simple and sometimes symbolic. The users are using the language in such a manner that it is taking a new form and becoming highly coded and at the same time the new form has gone popular. To make the idea more clear we can go through the following examples:

Single letter replaces words: Be becomes B, Sea or See becomes C, The becomes D, Okay becomes K, are becomes R, You becomes U.

Digits replace words: To becomes 2, won or one becomes 1, Ate becomes 8.

Combination of letters and numeric characters form words: Fine becomes F9, Night becomes Ni8 and Before becomes B4, Right becomes Ri8, Happy becomes ½ E.

Words take short form: Computer becomes Comp, Communication becomes Comn., Manager becomes Mgr, Please becomes PLZ.

New ways to express feelings: LoL to express lots of happiness or laughter, hmm to express I am thinking.

Use of sentences in short forms: 43 replaces I Love You, AAMOF replaces As a matter of fact, ACC replaces Anyone Can Come, AND replaces Any Day Now, B4N replaces Bye For Now

Use of emoticons: An emoticon is a cultural form of expression of a body language through a pictorial representation to communicate the mood of the communicator. In case of the social media users they are using emoticons as a part of the communication. To express happiness, love, anger and other such feelings in a quick manner.

This changing trend in language use is becoming highly popular and it is proving time saving for the users of social media. The social media users who are mostly young and at a growing stage of language learning are acquiring this type of language in such a faster manner that not only in case of social media but also in case of all their communications this type of language use is getting reflected and sometimes it is creating difficulties for the non-social media users to understand. Breaking the geographical boundaries this type of language use has gone popular all over the world and the previous form of linguistic class system has started declining. English language which once was a privileged language of the intellectuals and was creating a division in the society among competent English learners and non-competent English learners has slowly started becoming an easy language for all in the social media forum due to the removal of the restrictions of grammar. The language use has become more and more spoken avoiding the laws of grammar. Language use in social media platform has changed so much that sometimes people of same language are using English letters to form words of that particular language. The scenario has changed in such a manner that people are using language according to their choice. Language learning in social media platform is taking place in a sharing and entertaining manner which ultimately is fuelling the process of language learning in this manner.

This phenomenon of language learning through the social media has already brought a big change in the structure of word formulation and the connotation and denotation of the words. Thus, there is a need of understanding these phenomena and to get a clarity on this area through a study of the language using habits of modern youth on social media platform.

2. Language using Habits of Social Media Platform Users

In this study, a sample of 100 college going youth, who are the active users of social media are taken into consideration and a survey is done among them relating to their language using habits in social media platform by using questionnaire method and the results are presented below.

Q1: Do you use Social Media?

Preferences	YES	No	Can't Say
% of Response	100	0	0

Q2: While writing your Post or Comments do you ever consider language to be a barrier in expressing yourself.

Preferences	YES	No	Can't Say
% of Response	7	93	0

Q3: While writing post or comment what is your basic idea?

Preferences	Your message should be communicated meaningfully without any grammatical error.	You try to communicate properly and rules of grammar are situation dependent	You do not worry much about grammar but you emphasize more on understanding of the message
% of Response	44	38	18

Q4: Do you think writing English in Social Media in your own way beyond the rules of grammar is wrong?

Preferences	YES	No	Can't Say
% of Response	33	47	20

Q5: Do you get excited or enjoy innovating new words or short cut form of any existing word while communicating through Social Media

Preferences	YES	No	Can't Say
% of Response	67	13	20

Q6: Which language is more comfortable for you to use in Social Media?

Preferences	Normal English	English with little change according to your need	Mother language typed in	Any other Indian regional language typed in English	Any other (please specify within one sentence)
% of Response	40	53	7		

Q7: Why you prefer using short words and shortcuts while writing in Social Media?

Preferences	It is a tricky way to communicate	It saves time and space	Others use so you also use	You feel if you will not use this way to communicate then others will consider you backward or fool
% of Response	7	80	13	0

Q8: Do you think the English that you use for Social Media is better than the traditional kind of classroom

Preferences	YES	No	Can't Say
% of Response	7	80	13

Q9: While communicating with seniors do you feel scared to write posts, comments or in the shortcut English that you normally use in or Social Media?

Sl. No	YES	No	Can't Say
% of Response	54	8	38

Q10: It is more convenient to use shortcuts while talking with

Preferences	Family Members	Friends	People with whom you are not very close but you know them	Unknown persons	Any other (Please specify within one sentence)
% of Response	0	100	0	0	0

Q11: You use the short cut and randomly modified form of English according to your choice because:

Options	English in this form is more informal	It carries emotions in a better manner	it is a faster way to communicate	Others are using it that is why you use it.	Any other reason (Please specify within one sentence)
% of Response	0	0	73	27	0

Q12: For short cut languages which forum is more preferable?

Options	Common talk	Social Media	Formal communication
% of Response	27	73	0

It will be useful to offer an explanation for the above responses.

The above answers in the tables clearly pronounce the fact that the use of social media by the modern youth has brought a radical change in their language using behavior and they have started using the English language in a new format. They are enjoying it and they are also happy that it is becoming time saving, short and useful for them to communicate in a meaningful manner among themselves. Though they are still with the view that English in traditional classroom format is better but they are using it because it is proving attractive for them. Many of them are considering it to be a tricky way to communicate and are feeling better when they succeed in communicating in this way.

3. Conclusion

The study finally states that the new generation is on the way of bringing transformations to the English language which is more talkative and meaningful for them. Though

they appreciate the traditional form of classroom English but they are no more interested to use it in their common communications through social media and it can be predicted that the social media English someday may replace the classroom English completely.

Bibliography

1. Pandey, S.K. (1997) Teaching communication, Common wealth Publishers, 4378/4B, Ansari Road, Darya Ganj, New Delhi
2. <http://en.wikipedia.org/wiki/SMS>
3. <http://www.160characters.org/documents/SocialEffectsOfMessaging.pdf>
4. http://en.wikipedia.org/wiki/SMS_language
5. http://en.wikipedia.org/wiki/Text_messaging
6. http://en.wikipedia.org/wiki/SMS_hubbing

Human Rights and Right to Expression in Mass Media in The Present Times

Dr. Deepak Upadhyaya*

ABSTRACT

Human rights constitute a precious heritage for the entire mankind for which many battles have been fought and won. Human rights and mass media are complementary to each other. Since the dawn of time, journalism has pushed for the protection and promotion of human rights. It is largely believed that mass media can play a wonderful role in creating widespread awareness in a country like India on issues concerning human rights by exposing its violation and focusing attention on ensuring protection of human rights for all sections of the society. However, today many questions are being raised on the role of mass media in protecting and proliferating human rights. The objective of this paper is to understand the prevailing scenario, especially in India and abroad. The aim is to dissect the state of affairs so as to comprehend whether or not the right to freedom of speech and expression is being enjoyed by the masses in the country and the role of mass media in that regard.

Key Words: Mass media, Universal Declaration of Human Rights, Communication as a Human Right, Right to Freedom of Speech and Expression, Market driven media and sensationalism.

1. Introduction

"It has always been a mystery to me how men can feel themselves honoured by the humiliation of their fellow beings" – M.K. Gandhi.

These wonderful lines from the Father of the Nation encapsulate the irony of our times! It is needless to say that our civilization has been tremendously enriched by innovations meant for the welfare of the human beings, which our forefathers could not have even dreamt of. With the Universal Declaration of Human Rights, it is indeed an irony that majority of the people still live in the grip of extreme poverty and economic, social and political exploitation.

It also reminds us of what the celebrated dramatist Charles Dickens had written in the opening paragraph of his novel – A Tale of Two Cities in the context of the French Revolution. Dickens writes,

It was the best of times, it was the worst of times, it was the age of wisdom, it was the age of foolishness, it was the epoch of belief, it was the epoch of incredulity, it was the season of light, it was the season of darkness, it was the

spirit of hope, it was the winter of despair, we had everything before us, we had nothing before us.....

However, with the passage of time, the world has started to experience a widening 'human rights divide' which is felt amongst all individuals and sections of the society. It is so widespread that it has become a matter of concern in the present times. One of the challenges confronting the contemporary society is to find out a way to bridge the human rights divide.

Human rights, as the term most commonly means and is understood, are the rights which every

human being is entitled to enjoy and to have protected. The underlying idea of such rights, which are fundamental to the concept of human dignity, is that these rights should be respected while treating all men, women and children. These rights are not new; rather these rights have existed in some form or the other spanning across cultures and societies. Human rights have been legally granted to all the citizens of all the countries by the United Nations Organization (UNO).

However, it was not the case always. If we look back, the concept of human rights evolved over a long period of

*Assistant Professor, Department of Journalism and Mass Communication, Tripura University, Agartala.

time. Initially, it was merely confined to the rights of the upper strata of the society. It had no universal application; it took a long time before it was extended to cover all human beings without distinction of class or creed. For instance, the famous Magna Carta of the thirteenth century was primarily meant for the protection of the rights and privileges of the feudal lords of Britain, although it contained a few clauses of general application as well. The ambit of human rights was extended further with the promulgation of the Bill of Rights of 1689 which ensured minimum liberties for the citizens. In 1776, on the other hand, the concept of inalienable human rights saw the light of the day in America with the Declaration of Independence. Shortly, thereafter, the French revolutionaries, on deposing and executing their king, made the declaration that men are born and remain free and equal in rights" (Gupta, 2005).

The contemporary conception of human rights can be traced to the period of the renaissance. The struggle for the recognition of human rights was gaining grounds by leaps and bounds in the West and the general consciousness was that the purpose of any political association was the confirmation of the human rights of liberty, property, security and resistance to oppression. The Code of Hammurabi is one of the best preserved examples of this kind. Various rules and punishment on a variety of matters including women's rights and slave rights were mentioned in the code. The Persian Empire under the reign of Cyrus had also established unprecedented principles of human rights in the 6th century BC. Religious documents like the Vedas, the Bible, the Quran and the Analects of Confucius also referred to the duties, rights and responsibilities of the citizens. The struggle against political, social, economic, social and cultural oppression, injustice and inequalities, has been an integral part of human societies.

The concept of human rights is not new to India. It can be traced back thousands of years from the Vedas. When the West was yet to be civilized, India had such high ideals that reflected the inherent philosophy of human rights as 'Vasudhaiva kutumbakam, sarbe bhavantu sukahani, sarbe bhavantu niramayah...etc.' It has been an outlook of life in Indian society since time immemorial. The Mauryan Empire had established the principles of civil rights. Another point of contrast between Western and Eastern concept of human rights could be noticed in the fact that in the West, governments operated on the principle of divine rights of kings and the rulers did not seek legitimacy for their power in any notion of justice. The struggle against such injustice never demanded any coup of governments throughout the history of India; rather the king was seen as

the trustee of the empire. Social institutions were based on legitimacy, consent and rule of law.

If the principles proclaimed by the American War of Independence (1776) and the French Revolution (1789) defined the first generation of human rights, wherein civil and political rights were the main focus; the October Revolution (1917) gave rise to the economic and social rights, which constituted the second generation of human rights. The charter of the United Nations, which came into force in October 1945, begins with the determination of the people of the member nations to save the succeeding generations from the scourge of war and to reaffirm their faith in the fundamental human rights and the dignity of human being.

The culmination of all these efforts in the contemporary international scenario is the promulgation of the Universal Declaration of Human Rights which was adopted on 10th December, 1948. The Declaration proclaimed economic, social and cultural rights in addition to political and civil rights and freedom for the people of the world. Actually it was the United Nations Charter of 1945, which initiated the recognition of the notion of Human Rights universally, and it affirmed faith in the fundamental human rights and "in the dignity and worth of the human person". The Article 14 through Article 17 of the Indian Constitution deals respectively with the protection of Right to Life, protection from arbitrary arrest and detention, protection from freedom of movement and protection from inhuman treatment. These rights are considered as third generation of human rights because they constitute the foundations of freedom, peace and justice in the world. Through this declaration, the United Nations reaffirmed its faith in the worth of human beings and in equal rights for men and women, and expressed determination to promote social progress and better standard of living for the largest majority of people. Another point to be noted here is that Article 24 of the charter of the United Nations confers on the Security Council "primary responsibility for the maintenance of international peace and security".

A fourth generation of human rights is said to have emerged in international forums in 1986 when the right to development, right to a healthy environment, the right to peace, the right to access to common heritage of mankind etc., reflected a certain humane conception of life. The World Conference on Human Rights held in 1993 marks an important landmark in UN policy in the field of human rights. The Vienna Declaration encouraged the United Nations to pursue and strengthen its activities to make respect for human rights a priority objective on the same level as development and democracy and to work for the

concurrent achievement of these objectives. The Vienna Conference on Human Rights reaffirms the Right to Development as a universal, unassailable and an integral part of Fundamental Human Rights when it declares that "while development facilitates the enjoyment of all human rights, the lack of development may not be invoked to justify the abridgement of internationally recognized Human Rights".

Thus, one can notice that the concept of human rights has undergone a revolutionary change from the Magna Carta of 1215 AD to the rights contained in the United Nations Declaration. It has been truly a revolutionary and evolutionary concept all along, for which many battles have been fought and won. Time and again, history shows that the existence of human rights has been recognized and accepted as a necessary component for the well-being of civilization. As said above, we can safely say that the possession of human rights is essentially a birthright. Everyone born as a human being possesses such inherent rights, irrespective of the sex, caste, creed, race and religion. Of late, it has been incorporated in almost all the constitutions across the globe. It is immaterial that one calls these rights as inherent rights, fundamental rights or by any other name (Syed M.H., 2003). In the modern world, the perception of human rights has assumed universal proportion, and it is now a subject of international diplomacy, law and institutions. Therefore, the preamble to the Universal Declaration of Human Rights unambiguously proclaims Human Rights as "a common standard of achievement for all peoples and all nations".

2. Communication as a Human Right

Communication is more than mere transmission of messages. It is a fundamental social process and the foundation of all social organizations. Communication is human interaction among individuals and groups and which is why it plays a central role in politics, economics, and culture in societies across the globe. Communication can be an instrument for preservation and promotion of democracy, revolutionary weapon, commercial product or a means of education. Communication can serve the ends of either liberation or of oppression, of either the growth of the individual personality or of drilling human beings into endless state of misery by violating their human rights. Each society must choose the best way to use communication as a tool for furtherance of Human Rights and tame this wonderful monster of Aladdin.

The strengthening of peace, co-operation among nations, fortification of human rights and international security, and

the lessening of international tensions are the common concerns of all nations. The mass media can make a substantial contribution towards achieving these goals. The Universal Declaration of Human Rights (1948) together with the UNESCO Declaration (1976) on fundamental principles concerning the contribution of the mass media to strengthening peace and international understanding are important steps towards the promotion of human rights. Communication rights are based on a vision of the free flow of information and ideas which is interactive, egalitarian, non-discriminatory and driven by human needs, rather than commercial or political interests. Put in simple words, these rights represent people's claims to freedom, inclusiveness, diversity and participation in the communication process. However, in the present times, there are problems facing the full recognition of communication rights and one of the problems is manifested in the form of political control and interference with freedom of expression.

With the adoption of the Universal Declaration of Human Rights, the international community recognized the inherent dignity of all members of the human family by providing everyone with equal and inalienable rights. Communication rights are intrinsically bound up with the existence of human life and based on a powerful understanding of the implications of human rights and role of communications. The bottom line is that without communication rights, human beings cannot live in freedom, justice, peace and dignity. The recognition of this universal need got itself reflected in the form of Article 19 of the Universal Declaration of Human Rights. The core of communication rights is explained in the said Article which proclaims that "Everyone has the right to freedom of expression and opinion; this right includes the freedom to hold opinions without interference and to seek, receive and impart information and ideas through any media and regardless of frontiers."

This basic freedom is also recognized in the International Covenant on Civil and Political Rights (Article 19) and in other UN treaties, such as the Convention on the Rights of the Child (Article 13), etc. Article 19 (1) (a) of the Indian Constitution says much the same thing, guaranteeing for all citizens the right to freedom of speech, expression, conscience and religion.

3. Freedom of Speech and Expression as Human Right

The most precious gift of God to mankind is speech and through speech a human being conveys his thoughts and feeling to others. Freedom of speech and expression is thus

a natural right, which a human being acquires on birth. It is therefore a basic right in any democratic society. Freedom of speech enjoys a special position as far as India is concerned. The importance of freedom of expression and speech can be easily understood by the fact that preamble to the Constitution of India itself ensures to all citizens inter alia, liberty of thought, expression, belief, faith and worship. The constitutional significance of freedom of speech consists in the Preamble of Constitution and is transformed as fundamental and human right in Article 19 (1) (a) as "freedom of speech and expression".

More than six decades ago, explaining the scope of freedom of speech and expression, the Supreme Court said that the words "freedom of speech and expression" must be broadly constructed to include the freedom to circulate one's views by words of mouth or in writing or through audio-visual medium. Freedom of speech and expression means the right to express one's own convictions and opinions freely by words of mouth, writing, printing, pictures or any other mode.

As said already, free speech is the cornerstone of a free society as it is an inherent, inalienable right of the citizens of a democratic country. It is such a human right which forms the basis for other human rights and it is supposed to be enjoyed by all people irrespective of their caste, colour, creed, religion, culture and other backgrounds. Often regarded as an integral concept in a democratic set up, without free speech no justice is possible and no resistance to injustice and oppression is possible.

The expression of freedom of speech also means propagation of one's idea through any communicable medium or visible representation, such as gesture, signs, and the internet. This expression connotes publication and thus the freedom of press is included in this category. Free propagation of ideas is the necessary objective and this may be done on the platform or through the press. This propagation of ideas is secured by freedom of circulation. Liberty of circulation is essential to that freedom as the liberty of publication. Indeed, without circulation the publication would be of little value. The freedom of speech and expression includes liberty to propagate not one's views only, it also includes the right to propagate or publish the views of other people.

4. Social Media Networking and Human Rights

It is important for an elected government to guard freedom of speech and expression of its citizens because when criticisms of a government are freely voiced, the government has an opportunity to respond to the

grievances of the citizens and function properly. It is in the governments' interest in this digital age to allow criticisms for transparency and lasting public opinion. The saying "with public opinion everything is possible, without it nothing is possible" is especially true in the age of Facebook and Twitter or the surge of other modes of information technology pertaining to social media in the present times. Social media and more particularly blogging, Facebook and Twitter have played a key role in instigating, accelerating and even organizing some of the uprisings and revolutions that have been taking place all over the Middle East. The Internet has allowed large masses of Middle Easterners to solidify their efforts and organize protests in a short amount of time. "It also provided a platform for people to express their solidarity, both within their respective countries and with others in the region and beyond (The Arab Revolution and Social Media, 2011).

More than 70,000 Egyptians signed up on Facebook to attend the protest. The young activists whose organizations participated in the revolution formed the "Coalition of the Revolution's Youth". The netizens group participated in citizen journalism and consequently it served "as a forum for discussion and an umbrella movement that tried to crystallize specific demands. Suggestions made online through Facebook were taken up and discussed at face-to-face meetings, both in the capital and in the governorates" (Eissa 2011). On Twitter, Egyptian activists, and then people around the world, began using the tag "#Jan25" to help spread information about the protests. Such is the power of new media or power of expression that it helped in bringing the uprising in Egypt that brought down the government of Hosni Mubarak.

It is needless to say that the value of social media as a tool of free speech and expression is as potent as a dynamite. The fact that it helps to bring political change was well displayed in the recent dramatic events that unfolded over the course of 2009 and 2010 when protesters were occupying Tahrir Square in Egypt. After the people of Tunisia had utilized Facebook and YouTube to help topple the regime of the then President Zine el-Abidine Ben Ali, opposition groups in Egypt were inspired. They, too, turned to Facebook, Twitter and YouTube to help organize protests for January 25, known as National Police Day. What followed thereafter is well known to people all over the world. Social media, particularly Facebook and Twitter, as an internet weapon of speech and expression, played a critical role in the political upheavals that have been taking place in the Middle East. While Facebook allows for rich information and a high level of sustained platform for

expression among its users, Twitter has the potential to reach a broader audience at a faster pace compared to Facebook. Thus Facebook and Twitter have exemplified a different facet of communication as human rights in their use by activists in Egypt and Iran.

Although the Indian Constitution, provides for "right to freedom of speech and expression", however, this right is subject to restrictions. In practice the right to freedom of speech is not absolute in any country, although the degree varies greatly. Developed countries like USA also have varying approaches to balance freedom with order. The government of India too placed restrictions in the enjoyment of this freedom for reasons of "sovereignty and integrity of India, the security of the State and friendly relations with foreign States, public order, preserving decency, preserving morality, contempt of court, defamation or incitement to an offence". For instance if the exercise of this right is likely to inflame passion which in turn may lead to further violations of human rights and promotes more bloodshed of the innocent, the right of freedom of expression needs circumspection and consequential restraint for greater good of the society.

5. Curious Case of Internet and Freedom of Speech and Expression

Right to freedom of speech and expression also includes the right to propagate one's views through words of mouth or through any other mode of communication in this digital age. Every citizen of this free country, therefore, has the right to voice his concerns or air his views through print or electronic media subject to, of course, permissible restrictions imposed under Article 19 (2) of the constitution. However, human rights activists express concerns over new threats that hang over the enjoyment of the right to freedom of expression in India.

Freedom to air one's view is the lifeline of any democratic institution and any attempt to stifle, suffocate or gag this right would sound a death knell to democracy and would help usher in autocracy or dictatorship. The Palghar case has proved that India is an ailing democracy which is socially conservative and politically servile nation, worse than China when it comes to violation of civil liberties and the fundamental right to free speech and expression was guaranteed under Article 19 of the constitution more than six decades ago.

In a sign of clear regression, Section 66 (a) of the Information Technology Act of 2008 can send the citizens to jail for three years for expressing a contrarian view. On November 17, 2012 the Mumbai Police arrested a 21-year-old girl, Shaheen Dhada for questioning the total

shutdown in the city for Bal Thackeray's funeral on her Facebook account. Another girl, 20 year old, from Palghar, Rinu Shrinivasan who 'liked' and 'shared' her friend Shaheen's Facebook comment was also arrested. The duo was booked under Section 295 (a) of the IPC (for hurting religious sentiments) and Section 66 (a) of the Information Technology Act, 2008. What an irony of the guaranteed fundamental rights of the citizens of the largest democracy! The teenage girls were arrested for objecting to a band on their Facebook page which was interpreted as an insult to the late Shiv Sena leader and punishable under Section 66(a). The Mumbai Police is said to have pressurized the girls to withdraw their comment and compelled them to seek an apology. On the other hand, a mob of some 2,000 Shiv Sena workers attacked and ransacked Shaheen's uncle's orthopedic clinic at Palghar, north of Mumbai, while the police was observing a silence. Curiously enough, the hooligans could not be booked by the police for their vandalism.

So much for 'freedom of expression' in a democratic country! Did the innocuous comment amount to defamation, breach of public decency or morality or incitement to an offence? Is it democracy? But in the Palghar case, authorities deliberately invoked Section 66(a) of the IT Act, and Sections 295(a) and Section 505 of the IPC (for statements conducive to public mischief). However, with the issue sub-judice now, the Supreme Court took it up by mid-January 2013, and it is up to the Parliament to incorporate suggested changes in the Section 66(a) of the IT Act. But, history will certainly give its judgment to the best as to whether the girls' innocent comment was meant for hurting religious sentiments or an act of hooliganism of highest order in a free country like India where even the administration, police and bureaucracy are all hands in glove and have lost all sense of reason.

This was not the first example of the use of Section 66(a) of the IT Act to incarcerate a person without good reason. A businessman was arrested in Chennai and sent to jail because he tweeted that the then Union Finance Minister P. Chidambaram's son Mr. Karti Chidambaram had amassed huge amounts of wealth. Mr. Karti could have at the best sued the Chennai based businessman for defamation but to arrest him under the Section 66(a) was an act of absurdity.

We are all aware of the arrest of Prof. Ambikesh Mahapatra of Jadavpur University in April 2012 for emailing a cartoon that poked fun at West Bengal Chief Minister Mamata Banerjee that drew widespread opprobrium from all quarters. Series of protests against the

arrests followed and spawned another rash of cartoons poking fun at the West Bengal Chief Minister's sense of humour. These are not the only two instances in the recent past when the state has acted ham-handedly against persons who have expressed a dissenting view against the powers that be. A single incident could have been an accident, two may have been a coincidence, but a series of incidents like these are nothing but a sign to muzzle the freedom of speech and expression.

Another disgusting incident had happened when the nation was shaken by a nation-wide anti-corruption movement "India Against Corruption" under the leadership of the veteran Gandhian Anna Hazare demanding Jan Lokpal Bill. Cartoonist Aseem Trivedi joined the crusade and started a cartoon based campaign – Cartoons Against Corruption to support the movement that the eminent Gandhian Anna Hazare had heralded, with his art as a tool of protest and communication. He had also launched a website www.cartoonsagainstcorruption.com consisting of his sharp anti-corruption cartoons, targeting at the corrupt contemporary system in our country and the politicians at the present times. However his website was suspended by the Crime Branch, Mumbai Police for displaying objectionable pictures and texts related to national flag and emblem of India. The ban on the website initiated a hot debate over freedom of expression in India. Reporters Without Borders, a US based firm wrote in their report about India saying that the case of a cartoonist charged with treason and offending India's national sentiments reflects a growing debate over what constitutes freedom of expression in India. No sooner than the ban on his website was imposed, Aseem Trivedi had started Save Your Voice – a campaign for internet freedom, along with his friend Alok Dixit, that eventually soon earned mass support and became a public movement in several cities.

Eventually, Aseem Trivedi began Freedom Fast, an indefinite hunger strike for internet freedom movement in India. Along with journalist Alok Dixit and several members of the team Save Your Voice, comprising writers, artists and musicians, he organized a protest and sat inside cages set up at Jantar Mantar with the slogan 'Freedom in the Cage', symbolizing how the IT Rules 'caged' the freedom of the people granted by the Constitution. The motive of the hunger strike was to request political parties to support the annulment motion against the intermediary guideline rules of the Information Technology Act of 2011 of India.

Faced with the serious allegations of insulting national emblem, parliament, national flag and the constitution through his anti-corruption cartoons, Aseem Trivedi was

arrested in Mumbai on 9th September, 2012 on charges of sedition for his anti-corruption drawings. The ensuing furor from the media community and civil society saw him eventually released within a few days and the charges were later dropped.

It is time we seriously ponder a little over freedom of speech and expression with the arrest episode of Aseem Trivedi, Mumbai Girls and the recent murder of an American envoy over a film that has been labeled anti-Islam.

India's clampdown on internet freedom has attracted global attention. The favourite target of the state's paranoia these days is the internet. India has descended into the ranks of semi-rogue nations which censor the internet. Freedom House – a US based advocacy group, has placed India alongside Russia, Libya and Egypt as nations where internet is only partly free. Shockingly, Nigeria scores better than India on internet freedom. Freedom House further mentions that internet freedom in India is actually being reduced over time whereas in most countries, excluding the authoritarian states, it is almost always getting better. The vast space of the world wide web is not an easy task for the police department to patrol in a developing country like India, but the government is leaving no stones unturned to gag the digital landscape of the country either by blocking particular sites and Twitter feeds or by requesting web companies to remove 'offensive' content from their websites.

The definition of what is offensive is too loosely defined under the canvas of the IT Act. Under Section 66(a) of the IT Act, anything that powerful people or politicians do not like can be termed offensive and common people could be booked under the law. If India wants to be counted as a democracy, such a law has no reason to exist. Freedom House states that government control over the internet was limited before November 2008 when the country faced security threats in the wake of Mumbai terror attacks and as a consequence the government control in the form of censorship and monitoring were enhanced. Freedom House further mentions that this trend was continued in 2011 with the adoption of amendments in the form of Section 66(a) in regulations in the IT Act 2000, amounting to increasing surveillance in cyber cafes, to keep a tab on social media networking sites that are 'grossly offensive' and 'menacing character'.

Curiously enough, the Supreme Court bench comprising of the then Chief Justice of India Altamas Kabir and Justice J. Chelameswar, heard a PIL filed by Ms. Shreya Singhal, who challenged the constitutional validity of Section 66(a).

The esteemed Chief Justice of India has also noted that the "wording of Section 66(a) is not satisfactory. It has been made very wide and can be applied to all kinds of comments." Indeed Section 66(a) is a draconian section that was introduced as an amendment in 2008 to the IT Act which is loosely worded. It prescribes a three year jail term and fine for anyone who uses a computer or a communication device to send messages that are known to be false, but could cause among other things 'annoyance' or 'inconvenience'.

In the aforesaid case petitioner Shreya Singhal was of the opinion that in the wake of Section 66(a), coercive steps might be taken by the then government under the provisions of the IT Act, resulting in an adverse effect on the freedom of speech and expression of millions of users of social networking sites in the country. It is so elastic and general that it can be misused by the government to intimidate and punish people like the Palghar girls.

If an innocuous Facebook user is the enemy of the state, there is something wrong with the human rights of the citizens of the country. The fate of human rights of the millions from the weaker sections of the society like children, womenfolk and innocent girls like Nirbhaya and Badaun who die every day at the hands of gang rapists in India is something to see. It is no surprise that this could happen only in India where the authorities have chosen to invoke section 66(a) for political connotations. The police have rarely used the section in aid of ordinary citizens who face real harassment on the social media, and for women who are stalked everyday on the Facebook. How many rape victims in India can come out and protest when they have been molested! Police often refuse to accept complaints from those who are courageous enough to report the rapes, and a few that are entertained in the courts drag on for years or the accused are let off on bail. Of late, the state of affairs of human rights in India has been miserable. Police is found to be punishing the innocent protesters who have assembled. It has been such that either the police will not write an FIR or try to victimize the victim even more. Recently, even a female CM of a state has been reported to have accused the victim herself and suggested a curious compensation package of only Rs. 20000! It was not without reason that naked women's protests have been staged out in Manipur a few years ago, clamouring the slogan "Indian army rape us". If the army and police force, who are supposed to be the protectors of the masses, not committed the crimes themselves, the common people would not have lost their faith on the saviours. But on the contrary, they become the perpetrators of the organized crime.

Under the guise of censorship, the freedom of expression has been under constant attack in a variety of ways. Banning of the book *Satanic Verses* authored by Salman Rushdie in India and Pradip Dalve's play *Godse* are a few cases in point. An irony of sorts was when an American documentary filmmaker Michel Monroe made *Fahrenheit 9/11* accusing George W. Bush for waging a war on Iraq. This documentary was being exhibited in all countries where English movies are seen including its country of origin, the USA, whereas the Government of India through its Central Board of Film Certification had serious reservations for its release in India.

Since the adoption of the New Communication Strategy by the General Conference in 1989, the UNESCO has contributed to a wider recognition and public awareness of the importance of freedom of speech and expression as a fundamental human right. It emphasizes that the governments have a duty to eliminate barriers to freedom of speech and expression and take steps to ensure an environment in which free speech and expression flourish.

6. Conclusion

News in the electronic, print and other mainstream media in a country reflects the state of the nation. The mass media are mirrors of the political, social and other conditions of the society. They speak of the culture of violence and consequent deterioration of human rights and of the afflictions from which a society is suffering or the hot issues which are engaging the immediate attention of the leaders and the masses. Admitting that there are some cases of misreporting, exaggeration, sensationalism and one sided or biased versions of events, the news printed in a number of newspapers or broadcasted by TV channels or radio on a particular day, informs one of at least the core of the events and facts.

It is now a common feeling of the readers, listeners, or viewers that human rights no longer remain humane because authority, justice and politics has been blind folded as the proverbial goddess of justice is often shown as an icon with a weighing balance in her hands. Now in politics, the major concern is no more the welfare of the people, but to capture power by hook or crook or being near the centres of power that be. Selfishness, not service, is now generally the motivating force that rules the minds of the rulers. Their parties, policies and pan are only tools for winning votes and giving them control of the levers of the state. Most of the politicians can change their stand, stance or side any moment if that helps them to fulfill their personal ambition. Even religions which were originally meant to bring peace to the tormented minds and ensure

human rights protection, have now become politicized and are now freely violating human rights in the name of religion.

A deeper understanding of the conceptual foundations of human rights and mass media in the present times reveals that mass media can play an important role by being a watchdog of human rights violence. It can highlight cases of human rights violation and create public agenda to wipe the scourge and work towards its promotion and preservation among the masses by playing a pro-active role. Benjamin Franklin had once said "Without freedom of thought, there can be no such thing as wisdom; and no such thing as public liberty, without freedom of speech". These beautiful lines call upon the media to deliver its best for protection of human rights. In a healthy society, human rights are protected to the fullest and such a society is where journalism can flourish well and realize its goals. Mass media has to strike a balance between its dual functions of ensuring that individuals enjoy the rights to freedom of speech and expression, and on the other hand, goad the governments to abide by its obligations.

Bibliography:

1. Agarwal, R.S. (1978). Human Rights in Modern World. New Delhi: Chetna Prakashan.
2. Akbar, M.J. ((2012).Laughter lost at the gate of power. India Today, Vol-XXXVII, No.-39, for the week Sept 18-24, 2012, pp.18-20.
3. Arora, Bhavana Vij & Rahul Jayaram (2012).The paranoid state, India Today, Vol-XXXVII, No.-51, for the week Dec 11-17,2012,pp.18-25.
4. Bhatt, S.C. (1997). Indian Press since 1955. New Delhi: Publications Division.
5. Borgohain, B. (2007). Human Rights: Social justice and political challenge. New Delhi: Kanishka publications.
6. Dickens, Charles (1999). A Tale of Two Cities. India reprint: Penguin Books,
7. Eissa, Sarah (2011). Their Eyes on the Future. Al-Ahram Weekly, March 17-23, 2011. <http://weekly.ahram.org.eg/2011/1039/eg61.htm>. Accessed: June 12, 2011.
8. Ghosh, Vishwajyoti (2012).Cry, thy beloved cartoon, India Today, Vol-XXXVII, No.-39, for the week Sept 18-24, 2012, pp.34-35.
9. Gupta, V.S (2005).International Communication-Contemporary issues and trends in global information revolution. New Delhi: Concept Publishing Company,
10. Heacock, Rebekah (2009). Twitter Revolution? The Journalism School, Columbia University, <http://jackfruity.com/2009/12/twitter-revolution/>. Accessed: June 12, 2011.
11. Himelfarb, Sheldon (2011). Social Media in the Middle East. United States Institute of Peace, April 11. <http://www.usip.org/publications/social-media-in-the-middle-east>. Accessed: June 15, 2011.
12. Joshi, S.C. (2005). Human rights: concepts, issues and laws. New Delhi: Akansha Publications,
13. Kabi,K.H.(2012).Press and Human Rights in the line of fire in Manipur, Media Watch, Vol-3, No.2.July-Dec 2012,pp. 62-64.
14. Kulasekaran, K & P.Rajendran (2012).Effectiveness of media relations and communication for creating awareness in the issues of Human Rights with special reference to the Puducherry state, International Journal of Communication Development, Vol-2, issue-2, July-Sept 2012, pp.5-14.
15. Mishra, A. (2005). Patrikarita: Mission se Media tak. Aajkaal Prakashan , New Delhi.
16. Morozov, Evgeny (2009). Iran: Downside to the 'Twitter Revolution.' Dissent (Fall): 10-14, <http://www.dissentmagazine.org/article/?article=1962>. Accessed: June 15, 2011.
17. Nickel, J.W. (1987).Making sense of Human Rights: Philosophical reflections on Universal Declaration of Human Rights. London: University of California Press.
18. Prabhakar, M. & Bhanawat, S. (2004). Human rights and Media. Jaipur: University Book House.
19. Ray, A. (2004). National Human Rights Commission of India: Formatting, functioning and future prospects. New Delhi: Atlantic Books
20. Sahu, G.K. & Shobana (2012).Journalists perceptions on Human Rights-An Empirical analysis, Media Watch, Vol-3, No.2.July-Dec 2012, pp. 50-56.
21. Subramani, R. & Alwin, Rodrigues (2012). Media coverage of crime, public perceptions and Human Rights violations, Media Watch, Vol-3, No.2.July-Dec 2012, pp. 57-61.
22. Syed, M.H. (2003) Human Rights: The New Era, New Delhi: Kilaso Books.

Adoption of Information Communication Technology Tools Among Medical Doctors

R. Jayaseelan*
Dr. C. Pichandy**
N. Boobalakashnan***

ABSTRACT

Information and Communication Technology (ICT) proves to be a touchstone and becomes a part of a developing and also a developed country. This research explores the accessibility and the extent of Information Communication Technology usage by health professionals. Data was collected using a sample size of 427 medical doctors in different public and private hospitals, placing a particular focus on the Indian state of Tamil Nadu, by means of a structured questionnaire. The finding of the study reveals that ICTs were commonly available and are used by the health professionals. A comparative analysis designates that there was superior availability and use of computers, internet and mobile phones by medical doctors in private hospitals than those in government hospitals and individual clinic. Interestingly, the level of awareness is higher among users on the numerous benefits of ICTs on their job and productivity. Therefore, it is concluded that there is a significant usage of ICT tools among the medical professionals.

Key Words: Internet, New media, Medical professionals, Online medical database, Online medical journals

1. Introduction

Information and communication technologies are fast, interactive and user-friendly. They support rapid communication and are one of the biggest knowledge libraries among the users and its need may differ according to the people who use them accordingly. Claudia Parlanti (2009) determines Information and Communication Technology (ICT) as a term used to indicate a broad subject connected with technology and other aspects of managing and processing the information. Now a day, it has become an essential and inseparable part of everyone's life and its usage is increasing day by day. It is expected that this will develop even more in future, becoming an indispensable part of people's work, social and personal lives. The word ICT denotes hardware, software, personal computers, laptops, tablets, communication devices like telephones and mobile phones, internet modems and internet data cards and so on. It also includes the communication technologies through which people seek and access

information including internet, email and video conferencing.

1.1 ICT in the field of Medicine

It denoted as a 'key instrument' in healthcare delivery and public health internationally (Drury 2005). The health sector has always relied on technologies. According to the World Health Organization (2004), technologies are the backbone of the services to prevent, diagnose and treat illness and disease. ICTs are only one category of the vast array of technologies that may be of use. Given the right policies, organization, resources and institutions, ICTs can be powerful tools in the hands of those working to improve health.

In the current circumstance information technology is started penetrating more into the medical domain, researchers Priti Kalode, Onkar S. Kemkar, P. R. Gundalwar (2014) remark that healthcare sector has become an important part of our society and it represents a considerable economic and financially attractive area for informatics research and ICT industry.

* Research Scholar, Department of Mass Communication and Journalism, PSG College of Arts and Science.

** Head, Department of Mass Communication and Journalism, PSG College of Arts and Science.

*** Research Scholar, Department of Mass Communication and Journalism, PSG College of Arts and Science.

Everyone will have some sort of relationship with the health care sector; some are closer than others and it has become difficult for people to imagine that someone has never been inside a physician's practice or a pharmacy Reinhold Haux (2002). As patients, many people will have gathered personal experiences with the institutions of the respective health care system and due to the development of health information technology many are largely benefited and the entire world has become a small village with regard to ICT and health care.

1.2 Use of ICT among the medical professionals

According to Wole Michael Olatokun and Olufunke Christey Adeboyejo (2009), Health workers play important roles in a nation's socio-economic growth. ICTs are vital tools that help them to access and use relevant information which are needed for their profession. ICT usage can be highly effective when it satisfies the needs of health professionals.

It is a well-known fact that physicians play a very significant role in the field of medicine. Their role in adoption of information technology and its tools are very important. Ammenwerth, Buchauer and Bludau (2000) explain these information communication technology tools' adoptions have numerous advantages like improving the clinical and administrative performance within a hospital to promote quality and safe care. The benefits of computers and laptops to medical care are widely accepted; however, physicians have started adopting and utilizing new media tools as a part of their practices.

Gbolahan Olasina and Tobi Popoola (2014) explain that use of information technology supports in information processing, decision making and records keeping in the health sector and level of adoption varies according to health professionals, especially the doctors.

Fiona Chew, William Grant and Rohit Tote (2004) denote that information technology has enabled health professionals to obtain and share increased amounts of health care information and to track and monitor diseases. In addition to this, the internet has allowed physicians all over the world to collaborate, communicate, and interact with each other. Increasingly, physicians use online databases to search for the latest information on clinical protocols in different medical specialties, for patient management, to consult with specialists and seek continuing medical education.

Communication technologies increase the ability of healthcare providers to improve patient care, reduce cost, streamline processes, and comply with government rules and regulation by providing access to real-time data at

the point-of-care (Kalorama, 2009). In short, communications technology assists the healthcare providers by enabling physicians and nurses to expedite access to high-risk patients' information anytime, anywhere, to save their lives. Therefore, the patients may give more attention to their health as well as foster closer relationship with the caregivers (Chao et al., 2007).

1.3 The importance of the present investigation

Information and communications technologies (ICTs) are playing a critical role in the improvement of health care sector in the developing countries Okpalla, Chidimma (2015) by providing new and more efficient ways of accessing, communicating, and storing information, ICTs are being a bridge between health professionals and the communities. They serve the producers of health research and the practitioners who need it. Through the development of databases and other applications, ICTs also provide the capacity to improve health system efficiencies and prevent medical errors.

The usage of ICT differs between the developed and developing countries. While developed countries have invested heavily in the ICT integration and made it easy and possible for the medical professionals to have access to the latest updates while in the developing countries, they are lacking behind when compared to the developed countries due to economic, social and infrastructural limitations. The information technology knowledge and computer skills among medical doctors are higher in developed countries while comparing with developing countries (Kommalage and Gunawardena, 2008).

Though, India is a developing country, but adoption of ICT is very high comparing with other developing countries. Pichandy, Natchimuthu (2014) states that India's ICT revolution began in the late 1980's when Prime Minister Rajiv Gandhi and Pitroda implemented the New Telecommunication Policy (NTP) with a missionary zeal, diffusing it to the grass roots level. This made telecommunication facility within the reach and access of the common people of India. It is no wonder that India is now a leading ICT global resource base. The present investigation throws a light on the usage of information communication technology in the field of medicine by medical doctors to enhance their profession.

1.4 Theoretical background

ICT uses by doctors offer an opportunity to improve the coordination and quality of care. Information Communication Technologies allow doctors access to calling capability, access to e-mail and the internet for

research and communication, access to word processors and presentation documents, electronic prescription and access to patient records. In order for these opportunities to be realized, doctors must first choose to adopt and use information communication technology as such; studies have used theoretical constructs from the technology acceptance model (TAM) and the innovation diffusion theory (IDT).

Technology Acceptance Model (TAM) has been used by the researchers for the study, as it is most widely researched theoretical model used to explain adoption of new systems and other information technologies. TAM, based on the theory of Reasoned Action (Fishbein and Ajzen, 1980), is a simple model of IT adoption that claims that the overall IT acceptance or utilization is based on users' beliefs like (a) system's perceived usefulness (PU) and (b) systems' perceived ease-of-use (PEOU), which are the major impact factors for their (c) attitude towards use (ATT) and also (d) behavioral intentions to use (BI).

Diffusion of innovation has been widely applied in disciplines such as education, sociology, communication, agriculture, marketing, and information technology, etc. (Rogers, 1995; Karahanna, et al., 1999; Agarwal, Sambamurthy & Stair, 2000). An innovation is "an idea, practice, or object that is perceived as new by an individual or another unit of adoption" (Rogers, 1995). Diffusion, on the other hand, is "the process by which an innovation is communicated through certain channels over time among the members of a social system" (Rogers, 1995). Therefore, the IDT theory argues that "potential users make decisions to adopt or reject an innovation based on beliefs that they form about the innovation" (Agarwal, 2000).

The investigators try to attempt to use the most widely applied theoretical model in the Information Systems field, the Technology Acceptance Model (TAM) innovation diffusion theory (IDT). The study aims at evaluating the attitude of medical doctors towards the use of technology in the field of medicine to enhance their knowledge and for an easy work culture.

2. Objective of the Study

- To identify the usage of computer for maintaining database and using software among medical doctors.
- To identify the usage of internet for accessing e-mails and website among medical doctors.
- To identify the usage of mobile phone for accessing mobile application and short message service (SMS) among medical doctors.

3. Review of Literature

The entire universe started to adopt E-Health environment in a smooth way. In fact, there is a smooth transition to the new technological atmosphere, particularly towards the medical professionals. Information Communication Technology is becoming an essential part of health department, just as they are a part of all other aspects of life. In the early periods adoption of information communication technology was intermittent. But today in this techno world, particularly in developing countries, the adoption is little bit higher while comparing with others.

Hiroshi Takeda et al (2003): health care has always tried to make use of the capabilities of emerging technologies so as to improve the quality of treatment. Hospital computer information system, intranet and other information communication technologies (ICT) increasingly robust communication in the health care environment. In the early days, ICT contributed mainly to the timely and efficient communication of care data. Now its attention is turning to improve quality and efficiency in health care by using on-line clinical data acquisition and processing.

If we notice the reality of information, processing in health care environment for past several years, we can identify that there has been a great change over from paper-based processing and storage to computer based processing and storage R. Haux, E. Ammenwerth et al (2002). This helps the doctor to trace the history of the patient very easily even though the patient visited the hospital long back.

ICT literacy consists of the experience and ability to operate internet, mobile, computers, including knowing the structures of computer software and hardware, having the skills to operate computer software, and applying computer usage to social issues (Li, 2008).

3.1 Computer/ Database Usage

The amount of information processing in hospitals, especially in larger ones, should not be underestimated. R. Haux, A. Winter, et al. (2004) it has many advantages like easy accessible, there is no need for big place to store the data or need not to worry about maintaining the paper based data base were possible for more risk .

A Pamela Lewis Dolan (2012) Acceptance of computer has grown rapidly among medical professional, according to Manhattan Research's "Taking the Pulse U.S. 2012" survey of 3,015 physicians in 25 specialties. The survey, conducted in the first three months of 2012, found that 62% of physicians have their own computer; there is growth of 27% in 2011, by comparison, most surveys put

electronic health record use by medical doctors at around 50%, and that has required federal incentive programs to help get adoption to that mark.

Johanna Viitanen and Hannele Hypponen (2010) point out that today, hundreds of information and communication technology (ICT) systems are used in healthcare organisations to serve physicians and other professionals in their daily work with patients. These systems cover a broad range of applications, from widely used electronic health records (EHR) and computerised physician order entry (CPOE) systems. Among other industries, healthcare has already profited extensively by the development of ICT.

Marc Berg (2013) stated in this article that "We can make systems that help professionals do their work better: providing reminders, allowing free and fast communication, allowing fast access to patient information and so forth. On the other hand, we can also make systems that require meticulous data entry for the sake of "completeness", or that help managers' overview and control the work of professionals."

Isabelle Vedel (2011) concludes in her study that different user profiles drawn from the dynamics of implementation are linked to different sets of perceived drivers and barriers that evolve over time. Certain factors favour the decision of adopting Da Vinci early on: e.g. user skills and the system's expected ease of use and usefulness. Certain concerns hinder its adoption: e.g. perceived negative impact on the doctor-patient relationship. As computer is one of the most important gadgets in the informative world the internet also plays vital role in bridging the knowledge among the people.

Adrian Gropper (2011) explores software tools are yet another new technology competing for the attention of physicians. Medical software is evolving rapidly from a record-keeping tool to a communications system to a source of decision support and plays the role of a medical device or clinical service.

Shinji Kobayashi (2012) indicates, in many hospitals they have adopted information systems software to manage clinical practice. Commonly, a hospital needs integrated EHR to administer clinical information from subsystems for departments, such as laboratory data, pharmacy, radiology section etc.

According to supporting literature, researchers seek to determine usage of information and communication technology tools, computer or laptops for maintaining database. Therefore, first two research questions were raised:

RQ1: Do medical practitioners prefer using computers/laptops for database management systems?

RQ2: Do medical practitioners prefer using computers/laptops for accessing software related to their profession?

3.2 Internet Usage

The Internet has become the world's biggest library where retrieval of scientific resources can be done within minutes. Young adults are heavy users of internet. It is integrated into their regular communication habit and has transformed as an ordinary thing just like telephones or televisions. Mainly this internet is being accessed through internet modem which is a fixed device or through internet data card, which is a portable device.

Benjamin Hughesa (2009) states that physicians use the internet far more than the general public, and although physicians still prefer to consult with colleagues on complex cases, internet is viewed as an increasingly important source of medical information among them. This use of the internet is being impacted by Web 2.0, a term that represents a second generation of web-based tools and communities (e.g., social-networking sites, wikis) which aim to facilitate user collaboration by user centric design

A study was conducted by researchers Priyadarshini M. Deodurg, Nandini T, Srikanth and Praveen Kumar Doddamani (2013). In the study, respondents was separated according to their professional grade, from professors to tutors. The Assistant professor/Senior residents (80%) were the respondents who use medical information in higher level; associate professors were in the second categories (71.7%). Assistant professor/Senior resident used the Internet daily for general as well as medical purposes. PubMed was the website mostly accessed by Assistant professors/Senior residents (81.9%), which was tailed by Tutors/Junior residents (79.5%). Majority of the doctors had access to internet and was using it for both medical and general purposes.

Access and use of internet to seek health related information among medical doctors is important to provide a high quality of health services and to solve various health issues. In their medical practice, "physicians experience very specific information needs, in relation to which precision, reliability and promptness are fundamental aspects" (Martinez and Oddone 2008).

With the development of technology, the practice has started to change through the years. Some recent studies have reported Internet or electronic resources as popular sources of information for physicians. A study by Jackson

et al. (2007) on the information-seeking behaviors of health and social care professionals in Barnsley, England, showed that the usage of new media is high among professionals, followed by verbal queries to coworkers, libraries or paper materials. In the new scenario the internet usage rate has become higher because of the mobile phone revolution. The smart phones started to replace the desktops. With the help of smart phones, doctors are able to access their data very easily without any hindrance. There are many new medical applications coming up day by day which aid them in this.

Terez Malka and Chad S. Kessler (2015) points out e-mail is now a primary method of correspondence in health care, and proficiency with professional e-mail use is a vital skill for physicians. Physicians use e-mail for a multitude of purposes: to obtain consults, both formal and "curbside"; communicate with patients; collaborate on scholarly projects; perform administrative duties; and conduct routine communication.

Jaffar M. A. Bareeq (2002) indicates that through e-mail doctors receive the latest advance in medicine from their respective societies around the world. Doctors can read their medical journal on the Internet before they receive their hard copy and it fulfill an important function as communicating media between the professional societies and their members. Many pharmaceutical and medical instrument companies send their information about their most recent drug or gadgets through emails. The latest advance in medicine and professional decision that may affect his practice is sent by emails.

With the extent of available literature on usage of internet for communicating through e-mail and for gathering information from websites the following questions were raised.

RQ3: Do medical practitioners prefer using internet for sending and receiving e-mails?

RQ4: Do medical practitioners prefer using internet to access websites for gathering information?

3.3 Mobile Usage

Rajesh R Mane, R.V. Kulkarni and Pallavi M. Dessai (2014) observe that smart phones, both i-Phones and Androids, have changed the way medicine is practiced on many levels. The smart phones are used to run apps, which are special software programs for various purposes, such as the following: functions in image viewing, diagnostics, remote monitors and microscope.

In the increasing development of mobile health care system yields the largest growth among mobile users and

there are few studies on mobile healthcare alert system that delivers the proper timing and emergency case alerts. Ruchi Dass (2012) exposes that there are 20,000 plus m-Health applications in the major app stores today, and by 2015, it is projected that there will be 500 million m-Health application users worldwide. The access of smart phones in India is growing at a great pace, with 40 percent of people using internet daily through smart phones; 34 percent of these users log in for more than half an hour each day.

Karl Frederick Braekkan Payne, et al. (2012) argues that smartphone usage has disseminated too many settings including that of healthcare with numerous potential and realized benefits. The ability to download custom-built software applications (apps) has created a new wealth of clinical resources available to healthcare staff, providing evidence-based decisional tools to reduce medical errors.

Munish Aggarwal (2012) explores in his recent survey research, India stands 2nd largest country in mobile phone purchase, after China and the consumer base is expanding in India at a faster pace than that of China. Studies from various parts of the world have shown adverse physical and psychological consequences of excessive use of mobile phones applications. However, no systemic study is available that has evaluated the abuse and dependence potential of mobile phone use in India.

According to the results of 'Healthcare Data Solutions' recent survey (2012), leading the way are doctors, a group known for early adoption of technology, 68 percent of who are already using mobile applications in their practice. It also denotes that Mobile usage among older doctors is surprisingly high.

Short Message Services (SMS) technology offers advantages in terms of more convenient communication between patient and physician, including transmission of life style information, diagnosis in emergencies, clinical test results and promotion of self-management for those who have been diagnosed with chronic illnesses (Qasim Hameed Afridi, 2011).

Med Adherence (2011) explains through SMS, healthcare providers can help their patients stay connected with medical professionals on an immediate basis. Some use cases include patients receiving confirmation messages when an appointment is made, a reminder message with a link to directions in Google Maps and follow-up communication to remind patients of an upcoming appointment. By sending alert notifications through text messaging, healthcare providers are able to stay better connected with their patients.

In general the history of this literature has attributed to the usage of smart phones for communication purposes have provided more substantial elucidations. The following research questions have been raised.

RQ5: Do medical practitioners prefer using smart phones for accessing mobile applications?

RQ6: Do medical practitioners prefer using mobile phones to communicate through short message services?

4. Methodology

With the reference of review of literature it is denoted that adoption of information communication technology is comparatively good among the medical practitioners. Hence, the research steps into further investigation to know how the doctors in India, Tamil Nadu get adopted to the access of Information Communication Technology in the field of medicine.

According to literature review the researchers mooted the research questions for the study to understand how the medical practitioners use ICT tools in the field of medicine.

With the main objective of understanding the uses and effects of information and communication technology among the medical doctors across Tamil Nadu. At the first stage, the researcher took three major district of Tamil Nadu as Chennai the capital of the state, Madurai as a largest city in the state after to Chennai and third city Coimbatore because of medical facilities prevails in the city. At the third stage, the researchers identified the regular users and administrated instrument developed for the study to the medical doctors. At the fourth stage, the researchers explained the nature of research and the medical professionals are requested to respond to the issues raised in the questionnaire. Thus, using the stratified random sampling, care was taken to include a cross section of the population who use the ICT. 427 samples

that are completely answered were included for the study. Usage and effects of ICT such as computer database system, internet, and mobile phone were taken as dependent variable for the investigation and demographic variables such as age, gender, education qualification, experience and occupation were also included in the study.

4.1 Development of the Scale

As a first step, the Researcher, from the extensive scrutiny of the review of literature, identified the major dependent variables the usage of ICT (Computer database usage, internet usage and mobile usage) and users' demographics (gender, age, education qualification, occupation and experience). The Researcher framed descriptive questions to elicit the nature of ICT usage.

At the second level, in order to collect data to measure the dependent variables, 7 Statements were included on the lines of the Likert type five-point scale (most often, often, rarely, very rarely and never). The Statements were structured on the usage of ICT tools and issues so as to bring about internal consistency and to prevent the respondents from answering the questions mechanically.

5. Data Collection

The study was conducted using a stratified multi-stage sampling procedure for collecting data from medical professionals. The sample for the present study was gathered from three types of medical industries namely: Government, Private and Own Clinic.

The researchers collected a total sample from 510 respondents. After careful scrutiny it was found that some of the respondents did not answer some of the questions and some of the items were incomplete. After removing those incomplete samples, the final tally of respondents included in the study is 427.

Table: 1. Gender * Age Cross-tabulation

	25-35	36-45	46 and Above	Total
Male	95	103	26	224
Female	101	67	35	203
Total	196	170	61	427

5.1 Sample Characteristics

According to the cross tabulation table above it is projected that there are 224 male out of 427 samples selected for the study in which 95 respondents belong to the age group of 25 to 35 years, 103 male samples

belongs to the age group of 36 to 45 years. 26 male were belongs to the age group of 46 and above. When it comes to female there are 196 female respondents in the age group of 25 to 35 years and 103 female samples belongs to 36 years to 45 years. 26 respondents belong to the age group of 46 and above.

Table: 2. Education * Occupation Cross-tabulation

	Government	Private	Own Clinic	Total
UG	66	35	22	123
PG	66	74	36	176
OTHERS	34	66	28	128
TOTAL	166	175	86	427

The above table reveals about the occupation and educational qualification of the respondents for the study. Out of 427 sample 166 respondents belongs to government sector, 175 respondents works in private hospitals and 86 respondents have their own clinic and if we see their education qualification 123 member belongs to under graduation in which 66 are working as government doctors, 35 of them works in private hospital

and 22 of them have their own clinic, out of 427 respondents 176 of them finished their post-graduation works in all the three category with the number 66 works in government, 74 are in private sector and 36 keep their own clinic and 128 medical doctors studied above post-graduation also there in various sectors such as 34 in government, 66 doctors are in private and 28 focus their own clinic.

Table: 3. Gender * Computer-Internet-Mobile Cross-tabulation

	Computer			Internet			Mobile		
	Not Using	Using	Total	Not Using	Using	Total	Not Using	Using	Total
Male	60	164	224	53	171	224	34	190	224
Female	50	153	203	63	140	203	32	171	203
Total	110	317	427	116	311	427	66	361	427

The above table reveals the usage of computer, internet and mobile phone in terms of genders category. In whole of 427 samples in male, 60 do not use computer for their work and 164 male use computers in their work place which denotes that there are more adoptions in using computer. When we see the female respondents 50 of them not using the computer and 153 of them use it official so it denotes the usage of computer is more towards the doctors.

If we see the usage of internet the same trend is prevails, out of 224 total male samples 171 use the internet and 53 of them does not turn up to internet. In the mean while if see the female respondents users are more with 140 members use internet and only 63 are not using. This again proves that the usage of internet is higher and female doctors are using internet equally to male doctors.

If we see the mobile usage only 66 of total 427 respondents are not using mobile phone. Here 190 male and 171 female respondents are constantly using mobile phones. Usage of all this three ICT tools denotes that there are more adoptions towards the ICT tools for various reasons. The main motive of this test is to find how many respondents are still not adopting the ICT tools and here with we finds that there are people still not using ICT.

The independent variable, age included three groups: 25 to 35 years ($M=3.78$, $SD=1.352$, $n=196$), 36 to 45 years ($M=3.84$, $SD=1.177$, $n=170$), 45 years and above ($M=3.21$, $SD=1.250$, $n=61$). The ANOVA was significant, $F(2, 425) = 5.5$, $p < .05$. Thus, there is significant evidence in usage of software by doctors based on their age (Table 4).

The independent variable, age included three groups: 25 to 35 years ($M=3.91$, $SD=1.146$, $n=196$), 36 to 45 years ($M=4.04$, $SD=.981$, $n=170$), 45 years and above ($M=3.69$, $SD=1.253$, $n=61$). The ANOVA was not significant, $F(2, 425) = 3.6$, $p > .05$. Thus, there is no significant difference in usage of computer for data storage by doctors based on their age.

The independent variable, age included three groups: 25 to 35 years ($M=2.74$, $SD=.951$, $n=196$), 36 to 45 years ($M=2.73$, $SD=.761$, $n=170$), 45 years and above ($M=2.34$, $SD=.958$, $n=61$). The ANOVA was significant, $F(2, 425) = 7.8$, $p < .05$. Thus, there is a significant evidence difference in usage of email by doctors based on their age.

The independent variable, age included three groups: 25 to 35 years ($M=4.01$, $SD=.934$, $n=196$), 36 to 45 years ($M=3.98$, $SD=.910$, $n=170$), 45 years and above

5.2 Results of the Study

Table: 4. Age wise Table of ANOVA

Independent variables	Software		Computer data storage		Email		Website		Mobile Application		Mobile SMS	
Age	F =5.540 Sig. =.004		F =7.757 Sig. =.000		F =3.563 Sig. =0.29		F =11.724 Sig. =.000		F =3.847 Sig. =0.22		F =10.911 Sig. =.000	
Groups	Software		Computer data storage		Email		Website		Mobile Application		Mobile SMS	
	NR	Mean Value	NR	Mean Value	NR	Mean Value	NR	Mean Value	NR	Mean Value	NR	Mean Value
25 to 35 years	196	3.78	196	2.74	196	3.91	196	4.01	196	3.61	196	2.95
36 to 45 years	170	3.84	170	2.73	170	4.04	170	3.98	170	3.58	170	2.84
46 years and above	61	3.21	61	2.34	61	3.69	61	3.34	61	3.16	61	2.10
Total	427	3.72	427	2.68	427	3.93	427	3.90	427	3.54	427	2.78
	SD Value		SD Value		SD Value		SD Value		SD Value		SD Value	
25 to 35 years	1.352		1.146		.951		.934		1.054		1.304	
36 to 45 years	1.177		.981		.761		.910		1.190		1.198	
46 years and above	1.250		1.253		.958		1.237		1.241		1.274	

(M=3.34, SD=1.237, n=61). The ANOVA was significant, $F(2, 425) = 11.7$, $p < .05$. Thus, there is a significant difference in usage of website by doctors based on their age.

The independent variable, age included three groups: 25 to 35 years (M=3.61, SD=1.054, n=196), 36 to 45 years (M=3.58, SD=1.190, n=170), 45 years and above (M=3.16, SD=1.241, n=61). The ANOVA was not significant, $F(2, 425) = 3.6$, $p > .05$. Thus, there is no significant difference in usage of mobile applications by doctors based on their age.

The independent variable, age included three groups: 25 to 35 years (M=2.95, SD=1.304, n=196), 36 to 45 years (M=2.84, SD=1.198, n=170), 45 years and above (M=2.10, SD=1.274, n=61). The ANOVA was significant, $F(2, 425) = 10.9$, $p < .05$. Thus, there is a significant difference in usage of mobile SMS by doctors based on their age.

The independent variable, education included three groups: under graduate (M=2.85, SD=1.385, n=123), post graduate (M=3.48, SD=1.209, n=176), others (M=3.20, SD=1.199, n=128). The ANOVA was significant, $F(2, 425) = 9.2$, $p < .05$. Thus, there is a significant difference in usage of software by doctors based on their education (Table 5).

The independent variable, education included three groups: under graduate (M=3.81, SD=.935, n=123), post graduate (M=3.86, SD=1.084, n=176), others (M=3.45, SD=1.272, n=128). The ANOVA was significant, $F(2, 425) = 5.7$, $p < .05$. Thus, there is a significant evidence to reject the null hypothesis and conclude there is a significant difference in usage of computer data storage by doctors based on their education.

The independent variable, education included three groups: under graduate (M=3.69, SD=.993, n=123), post graduate (M=4.14, SD=.817, n=176), others (M=3.87, SD=.807, n=128). The ANOVA was significant, $F(2, 425) = 9.9$, $p < .05$. Thus, there is a significant difference in usage of email by doctors based on their education.

The independent variable, education included three groups: under graduate (M=3.06, SD=1.027, n=123), post graduate (M=2.87, SD=.925, n=176), others (M=3.79, SD=1.032, n=128). The ANOVA was significant, $F(2, 425) = 5.2$, $p < .05$. Thus, there is a significant difference in usage of website by doctors based on their education.

The independent variable, education included three groups: under graduate (M=3.46, SD=.969, n=123),

Table: 5. Age wise Table of ANOVA

Independent variables	Software		Computer data storage		Email		Website		Mobile Application		Mobile SMS	
Education	F =9.279 Sig. =.000		F =5.761 Sig. =.003		F =9.959 Sig. =.000		F =5.206 Sig. =.006		F =7.003 Sig. =.001		F =8.983 Sig. =.000	
Groups	Software		Computer data storage		Email		Website		Mobile Application		Mobile SMS	
	NR	Mean Value	NR	Mean Value	NR	Mean Value	NR	Mean Value	NR	Mean Value	NR	Mean Value
Under-Graduation	123	2.85	123	3.81	123	3.69	123	3.76	123	3.46	123	3.06
Post-Graduation	176	3.48	176	3.86	176	4.14	176	4.09	176	3.77	176	2.87
Others	128	3.20	128	3.45	128	3.87	128	3.79	128	3.29	128	2.41
Total	427	3.22	427	3.72	427	3.93	427	3.90	427	3.54	427	2.78
	SD Value		SD Value		SD Value		SD Value		SD Value		SD Value	
Under-Graduation	1.385		.935		.993		1.027		.969		1.404	
Post-Graduation	1.209		1.084		.817		.925		1.135		1.237	
Others	1.199		1.272		.807		1.032		1.256		1.153	
Total	1.284		1.117		.886		.997		1.145		1.288	

post graduate (M=3.77, SD=1.135, n=176), others (M=3.29, SD=1.256, n=128). The ANOVA was significant, $F(2, 425) = 7.0$, $p < .05$. Thus, there is a significant difference in usage of mobile applications by doctors based on their education.

The independent variable, education included three groups: under graduate (M=3.06, SD=.1.404, n=123), post graduate (M=2.87, SD=1.237, n=176), others (M=2.41, SD=1.153, n=128). The ANOVA was significant, $F(2, 425) = 8.9$, $p < .05$. Thus, there is a significant difference in usage of mobile SMS by doctors based on their education.

The independent variable, occupation included three groups: government (M=3.17, SD=1.284, n=166), private (M=3.64, SD=1.146, n=175), own clinic (M=2.43, SD=1.174, n=86). The ANOVA was significant, $F(2, 425) = 29.1$, $p < .05$. Thus, there is a significant difference in usage of software by doctors based on their occupation (Table 6).

The independent variable, occupation included three groups: government (M=3.79, SD=1.105, n=166), private (M=3.75, SD=1.239, n=175), own clinic (M=3.53, SD=.836, n=86). The ANOVA was not significant, $F(2, 425) = 1.5$, $p > .05$. Thus, there is a significant difference in usage of computer data storage by doctors based on their occupation.

The independent variable, occupation included three groups: government (M=4.01, SD=.936, n=166), private (M=3.94, SD=.865, n=175), own clinic (M=3.76, SD=.750, n=86). The ANOVA was not significant, $F(2, 425) = 2.2$, $p > .05$. Thus, there is a significant difference in usage of email by doctors based on their occupation.

The independent variable, occupation included three groups: government (M=4.00, SD=.991, n=166), private (M=3.92, SD=1.031, n=175), own clinic (M=3.67, SD=.913, n=86). The ANOVA was significant, $F(2, 425) = 3.1$, $p < .05$. Thus, there is a significant difference in usage of website by doctors based on their occupation.

The independent variable, occupation included three groups: government (M=3.73, SD=1.040, n=166), private (M=3.52, SD=1.231, n=175), own clinic (M=3.19, SD=1.079, n=86). The ANOVA was significant, $F(2, 425) = 6.7$, $p < .05$. Thus there is a significant difference in usage of mobile applications by doctors based on their occupation.

The independent variable, occupation included three groups: government (M=3.03, SD=1.300, n=166), private (M=2.69, SD=1.295, n=175), own clinic (M=2.51, SD=1.176, n=86). The ANOVA was significant, $F(2, 425) = 5.5$, $p < .05$. Thus, there is a

Table: 6. Occupation wise Table of ANOVA

Independent variables	Software		Computer data storage		Email		Website		Mobile Application		Mobile SMS	
Occupation	F =29.136 Sig. =.000		F =1.559 Sig. =.211		F =2.288 Sig. =.103		F =3.098 Sig. =.046		F =6.719 Sig. =.001		F =5.585 Sig. =.004	
Groups	Software		Computer data storage		Email		Website		Mobile Application		Mobile SMS	
	NR	Mean Value	NR	Mean Value	NR	Mean Value	NR	Mean Value	NR	Mean Value	NR	Mean Value
Government	166	3.17	166	3.79	166	4.01	166	4.00	166	3.73	166	3.03
Private	175	3.64	175	3.75	175	3.94	175	3.92	175	3.52	175	2.69
Own Clinic	86	2.43	86	3.53	86	3.76	86	3.67	86	3.19	86	2.51
Total	427	3.22	427	3.72	427	3.93	427	3.90	427	3.54	427	2.78
	SD Value		SD Value		SD Value		SD Value		SD Value		SD Value	
Government	1.284		1.105		.963		.991		1.040		1.300	
Private	1.146		1.239		.865		1.031		1.231		1.295	
Own Clinic	1.174		.836		.750		.913		1.079		1.176	
Total	1.284		1.117		.886		.997		1.145		1.288	

significant difference in usage of mobile SMS by doctors based on their occupation.

The independent variable, experience included four groups: 1 to 5 years (M=3.18, SD=1.288, n=144), 6 to 10 years (M=3.07, SD=1.496, n=92), 11 to 16 years (M=3.68, SD=.969, n=115), 16 years and above (M=2.76, SD=1.221, n=76). The ANOVA was significant, $F(3, 424) = 9.0$, $p < .05$. Thus, there is a significant difference in usage of software by doctors based on their experience (Table 7).

The independent variable, experience included four groups: 1 to 5 years (M=3.87, SD=1.092, n=144), 6 to 10 years (M=3.91, SD=1.045, n=92), 11 to 16 years (M=3.76, SD=1.081, n=115), 16 years and above (M=3.16, SD=1.144, n=76). The ANOVA was significant, $F(3, 424) = 8.6$, $p < .05$. Thus, there is a significant difference in usage of computer data storage by doctors based on their experience.

The independent variable, experience included four groups: 1 to 5 years (M=3.92, SD=.947, n=144), 6 to 10 years (M=3.99, SD=.871, n=92), 11 to 16 years (M=4.08, SD=.807, n=115), 16 years and above (M=3.63, SD=.846, n=76). The ANOVA was significant, $F(3, 424) = 4.2$, $p < .05$. Thus, there is a significant difference in usage of email by doctors based on their experience.

The independent variable, experience included four groups: 1 to 5 years (M=3.96, SD=.897, n=144), 6 to

10 years (M=4.07, SD=1.146, n=92), 11 to 16 years (M=4.08, SD=.892, n=115), 16 years and above (M=3.47, SD=1.039, n=76). The ANOVA was significant, $F(3, 424) = 6.1$, $p < .05$. Thus, there is a significant difference in usage of website by doctors based on their experience.

The independent variable, experience included four groups: 1 to 5 years (M=3.77, SD=.980, n=144), 6 to 10 years (M=3.45, SD=1.083, n=92), 11 to 16 years (M=3.59, SD=1.290, n=115), 16 years and above (M=3.12, SD=1.166, n=76). The ANOVA was significant, $F(3, 424) = 5.9$, $p < .05$. Thus, there is a significant difference in usage of mobile applications by doctors based on their experience.

The independent variable, experience included four groups: 1 to 5 years (M=2.86, SD=1.180, n=144), 6 to 10 years (M=3.07, SD=1.381, n=92), 11 to 16 years (M=2.66, SD=1.176, n=115), 16 years and above (M=2.49, SD=1.456, n=76). The ANOVA was significant, $F(3, 424) = 3.4$, $p < .05$. Thus, there is a significant difference in usage of mobile SMS by doctors based on their experience.

The result of t-test seen in Table 8 reveals there is no significant difference between male and female respondents in the usage of software, email, mobile applications and mobile SMS, and also the table reveals that there is a significant difference between male and

Table: 7. Experience wise Table of ANOVA

Independent variables	Software		Computer data storage		Email		Website		Mobile Application		Mobile SMS	
Experience	F =9.068 Sig. =.000		F =8.653 Sig. =.000		F =4.172 Sig. =.006		F =6.106 Sig. =.000		F =5.866 Sig. =.001		F =3.391 Sig. =.018	
Groups	Software		Computer data storage		Email		Website		Mobile Application		Mobile SMS	
	NR	Mean Value	NR	Mean Value	NR	Mean Value	NR	Mean Value	NR	Mean Value	NR	Mean Value
1 to 5 years	144	3.18	144	3.87	144	3.92	144	3.98	144	3.77	144	2.86
6 to 10 years	92	3.07	92	3.91	92	3.99	92	4.07	92	3.45	92	3.07
11 to 16 years	115	3.68	115	3.76	115	4.08	115	3.96	115	3.59	115	2.66
16 years and above	76	2.76	76	3.16	76	3.63	76	3.47	76	3.12	76	2.49
Total	427	3.22	427	3.72	427	3.93	427	3.90	427	3.54	427	2.78
	SD Value		SD Value		SD Value		SD Value		SD Value		SD Value	
1 to 5 years	1.288		1.092		.947		.897		.980		1.180	
6 to 10 years	1.496		1.045		.871		1.146		1.083		1.381	
11 to 16 years	.969		1.081		.807		.892		1.290		1.176	
16 years and above	1.221		1.144		.846		1.039		1.166		1.456	
Total	1.284		1.117		.886		.997		1.145		1.288	

Table: 8. Gender wise Table 'T' test

Groups	Software		Computer data storage		Email		Website		Mobile Application		Mobile SMS	
	NR	Mean Value	NR	Mean Value	NR	Mean Value	NR	Mean Value	NR	Mean Value	NR	Mean Value
Male	224	3.26	224	3.81	224	3.95	224	3.87	224	3.67	224	2.91
Female	203	3.16	203	3.63	203	3.91	203	3.94	203	3.38	203	2.65
Total	427	3.42	427	7.44	427	7.86	427	7.81	427	7.05	427	5.56
'F' value	F =1.255		F=8.969		F=1.829		F=11.565		F=3.854		F=.060	
Sig. Value	Sig. =.263		Sig. =.003		Sig. =.177		Sig. =.001		Sig. =.050		Sig. =.807	
Variable	T				Df				Sig. (2-tailed)			
Software	.810				425				.418			
Computer Data storage	1.688				425				.092			
Email	.466				425				.642			
Website	-.676				425				.499			
Mobile Application	2.631				425				.009			
Mobile SMS	2.060				425				.040			

female respondents in the usage of computer data storage and website usage by doctors.

The Mean value from the table reveals that in case of computer data storage male respondent's (M-3.81) use more than of Female respondent's (M-3.63). The Mean value from the table reveals that in case of using websites

female respondent's (M-3.94) use more than of male respondent's (M-3.87).

Thus, it can infer that there is a significant influence between male and female respondents on the usage of computer data storage and website usage by doctors.

6. Discussion

With an intense penetration of the digital media, it can be perceived that there has been a transition towards the usage of information communication technology among medical doctors. The medical doctors in particular have easy access to the information communication technology at their office and also at their houses.

Through this research, it has been discovered that the usage of computer and software for database management by medical doctors are comparatively high this indicates the level of using information communication technology tools is higher among medical doctors, in particular doctors who are in the middle age, educated up to post-graduation and above, working in private and government sectors, having an experience above five years use the computer database system more. When it comes to gender, male dominate their female counterparts in using it.

Dolan (2012) study shows that acceptance of computer has grown rapidly among medical professionals. According to Manhattan Research's survey conducted in 2012, it is found that 62% physicians have their own computers; there is a growth of 27% in 2011. By comparison, most surveys put electronic health record use by medical doctors at around 50%, and that has required federal incentive programs to help get adoption to that mark. In another study by Michelle and Trevor (2013) conclude that Vietnamese doctors could successfully navigate and use a computerized CDS (software) tool written in English, as measured by improved performance on a written clinical exam testing knowledge on pediatric emergencies.

Further the result of the study explores: usage of internet for communication and gathering information by medical doctors are comparatively high and this indicates that the usage level of internet is high in developing countries like India. Younger medical doctors in the age group of 25 to 35 years, doctors who are post-graduates, those working in government sectors and those who have experience of 11 to 16 years make the utmost use of the internet. While it comes to gender, both male and female doctors use internet in a same level. According to the research conducted by Priyadarshini, Deodurg, et al. (2013) doctors who are assistant professors/senior residents (80%) were the respondents who use medical information in a higher level; associate professors were in the second category (71.7%). Assistant professors/Senior residents used the internet every day for general as well as medical purposes. PubMed was the website mostly accessed by

Assistant professors/Senior residents (81.9%), which was trailed by tutors/junior residents (79.5%). Majority of the doctors had access to internet and was using it for both medical and general purposes.

In a yet another study, Shou and Dennis (2005) predicated that E-mail communication was found to be a more convenient form of communication among doctors. Satisfaction was attained at both the ends of patients and physicians in the e-mail group. The volume of messages and the time spent answering messages for the e-mail group physicians was not increased. E-mail has the potential to improve the doctor-patient relationship as a result of better communication.

When it comes to the usage of mobile phones, 66 of the total respondents do not use mobile phones to communicate with the patients which again denotes that the level of usage of the ICT tools to be higher among the doctors in their profession. Doctors who are in the age group of 25 to 36, those who have finished their under graduation and post-graduation, those working in government sector, those who have experience of 1 to 10 years and male respondents use mobile phones more frequently while comparing with others. Ruchi Dass (2012) exposes that there are 20,000 plus m-Health applications in the major app stores today, and by 2015, it is projected that there will be 500 million m-Health application users worldwide. The access of smart phones in India is growing at a great pace, with 40 percent of people using internet every day through smart phones; 34 percent of these users log in for more than half an hour each day. Carole and Suzanne (2012) find out in their result that sharing best practices and providing strategic directions will allow the building of evidence for the use of mobile health technologies. Consequently, the promises of using mobile phones and SMS may translate into an equitable improvement in health.

7. Conclusion

The overall result of the study denotes that there is high evolution in using ICT tools. On the whole, 317 doctors of 427 collected samples are using computers in their work place denoting that there is a good transition in using computers. The usage of internet is also high: out of 427 samples, 311 users use internet for various reasons. This again proves that the usage of internet is higher among doctors for strengthening their professional knowledge. Only 66 of total 427 respondents do not use mobile phones, so the level of communication between the medical practitioners and others are good and smart phones help them in many ways. With these kinds of

usages of ICT tools the researcher finds significant results in using and accessing computers with software or for data storage, internet for various reasons like accessing websites, online journals to get themselves updated, for communicating through emails and mobile phones for accessing apps and communicating through SMS with the co-workers and being in touch with the patients and monitoring their health development.

References

1. Adrian Gropper (2011). State of Art and Science. American Medical Association Journal of Ethics.
2. Advisor, D. D. (n.d.). Healthforehttp://ehealth. eletsonline.com/2012/03/ring-ofhealthcare/# sthash.NeFJ4s8j.dpuf.
3. Agarwal, R. (2000). Individual Acceptance of Information Technologies. Educational Technology Research and Development.
4. Ammenwerth, A. B. (2000). Mobile information and communication tools in the hospital. *Int J Med Inf*, 21-40.
5. Benjamin Hughes, I. J. (2009). Junior physician's use of Web 2.0 for information seeking and medical education: A qualitative study. *International Journal of Medical Informatics*.
6. Berg, M. are (2013). Patients and professionals in the information society: what might keep us awake in 2013. *International Journal of Medical Informatics*.
7. Carole Déglise and Suzanne Suggs (2012). Short Message Service (SMS) Applications for Disease Prevention in Developing Countries.
8. C. Pichandy, N. M. (2014). Factors Influencing The Information And Communication Technology (Ict) Professionals' Geographic Work Destination With Special Reference To Chennai.
9. Chao, C. C. (2007). An innovative mobile approach for patient safety services: The case of a Taiwan health care provider. *Technovation*.
10. Dolan, P. L. (2012). Doctors quick to adopt tablets into practice. <http://www.amednews.com/article/20120604/business/306049967/2/>.
11. Priyadarshini, M. and Deodurg, D. N. (2013). Internet Usage among Doctors in South India. *Journal of Scientific and Innovative Research*.
12. Fiona Chew, P., William Grant, E., & Tote, R. (2004). Doctors On-line: Using Diffusion of Innovations Theory to Understand Internet Use. *Medical Informatics*.
13. Hiroshi Takeda, Y. M. (2003). Health care quality management by means of an incident report system and an electronic patient record system. *International Journal of Medical Informatics*.
14. Isabelle Vedela (2011). Healthcare professionals' adoption and use of a clinical information system (CIS) in primary care: Insights from the Da Vinci study. *International Journal of Medical Informatics*.
15. Jackson, R. B. (2007). The information requirements and information-seeking behaviours of health and social care professionals providing care to children with health care needs: a pilot study. *Health Information and Libraries Journal*.
16. Jaffar M. A. Bareeq (2002). Bahrain Doctors in the Internet Age. *Bahrain Medical Bulletin*.
17. Johanna Viitanena, H. H. (2010). National questionnaire study on clinical ICT systems proofs: Physicians suffer from poor usability. *International journal of medical informatics*.
18. Kalorama (2009). Wireless Opportunities in Healthcare. Kalorama Information. *Journal of Technology Management & Innovation*.
19. Karahanna, E. S. (1999). Information technology adoption across time: A cross-sectional comparison of pre-adoption and post-adoption beliefs. *MIS Quarterly*.
20. Karl Frederick Braekkan Payne1 (2012). Smartphone and medical related App use among medical students and junior doctors in the United Kingdom (UK): a regional survey. *Medical Informatics and Decision Making*.
21. Kommalage, M. (2008). IT-based activity in physiology education: An experience from a developing country. *Advances in Physiology Education*.
22. Med Adherence (2011). MedAdherence connects doctors with patients via SMS program-Mobile. <http://www.mobilemarketer.com/cms/news/messaging/9877.print>
23. Michelle, Lin and Trevor, N. (2013). English-based Pediatric Emergency Medicine Software Improves Physician Test Performance on Common Pediatric Emergencies: A Multicenter Study in Vietnam. *Western Journal of Emergency Medicine*.

24. Munish Aggarwal, S. G. (2012). Mobile Phone Use by Resident Doctors: Tendency to Addiction-Like Behaviour. Reprinted from the German Journal of Psychiatry.
25. Okpalla, C. L. (2015). The role of Information and Communication Technology in Healthcare Management for Efficient Healthcare Delivery in Nigeria. *International Journal of Computer Trends and Technology*.
26. Popoola, G. O. (2014). Predictors of the Use of E-Medicine by Medical Doctors. *Health and Medical Informatics*.
27. Porn, L. (2002). Mobile computing acceptance grows as applications evolve. *Healthcare Financial Management*.
28. Predrag Klasnja, W. P. (2011). Healthcare in the pocket: Mapping the space of mobile-phone health interventions. *Journal of Biomedical Informatics*.
29. Qasim Hameed Afridi (2011). Impact of SMS Reminders on CBT Appointments. A dissertation to the University of Dublin, in partial fulfilment of the requirements for the degree of Master of Science in Health Informatics.
30. R. Haux, A. W. (2004). Strategic Information Management in Hospitals. An Introduction to Hospital Information Systems. Springer.
31. R. Haux, E. A. (2002). Health care in the information society: a prognosis for the year. *Int. J. Med. Inf*
32. Rajesh R. Mane, R. P. (2014). Development of an Electronic Patient Medical Record (e-PMR) App for Doctors Using Smart Phones. *International Journal of Computer Science and Information Technologies*.
33. Rhine, G. A. (2008). The level of Internet access and ICT training for health information professionals in sub-Saharan Africa. *Health Information and Libraries Journal*.
34. Rogers, E. M. (1995). *Diffusion of innovations* (4th Ed.). New York: Free Press.
35. Shinji Kobayashi (2012). Open Source Software Development on Medical Domain. <http://www.intechopen.com/books/modern-information-systems/open-source-software-in-medicine>
36. Shou Ling Leong and Dennis Gingrich (2005). Enhancing Doctor-Patient Communication Using Email: A Pilot Study. <http://www.jabfp.org>.
37. Solutions, H. D. (2012). Mobile Device Usage Patterns Among Physicians.
38. Terez Malka and Chad S. Kessler (2015). Professional e-mail communication among health care providers: Proposing evidence based guidelines. *Academic Medicine*.
39. Venkatesh V., M. M. (2003). 'User Acceptance of Information Technology: Toward a Unified View. *MIS Quarterly*.
40. Yi-Hsuan Lee, Y.-C. H.-N. (2011). Adding Innovation Diffusion Theory to the Technology Acceptance Model: Supporting Employees' Intentions to use E-Learning Systems . *Educational Technology & Society*.
41. Claudia, P. (2009). *Information and Communication Technologies*, New York: World Bank working paper, 176.
42. Drury, P. (2005). The eHealth agenda for developing countries. *World Hosp Health Services* 41: 38-40.
43. World Health Organization (2004). World Health Assembly Resolution on eHealth (WHA 58-28).

Our Contributors

Dr. Francis P. Barclay

*Journalist-psychologist and news artist.

Dr. C. Pichandy

Prof. & Head of the Department of Communication, PSG College of Arts and Science, Coimbatore, Tamil Nadu, India.

Anusha Venkat

Doctoral scholar, PSG College of Arts and Science, Coimbatore, Tamil Nadu, India.

Mamatha K. N.

Junior Research Fellow, Dept. of Journalism and Mass Communication, Karnataka, Women's University, Vijayapur.

Prof. Onkargouda Kakade

Chairperson, Dept. of Journalism and Mass Communication, Karnataka, Women's University, Vijayapur.

Dr. Rajesh Kumar

Associate Prof., School of Communication, Doon University, Dehradun, Uttarakhand, India.

Boobala Krishnan N.

Assistant Prof., Dept. of Visual Communication and Electronic Media, PSG College of Arts & Science, Coimbatore, Tamil Nadu, India

Dr. D. Boopathy

Associate Prof., Dept. of Journalism and Mass Communication, PSG College of Arts & Science, Coimbatore, Tamil Nadu, India

Dr. Anindya Deb

Assistant Prof., Central University of South Bihar.

Dr. Ambika Shankar Mishra

Assistant Professor, Centurion University of Technology and Management Paralakhemundi, Odisha

Dr. Deepak Upadhyaya

Assistant Professor, Department of Journalism and Mass Communication, Tripura University, Agartala.

Jayaseelan R.

Research Scholar, Department of Mass Communication and Journalism, PSG College of Arts and Science.

Invitation and Guidelines for Contributors

Pragyaan: Journal of Mass Communication, is a biannual refereed Journal of IMS Unison University, Dehradun. Its objective is to create a platform, where ideas, concepts and applications related to the field of Mass Communication can be shared. Its focus is on pure research, applied research and emerging issues in media.

The articles are invited from academicians, practitioners as well as research scholars.

Guidelines For Contributors

1. The whole document should be in Times New Roman, single column, 1.5 line spacing. A soft copy of the document formatted in MS Word 97 or higher versions should be sent as submission for acceptance.
2. Title of the paper should be bold 16", and all paragraph headings should be Bold, 12".
3. Author names should be in 12", Bold, followed by affiliations in normal 12" font size. Names of different authors must be in different rows. First author will be considered for all communication purposes.
4. First Page of the document should contain Title and name (s) of author(s) followed by 4-5 lines about each author. Nothing else should be written on this page.
5. The following pages should contain the text of the paper including: Title, Abstract, Keywords, Introduction, Subject Matter, Conclusion & References. Name (s) of author(s) should not appear on these pages to facilitate blind review.
6. Place tables/figures/images in text as close to the reference as possible. Table caption should be above the table. Figure caption should be below the figure. These captions should follow Times New Roman 11".
7. References should be in standard APA style, such as :
(a) Prabhakar, M. and Bhanawat, S. (2004). Human Rights and Media. Jaipur: University Book House.
(b) Subramani, R. and Alwin, R. (2012). Media coverage of Crime, Public perceptions and Human Rights Violations. Media Watch, Vol. 3, No. 2, July-Dec., pp. 57-61.
8. Articles which are published should not be reproduced or reprinted in any other form either in full or in part without the prior permission of the Editor.
9. Wherever copyrighted material is used, the author should be accurate in reproduction and obtain permission from the copyright holders, if necessary.
10. Papers presented or submitted in a seminar must be clearly indicated at the bottom of the first page.
11. A brief resume of the author (s) should accompany the research articles.
12. The authors are required to send a duly signed copyright undertaking by post after sending the soft copy of the manuscript. All manuscripts should be addressed to:

Editor

Pragyaan : Journal of Mass Communication
IMS Unison University, Dehradun
Makkawala Greens, Mussoorie Diversion Road
Dehradun - 248009, Uttarakhand (India)
Phone: 0135-3000600, 3000801/3
E-mail: pragyaan.masscomm@iuu.ac
Mobile: 9897873575

The Editor
Pragyaan : Journal of Mass Communication,
IMS Unison University, Dehradun
Makkawala Greens, Mussoorie- Diversion Road,
Dehradun, Pin- 248001, Uttarakhand
Phone: 0135-3000600, 3000801/3
Mobile: 9897873575
E-mail: pragyaan.masscomm@iuu.ac
Website: www.iuu.ac

Sir,

Sub: Assignment of Copyright

I/We, _____, author(s) of the article
entitled _____

do hereby authorize you to publish the above said article in PRAGYAAN: JOURNAL OF MASS COMMUNICATION.

I/We further state that:

- 1) The Article is my/our original contribution. It does not infringe on the rights of others and does not contain any libelous or unlawful statements.
- 2) Wherever required I/We have taken permission and acknowledged the source.
- 3) The work has been submitted only to this journal PRAGYAAN: JOURNAL OF MASS COMMUNICATION and that it has not been previously published or submitted elsewhere for publication.

I/We hereby authorize, you to edit, alter, modify and make changes in the Article in the process of preparing the manuscript to make it suitable for publication.

I/We hereby assign all the copyrights relating to the said Article to the IMS Unison University, Dehradun.

I/We have not assigned any kind of rights of the above said Article to any other person/Publications.

I/We agree to indemnify the IMS Unison University, Dehradun, against any claim or action alleging facts which, if true, constitute a breach of the foregoing warranties.

First author
Name:

Second author
Name:

Third author
Name:

Signature:

Signature:

Signature:

IMS Unison University
SUBSCRIPTION/ADVERTISEMENT RATES

The Subscription rates for each of our four journals, viz., Pragyaan: Journal of Mass Communication, Pragyaan: Journal of Management, Pragyaan: Journal of Information Technology and Pragyaan: Journal of Law are as follows:

Category	1 Year		3 Years		5 Years	
	Domestic Rates (₹)	Foreign Rates (US \$)	Domestic Rates (₹)	Foreign Rates (US \$)	Domestic Rates (₹)	Foreign Rates (US \$)
Academic Institutions	500	30	1200	75	2000	120
Corporate	1000	60	2500	150	4000	240
Individual Members	400	25	1000	60	1600	100
Students	300	20	700	40	1200	75

Advertisement Rates (Rs.)

Location/Period	1 Year	2 Years	3 Years
B/W (Inside Page)	10,000/- (2 Issues)	18,000/- (4 Issues)	25,000/- (6 Issues)
Colour (Inside Back Cover)	17,000/- (2 Issues)	30,000/- (4 Issues)	45,000/- (6 Issues)
Single Insertion (1 Issue)(Inside B/W Page)- Rs. 5000/-			

SUBSCRIPTION FORM

I wish to subscribe to the following journal(s) of IMS Unison University, Dehradun:

Name of Journal	No. of Years	Amount
Pragyaan: Journal of Mass Communication	<input type="text"/>	<input type="text"/>
Pragyaan: Journal of Management	<input type="text"/>	<input type="text"/>
Pragyaan: Journal of Law	<input type="text"/>	<input type="text"/>
Pragyaan: Journal of Computer Applications	<input type="text"/>	<input type="text"/>
Total		

A bank draft/cheque bearing no. _____ dated _____ for Rs. _____

Drawn in favour of IMS Unison University, Dehradun towards the subscription is enclosed. Please register me/us for the subscription with the following particulars:

Name: _____ (Individual /Organisation)

Address _____

Phone _____ Fax _____ E- mail: _____

Date:

Signature (individual/authorized signatory)

Please send the amount by DD/Local Cheque favouring IMS Unison University, Dehradun, for timely receipt of the journal. Please cut out the above and mail along with your cheque /DD to: The Registrar, IMS Unison University, Makkawala Greens, Mussoorie Diversion Road, Dehradun 248009. Uttarakhand, India, Phone No. -0135-3000600, 3000801/3, Mobile: 9897873575

IMS Unison University at a glance

IMS Unison University, a constituent of Unison Group is a premier educational and research University nestled amidst beautiful and serene surroundings offering an environment that fosters learning and stimulates creativity.

It was established as IMS Dehradun in 1996, as a non-profit organization by a group of visionaries dedicated to the cause of changing the face of professional education in Northern India.

The University today provides a platform for excellence in teaching, learning, and administration. Its State-of-the-art Infrastructure facilitates in developing well trained graduate, post-graduate and doctorate professionals to meet the ever changing needs of the corporate world.

IMS Unison University aspires to become a world-renowned center for creation & dissemination of knowledge. It aims to provide a holistic career-oriented education that develops intellectual, moral and physical capabilities of the students.

University presently offers under-graduate, post-graduate and doctorate programs in several streams of Management, Computer Applications, Law and Mass Communication under the following four schools:

1. School of Management
2. School of Computer Applications
3. School of Law
4. School of Mass Communication

The University is committed towards delivering quality education, developing strong industry interface and providing placement opportunities to its students.

The University brings out four Journals, one each in the four disciplines of Mass Communication, Computer Applications, Management and Law, in an effort to fulfill our objective of facilitating and promoting quality research work:

- Pragmaan: Journal of Mass Communication
- Pragmaan: Journal of Management
- Pragmaan: Journal of Computer Applications
- Pragmaan: Journal of Law

Makkawala Greens, Mussoorie Diversion Road, Dehradun- 248009,
Uttarakhand, INDIA, T: 0135- 3000600, 7055900075
E: info@iuu.ac, W: www.iuu.ac
Established under Uttarakhand Act No. 13 of 2013,
Recognized by UGC under section 2(f) of UGC Act, 1956