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Literature Review

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CHAPTER-2

Literature Review

Before initiating research on any topic, it is important to know what has already been done on the particular topic. By undertaking literature review the researcher is able to critically summarise the current knowledge in the area under investigation, identify the strengths and weaknesses in previous works, identify them in own research and thus eliminate the potential weaknesses, whilst bringing to the fore the potential strengths. In addition, a good and full literature search provides the context within which the researcher should place the proposed study.

The first record of a newspaper, *Acta Diruna*, (*Historyofinformation.com, 2016*) is found in Rome in the form of the news carved on stones or metals and displayed at public places. In India, Ashoka, the great Indian emperor, also adopted a similar method for mass communication by publishing the Imperial addicts on rocks and stone pillars. According to Murthy (2016) the news of the day was published in small pictures drawn on the walls of temples in ink or colour, which could be removed easily. During the Mughal era in India, the news writers were appointed, who furnished the digest of important events in the districts. The invention of printing press is initially credited to Chinese who in 868 AD printed the first book, *Hiraka Sutra*. It were also the Chinese who first used movable types, made of Chinese clay filled into iron frames, in 1301. However, the invention of modern printing press by Johannes Gutenberg (*Biography, 2016*) in 1456 revolutionised the newspapers production.

The newspapers and news agencies remained dependent on pigeons, horses and runners for collection and dissemination of news for a long duration. The world’s first news agency, *Havas*, formed in 1835 and also *Reuters* set up in 1851 extensively used pigeons and horses for supplying news to their subscribers for many years. Since then things have changed in media beyond imagination. The invention and extensive use of telegraph, landline telephone, fax, pager, radio, television, mobile phones, internet, etc have further revolutioned the gathering and dissemination of news. The major change in media was witnessed with the invention of internet (*Andrews, 2013*) in 1983. However, internet in India began with the launch of Educational Research Network (ERNET) in 1986, the service was made available to the public on August 14, 1955 by Videsh Sanchar Nigam Limited (VSNL). As digital media booms, there are reports of using robots (*PTI, 2015*) and drones in reporting. This
shows the impact of technology in every activity related to newspaper, news channel, web portals, etc. The newsroom, the main centre of planning, gathering, processing, producing and disseminating the news in any media house, is fast turning humanless, as the manual tasks are fast getting mechanised. Several attempts have been made to partially record these technological changes both globally and internally in India.

The present study is concerned with “Paradigm Shift in News Operation Management with Special Reference to Technological Interventions in India” in the context of The Times of India, The Indian Express, Dainik Bhaskar, Rajasthan Patrika, Times Now, Aaj Tak and their web portals. Therefore, the Literature Review has been categorised under following heads:

- Studies at Global Level on Print Media
- Studies in India on Print Media
- Studies at Global Level on Broadcast Media
- Studies in India on Broadcast Media

2.1: Studies at Global Level on Print Media

Fidler (1997) in Mediamorphosis: Understanding New Media provides answers to various questions related to new media. In 1990s when the term ‘new media’ was used, most people were puzzled about it. It is an early book on new media and helps understand the early trends of information and communication technology. Harper (2002) focuses on the role of technology in the evolution of various media as well as in the professions of advertising, journalism and public relations. Central components of the book include the impact of internet on the media and professions, history of each medium and the professions, and the ‘demassification’ of media. Meyer (2004 & 2009) in The Vanishing Newspapers: Saving Journalism in the Age of Information Age discusses in detail how the information technology is impacting newspapers in the US. In 2004, he offered the newspaper industry a business model for preserving and stabilising the social responsibility functions of the press in a way that could outlast technology-driven changes in media. Divided into 12 chapters, the 248 pages highly publicised book does not specifically focus on the technological changes in newsrooms, rather discusses the related issues. In first edition of the book, published in 2004, Meyer while visualising the impact of information technology on print media had predicted that ‘final copy of the final newspaper will appear on somebody’s doorstep one day in 2043’ (Alterman, 2008).
Smolkin (2006) argues that the newspapers, which do not adapt to the changing trends and technologies are sure to die. Quoting over two dozen eminent experts, Smolkin says that if newspapers abandon the relentless reporting that makes them special, then their future won’t be worth protecting, in any form. Tyler and Pew Research Center (Tyler, 2008) jointly conducted a study between November 2007 and January 2008 on *Changing Newsroom: What is being Gained and What is being Lost in America’s Daily Newspapers?* The study throws light on the changing trends in the US print media showing how information technology has impacted the US print media. The study is seen as one of the most systematic efforts yet to examine the changing nature of the resources in American newspapers newsrooms (NRs) at a critical time. The study is based on extended face-to-face interviews with editors and NR executives at 15 daily newspapers across the United States. Interviews were conducted by Tyler Marshall between early November 2007 and mid January 2008.

Paulussen & Ugille (2008) in *User Generated Content in the Newsroom: Professional and Organisational Constraints on Participatory Journalism* looks into the challenges and opportunities posed by citizen journalism and user generated content to professional mainstream media. In order to explore the organisational and professional factors influencing the adoption of user generated content in professional NRs, the paper analyses a qualitative, empirical study of the NRs of two Belgian online newspapers, both owned by the same media group. One of the main conclusions is that participatory journalism is developing rather sluggishly; however, this is often due to NR structures, work routines and professional beliefs rather than unwillingness among professionals to open up the news production process to user contributions. Lavrusik (2009) disagrees with the argument that print media is dying. He says that journalism is expanding with social media platforms and technology allowing the former audience and sources to become reporters themselves. The study focuses on what newspapers should do in order to survive and evolve with today’s technology-driven, short-attention-span world. Kung, Picard & Towse (2009) in *The Internet and the Mass Media* offers a comprehensive analysis of the impact of the internet on the production and consumption of the mass media. It explores and discuses the changes the internet is bringing about in the media. Fenton (2010) in *New Media, Old Media: Journalism & Democracy and the Digital Age* explores how the media monopoly of breaking the news has collapsed and how this is being replaced by the ordinary citizens and netizens. The book has compilation of articles by 10 eminent journalists of the world. The articles provide information about the technological changes taking place in the British media. Specially the articles Old Sources:
New Bottles by Angela Phillips; Cultural shock: New Media and Organizational Change in the BBC by Peter Lee Wright; and the Political Economy of the ‘New’ News environment are partially useful to the present research. Craig (2011) in *Excellence in Online Journalism: Exploring Current Practices in an Evolving Environment* mainly focuses on speed and accuracy with depth in breaking news, ethical lens for looking at excellence, comprehensiveness in content, open-endedness in story development, etc. Charles et al (2011) explore how evolving conditions and technologies of production and reception are changing the practices of journalism across the world - from Britain to Latin America, from the United States to China. The book examines the role of journalists in the era of mobile journalism, online journalism and citizen journalism, and explains how the understanding of journalism has changed in response to the rise of blog, camera phone and new modes of broadcast and publication.

In 2013, the PRC studied the news coverage and cut in opinions by different newspapers (Kohut, 2013). The study points out that much has been written about the newspapers cutting staffs, news pages and bureaus in response to financial pressures in recent years, but a growing number of dailies also have reduced the amount of newsprint they devote to editorials and commentary, a departure from tradition that has gone largely unnoticed outside the affected communities. The latest and perhaps most prominent example is the *Philadelphia Inquirer*, which announced in September that it was cutting in half—from two to one—the number of pages allotted to editorials and opinions on weekdays, triggering protests. There is no formal tally of reductions in editorials and commentary, but Pew Research Center interviews with editors across the country have confirmed a gradual shift both in the amount of space given over to opinion and in the missions of editorial and op-ed pages (Enda, 2013).

Another important study by PRC in 2013 was how in the shifting journalism ecosystem, proliferating non-profit outlets emerged as an increasingly important source of news and information (Holcomb 2013). The PRC also studied the ethnic presence of people working in the media houses. The study reveals that the financial challenges of the journalism industry have resulted in significant declines in the number of employed reporters, editors, anchors and photographers. Daniels (2013) in *State of the Newsroom: South Africa 2013—Disruptions and Transitions* describes the changes in South African media newsrooms as “a ship sailing into Extreme Headwinds of Change—from digital disruption, regulatory change and government hostility to downsized newsrooms, declining circulation and shifting revenue models”. It says there were converging NRs negotiating the digital-first trend. The study finds notable changes including significant retrenchments, declining print circulation, shifting
advertising revenue, erection of pay walls, growth of internet use for news and rolling out of apps. While digital-first policies, incorporating social media were being practised in many more newsrooms, the researchers selected only four for the study. All four newsrooms – BDLive, Mail & Guardian, Eyewitness News and City Press – reported that their digital-first (and concomitant social-media) strategy accelerated in 2012-2013. The process seemed a bit haphazard and chaotic but the newsroom occupants stressed this was a “process” and it was a “transition” rather than digital first in actual implementation. All the newsrooms concerned were grappling with business models and the concept of how to generate revenue from online journalism. Data collection took place between June 2012 and June 2013. Over 70 editors, journalists, online staff, managers and trainers from all media types were interviewed. Oscar Westlund (2013) in Mobile News: A Review and model of journalism in an age of mobile media explores how with the technological convergence of mobile “phones” and multimedia since 1990s accessing news on mobile phones gained momentum in the US. Martin et al (2013) explore the development and examples of User Generated Content (UGC) and explain the various social media models available today. The book presents current scenario of social media monitoring and engagement of corporations in social media like Twitter, Facebook, YouTube, Corporate blogs and the likes for the purpose of brand building and remaining competitive.

Pew Research Center (PRC) conducted another study in 2014 (Jurkowitz 2014) showing how the growing digital news world is largely comprised of hundreds of smaller sites, often local in scope, that are working to fill gaps left by legacy reporting cuts. In another study, the Pew Research Centre shows how the media in Turkey (Anderson 2014) face increasing restrictions on press freedom and growing concerns about journalists’ safety as the country banned Twitter in early 2014, which prompted a lawsuit from Turkish journalists. In 2013, a total of 211 journalists were jailed worldwide, and Turkey led the way with 40 journalists behind bars. Turkey was also the No. 1 country to imprison journalists in 2012. In 2013, PRC studied the trends shaping digital news (Caumount, 2013) and how the internet and digital devices are changing the news consumption habits.

How news organisations work and to understand how consumers interact with digital news, the Pew Research Center’s Journalism Project, in collaboration with the John S. and James L. Knight Foundation, in 2013 and 2014 studied how news is functioning in the social media space (Matsa 2014). The PRC in collaboration with the John S. and James L. Knight Foundation in 2013, studied the role of news on Facebook (Mitchell, 2014), the largest social
media platform, finding that news is a common but incidental experience there. The study found that “overall, about half of adult Facebook users, 47%, “ever” get news there. That amounts to 30% of the population.” In 2013, PRC studied the shrinking audience problem that the news organisations confront for more than a decade. The trends emerged in the study “strongly suggest that these difficulties may only worsen over time. Today’s younger and middle-aged audience seems unlikely to ever match the avid news interest of the generations they will replace, even as they enthusiastically transition to the Internet as their principal source of news. Pew Research longitudinal surveys find that Gen Xers (33-47 years old) and Millennials (18-31 years old), who spent less time than older people following the news at the outset of their adulthood, have so far shown little indication that that they will become heavier news consumers as they age” (Anderson, 2014). Another study of 2014 about amateur journalists reveals that several television news organisations are relying on a significant amount of amateur news footage in their broadcasts, but a new report reveals that they rarely credit the citizen journalists who actually produce it (Holcomb, 2014). The PRC also studied the reading behaviour of the newspaper consumers. The study says that nearly one-in-ten U.S. adults (8%) get news through Twitter. Compared with the 30% of Americans who get news on Facebook, Twitter news consumers stand out as younger, more mobile and more educated (Mitchell et al., 2013).

Kilman (2014) underlines top 10 Newsroom Trends in 2014. Citing the World Editors Forum Report on 2014 Trends in Newsroom released in Turin, Italy, on June 10 2014 it underlines that the year 2014 was a defining one for the NRs of media houses. It says the realities, reach, infinite possibilities and, in particular, the risks of the digital age have become ever more apparent. Some trends noted in the Report include Moves to shield journalism in the post-Snowden era, rebooting of mobile strategy as “wearables” hit the market, social media verification is supporting trust and credibility, the way data and analytics are driving the news agenda, newspapers’ video starts to challenge broadcasters, the rise (and fall) of women editors, Global collaborative journalism breaks new barriers, the need for digital mega-stories, the ethical challenges of native advertising and the evolving role of the editor. It includes in-depth analyses and is framed by interviews with five of the world’s news business “thought leaders”, including The Guardian’s Janine Gibson, The New York Times’ Margaret Sullivan, Knight Foundation’s Michael Maness, Twitter’s Vivian Schiller and Nation Media Group’s Joseph Odindo. Grauer (2014) discusses how innovation is changing journalism for better (and occasionally worse). The writer lists 10 major trends. One of them is Proliferation
of Wearables. We’ve heard of Google Glass, Pebble, and Apple Watch, but these are just a few examples of what’s on the market. Grauer tracks 253 different wearable devices including lactic acid tracker sleeves, performance apparel, with EMG, heart-rate and breathing sensors, Melon’s brain-tracking headband and Fujitsu’s smart glove. Quoting Quickish founder Dan Shanoff, Grauer points out that wearable devices will lead to a new kind of journalism, which Shanoff refers to as “glance journalism,” since Glance is the name of the Apple Watch feature that lets users skim through ultra-brief news alerts. Porup (2014) argues that the printing press created journalism, but Internet will destroy it. He says Internet is hurting us into a new Dark Age, such as mankind has never before seen, and far worse than the one the printing press helped us escape. Keeping in view the fast changes taking place in digital technology Eric Jackson (2014) argues that Google and Facebook would completely disappear in next 5 years.

2.2: Studies in India on Print Media

Sajjad (2013) studies ‘latest trends in e-newspapers and e-news services in the electronic era’ and provides information on developments of newspaper websites and e-news services offered by different e-news channels. Attempting to explore the latent advantages of e-news, this study provides data on readers’ preferences regarding e-reading devices services, and also readers’ acceptance behaviour towards e-reading technology. The study finds that newspaper readers prefer the actual reading features to entertainment features on an e-reading device. Kaul (2013) in Journalism in the Age of Digital Technology explores intersections between new media, journalism and technology in order to enhance public understanding of the influence of ICT, especially internet technology on traditional journalism. The study investigates the adoption of IT, how journalists use the new tools to advance their profession, write for global audience and news gathering, the role of internet; what the security and ethical implications are in the new realm; and whether freedom of the press necessarily means freedom of access, confusion created by new digital technologies and the power, speed and usefulness of digital creation, transmission and reception. The study also considers that while the new digital platforms and technologies do present significant challenges to traditional journalism, they are also enabling technologies that offer opportunities to reinvigorate newsgathering.

Rajan (2007) in 21st Century Journalism in India discusses citizen journalism, online journalism, blogging as a new paradigm in journalism, etc. The book helps understanding the
initial technological trends in Indian media. It also focuses on emergence of media conglomerates within a global market, which has led to an array of new technologies. Gaur (2006) in *Media Journalism in 21st Century* highlights the changing face of journalism in technological aspects and also focuses how the traditional values can survive in the turbulent world of the Internet. Mudgal (1999) focuses on objectivity, credibility, ideological concepts, ethics and morality in the changing face of journalism. Pachauri (2009) highlights various issues emerging in the media through a series of articles that were originally published in various newspapers and were later compiled in this book. Babal (2009) in *Media Ke Badalate Tewar* throws light on the advent of development of information and communication technology. It has a separate section on radio, television and internet journalism. A special chapter has been devoted to explain how computer has changed the newsroom. It also explains how editing of news is done with the help of computer, web portals, blogging and books in the digital era.

Chauhan & Chandra (1997) in *Journalism Today: Principles, Practices and Challenges* explores how computers revolutionised work in the newsroom, how typewriters were replaced, how computers made the work easier, faster, effective, and above all more attractive. Chandra et.al (2012) in an extensive study conducted with the involvement of global experts and specifically surveying about 550 small and medium-sized enterprises (SMEs) in India from 2010 to 2012, examines the impact of Internet on India. In a study on the impact of social networking sites on Indian youth between the age group of 17 to 22 years. Neelamalar et al (2009) explores how technologies, adoption of Internet especially for its social uses have seen their highest levels of usage among the younger users. These digital natives see the technologies as a logical extension of traditional communication methods, and perceive social networking sites as often a much quicker and more convenient way to interact. Vij (2009) studies the future of print publications and marketing strategy for Desidoc Periodicals. The study reveals that the World Wide Web has threatened all but the strongest titles. The study says that some of the greatest titles in the United States have declined precipitously in this maturing market. National Geographic, Reader’s Digest, and Family Circle have lost about 20% of their subscribers in just four or five short years. Print publishers must respond by creating their own on-line operations, for periodicals with a presence in both media will have an advantage over those who do not adopt this strategy.

Murthy et. al. (2010) studies the trends in first page priorities of four major English dailies — The Hindustan Times, The Indian Express, The Times of India and The Hindu. The study
reveals that the Indian print media had acquired the contours of market driven journalism originally emanated in the US as a result of globalisation and privatisation in the post 1990s. Sharma (2006) traces the historical development of press in India from ancient time of Mannu to the beginning of Bengal Gazette and the modern day media. Murthy (1966) traces the origin, growth and development of Indian Journalism from emperor Ashoka to Pt Nehru period. Shrivastava (2007) traces of history of news agencies globally—how the technology in news gathering and transmission gradually changed using carrier pigeon, telegraph, internet, etc; and how the news agencies survived several technological developments since the beginning and used the technologies for further diversification of services. Tandon (2007) studied the future of print news media in the context of adapting to change. The study says that the rise of the new media has put the old (print) media establishment on the defensive. “Increased competition is making the old media to pull up its socks and provide the additional value demanded by a free market where the number of players has multiplied,” the study says. Wanjar et al (2014) studied various technologies & researches, which focus on extraction of relevant information from large web data storage. This study provides an effective approach for the Indian online newspapers, which extract contents from news web databases. It proposed a new approach for extracting data from online Indian newspapers in various Indian languages like Marathi, Hindi, Tamil, Gujarati, Kannada, Oriya, Telugu, Punjabi, etc. Ray (2006) provides an introduction to online journalism and internet. It particularly covers the history of internet, packaging news for the web, publishing on the web, digital access and barrier, convergence and broadband, etc. Singh (2012) particularly focuses on the changing trends in Hindi language used in newspapers, news channels, films, advertisements, radio and the internet. Sahay (2008) explores how media culture excels in creating mega spectacles of sports events, world conflicts, entertainment, breaking news, media events like the death of Princes Diana, Clinton sex scandal, murder or the related scandals of the moment.; and how these dramatic media passion plays attract mass audiences to their programming, hour after hour and day after day. Suman et al (2010) compiled articles by different writers on various facets of web journalism like blogging, web based e-content, e-magazines, social concerns of web journalism, online virus, cyber crime, video websites, web journalism and Hindi language, etc. Chauhan et al (1997) particularly trace the history of computers in newsroom—how computers were first introduced by leading news agencies or media houses, how they gradually replaced the manual work, typesetting, integrated operations, optimising
productivity, etc. Anuradha (2012) explores the language-related challenges in the growth of internet and the potential. It also traces the growth of micro-blogging in Hindi. Joshi (2012) traces the miracles caused by web journalism at global level whether in the form of startling revelations by WikiLeaks or Niira Raida case in India. It also focuses on how the leading media houses are now prioritising online editions more than the print, radio or television. Nath (2002) while tracing various features of web journalism particularly focuses on how Virtual Newsroom is taking in media houses all over the world. Kumar (2011) explains how going online created more opportunities for newspapers such as competing with broadcast journalism in presenting breaking news in a more timely manner. Rao (2006) describes relevant modern day’s technologies used for effective mass communication and the impact of technological developments on present day’s mass communication. Schille (2009) in “Mobile Communications” covers the important aspects of mobile and wireless communications from the Internet to signals, access protocols and cellular systems, emphasising the key area of digital data transfer. Aneez (2016) explores Indian Newspapers’ Digital Transition in the context of three leading Indian newspapers, Dainik Jagran, Hindustan Times and Malayala Manorama. “Our analysis shows that all three newspapers are investing in expanding their digital activities to pursue new opportunities as digital media become more important in India, and print relatively less so. All are investing significantly more effort in digital operations than they did in the past, and more than many other Indian newspapers. This includes investments in new technology and staff with new expertise, as well as training of existing staff” (Aneez et al, 2016).

Studies on Broadcast Media

- Studies at Global Level on Broadcast Media
- Studies in India on Broadcast Media

2.3: Studies at Global Level on Broadcast Media

David (1995) in, News Technology: The Cutting Edge, explores how television news evolved from the cinema newsreel benefiting greatly from the quality and portability of the film camera and the editability of film; how television developed a large appetite for up-to-date new; how the introduction of portable video tape recorders and cameras significantly reduced turn-around time as tape could be edited without a visit to the film lab and if necessary played straight to air. The study also explores how with improving camcorder, editing and
automation technology and increasing competition between broadcasters. News became a fast, efficient business with success measured in time-to-air, quality of content and operating costs. Vigneaux (1996) in *The Integration of a Newsroom Computer System with a Server-Centered News Production System* explores how random access to the shared central library of audio and video media greatly speeds the production process in broadcast media organisation. Eric Norton (1997) in *Digital Satellite News Gathering* explored how digital satellite news gathering equipments offered the broadcasters various advantages over analog. Digital compression provides superior video quality in only a fraction of the bandwidth used by analog systems. New advancements in technology allow these systems to fit into size sensitive installations, some as small as two rack units in height. The study concludes that Satellite New Gathering providers and broadcasters can reduce the amount of transponder bandwidth required for transmission by a substantial amount by using real-time MPEG-2 compression equipment. The picture quality is maintained while the costs of the satellite link are dramatically reduced. Advanced filtering and compression techniques increase these savings even further. Pew Research Centre survey (2012), conducted for the period 1991 to 2012, focuses on transformation of the news landscapes in the US. It reveals that there are indications that television news, which so far held onto its audience through the rise of the internet, also is increasingly vulnerable, as it may be losing its hold on the next generation of news consumers. The Survey notes that online and digital news consumption, meanwhile, continues to increase, with many more people now getting news on cell phones, tablets or other mobile platforms. Perhaps the most dramatic change in the news environment has been the rise of social networking sites. This project was initiated by the Times Mirror Center for the People & the Press in 1994 and continued by the Pew Research Center for the People & the Press since 1996. Over this period, 10 surveys were conducted, yielding more than 30,000 interviews. All media consumption surveys were conducted by telephone. Since 2006, cell phone interviewing was included. Adigwe (2012) uncovers the benefits and challenges associated with the use of ICT in news processing in broadcast industry of Nigeria. The study focuses how ICT has created opportunities for widespread electronic and timely delivery of news. It also underlines the technological barriers that the news organisations have to overcome including the problems of employees attitudes towards new technologies and resistance to change. It indicates that the implication of the use of ICTs in broadcast stations might lead to an overall shrink in the need for human correspondents. Hussain et al (2013) in *The Usage and Impact of Information Technology in Electronic Media in Pakistan* explores the technological advertisements have influenced modern and contemporary electronic
media, film, news reels, radio and television in Pakistan and how it changed the way journalists gather and presented news as well as the way public views and understands ongoing events. The study concludes that due to the advancements in information technology electronic media working has become more efficient and fast; live coverage, latest news updates and on spot reporting is possible, availability of electronic media is possible on different places, transmission of content is easier, videos, photographs, audios and images of events are transmit, faster, information is being made available within seconds, graphics and animated effects are in use in plenty and working capacity of workers enhanced. Chadwick (2014) in Revolutionizing the Newsroom: How Online and Mobile Technologies have Changed Broadcast Journalism traces how online and mobile technologies have changed television journalism in the past decade and what new technologies and trends they expect in the future. Conducted across United States in 2013 the study indicates that web presence and mobile apps are getting more important in most cases; the use of others’ digital assets for both television broadcast and the web; use of the internet and social networking to generate better stories; and an effort to reach out to younger audience. Chan (2014) in Journalism and Digital Times: Wider Reach and Sloppy Reporting presents three-part series on Digital Journalism: Making News, Breaking News, a new report by the Open Society Foundation’s Independent Journalism and Information programs. The report summarises the findings of OSF’s Mapping Digital Media project, the most extensive investigation of today’s media landscapes by any non-governmental organisation, with more than 50 country reports (including India) since 2011. Its findings on the impact of digitisation on media freedom and access to quality news are essential reading. Antcliff (2014) in Digital technologies and work intensification among professionals in the digital economy: A case study of television news uses a single exploratory case study of the UK’s first commercial public service broadcaster Independent Television (ITV)’s regional newsroom, Newsroom X, to explore the interactions between new digital technologies and working practices. The focus of the study is the process of news production, and whether this acts to enable or limit the ‘democratising effect of technology. The study takes a ‘social constructivist’ approach to understand how human agency can mitigate the effect of technological change and place limitations on a technologically determined ‘democratised’ model of news production. Using a single exploratory case study of an ITV regional newsroom it identifies how online and social media activity has increased workloads, but also allowed tasks to be completed more quickly and efficiently (Antcliff, 2014). Nielsen et al (2016) analyse what is happening to television news in the US and UK and mapped recent changes in traditional television viewing, the rise
of online video, and how different organisations are working with new forms of television-like news developed for a digital environment. The study also explores how recent years have seen significant declines in traditional television viewing in technologically developed markets, and a rapid rise in online video viewing driven by video-sharing sites, video-on-demand services, and the integration of video into social media sites.

2.4: Studies in India on Broadcast Media

Dwivedi (2010) explores the changing mutual perception of television news viewers and programme makers in India as a case study of CNN-IBN and its initiative of citizen journalism. Ninan (2012) argues that what is missing from the Indian Newsroom today is the ‘news’ and the news on television has been replaced by discussion and reporting by hectoring. Ninan claims that job security is also missing in the newsroom. Another thing, which Ninan finds missing from the newsrooms, is the Diversity. Rani (2013) studies the impact of privatisation on media policy of the Government of India and how it has evolved various institutional mechanisms to deal with the growth of television as the medium to study the effect of privatisation and convergence on media regulations as television is the most powerful medium. The paper deals with how with the opening up of the Indian economy in early 1990s enabled the entry of private broadcasters in India. The number of television channels proliferated manifold. By 2005, India had more than 200 digital channels. The number of television channels grew from around 600 in 2010 to 800 in 2012. This includes more than 400 news and current affairs channel. Technological changes have caused intense competition in news and general entertainment channels, as a result of which there is growth in regional and niche channels. The growth of cable and satellite television and direct to home television services has continued to drive television as the most preferred medium among advertisers. Broadcasters are also tapping into online and mobile media to increase their revenue. Jha (2014) argues that the time is not far when people would be able to watch television channels on their laptops, computers and mobile phones even without internet. This revolutionary technique is already being used in the US, UK, Japan, Australia, China. In India, Doordarshan has started work on it and soon it will be able to provide the facility to the people. Maheshwari (2015) in Innovation in creation and delivery of news content: A Case study of India Today News Channel explores innovative practices adopted by India Today News Channel in content creation and delivery analysing various programme formats, number of news based programme broadcast on channel, number of programmes produced on important beats, special series/campaigns launched by channel. The study was conducted
in June-August 2015. Kaushal (2015) explores how with the help of various social media platforms like Twitter, Facebook, etc, the news channels in India and abroad have improved the news gathering and presentation and how they decide their headlines following the trends on Facebook and Twitter. Sethna (2015) while quoting Richard Sambrook, a former director of BBC Global News argues that satellite TV has now been overrun by innovative digital technology in news consumption methods, and that the television news industry has been slow to recognise this change in content gathering and distribution as an essential factor drawing in younger viewers (Sethna 2015). Banerjee (2016) explores how Aaj Tak, since its beginning as a 20 minutes programme on Doordarshan in 1995 and then full-featured news channel in December 2000, changed the way news is covered and presented on television in India. The author says that the channel brought in several innovations to the newsroom like adding local flavours to a news piece from a particular region and adding ‘tadka’ to the news with actor enactments like docu-dramas supplementing the news coverage. Kundu (2016) shares his own experience of 2009 at Times Now Mumbai newsroom with the known face of television journalism, Arnab Goswami. Kundu explains how Arnab consistently set the agenda on social media (Kundu 2016). Singh (2017) explores how most of the big multi-channel broadcasters focused on launching new regional channels from 2014 to 2016 to build bouquets, which appeal to national, regional and state-level advertisers; increased interactivity with viewers through more structured and focused social media and digital strategy; and innovation towards revenue maximisation, particularly in the non-FCT space, and improving operational efficiencies across the value chain.

2.5: Research Gap

The literature review makes it amply clear that the information and communication technology has posed a major challenge to the mainstream media—both print and broadcast. Rather, the technology has thoroughly changed the way the work is done in the NR. The Research Papers, Research Articles, books and newspaper, magazine articles reviewed above indicate to the challenge, but do not provide any significant information about the changing face of the NR. However, many studies have been conducted in the Western countries especially in the US, but the work done in India is almost negligible. Whatever work is found in India it is in pieces touching one or the other aspect of the problem and that too for a particular span. It mainly talks about the nature of the problem, but suggests no solution. Compare to the print media, not much work has been done with regard to broadcast media.
NR. Therefore, a huge gap is there. That is why to understand all the changes in proper perspective, both in print and TV, and also to suggest some practical, viable solutions for the media houses it is essential to study all the changes taking place in the NR right from the day the internet was launched in India by VSNL on August 15, 1995 and the technological advancements added afterward and also those to hit the industry in coming days. The fast the digital technology is changing everyday, the NRs are fast heading towards Virtual Newsroom. But these changes need to be studied in proper perspective. Amidst the reports of introducing Robots and Drones in NR, the social media too has radically changed the media functioning. Not only Facebook & Twitter but also the smart phones through WhatsApp, hike, etc and many other messaging apps have given new dimension to citizen journalism. The younger generation prefers to stay updated about the happenings around them through their mobile phones. In this situation how it impacts the print media needs to be studied. That is why study of all these changes in proper and scientific manner is essential.

2.6: Summary

In this chapter, attempts have been made to understand the work that has been done so far on technological changes in the NR of Western countries, where the print media today face a tough challenge from digital media, and also in India. The Literature Review shows that some solid work has been done in several Western Countries on technological changes in the newsroom, but the work done in India is negligible. Some researchers, in the form of research papers, have tried to study several aspects of the changes like changes in front page reporting of several papers, graphic presentation on a particular TV news channel, etc. But not a single study has been carried out anywhere in the country so far studying the changes on larger scale, as has been done in this study.

In the next chapter, Methodology of the research has been discussed and explained in detail.