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Contents

Challenges in E-Governance in Higher Education: A Student Perspective towards University of Lucknow

Dr. Priya[1]

Abstract—*Higher education plays an important role in nurturing and developing intellectual community and contributes to the economy as well. With the help of modern technology higher educational institutes started adopting e-governance to better serve teachers and student community in a more transparent and accountable manner. To ensure quality education, administration and conforming to regulations are the basic purpose of practicing e-governance in higher education, especially in universities' system. The main objective of this paper is to assess how e-governance can be implemented by the University of Lucknow and what are the challenges that students face while using e-governance service. The research findings are based on the responses obtained with the help of self-structured questionnaire. The list of respondents include over 100 students of UG and PG courses as well as the research scholars of the University of Lucknow. Exploratory and descriptive research designs have been used and data has been calculated with the help of frequency distribution and chi-square test. The paper also suggests some measures for improvement in e-governance services provided by the University of Lucknow. Due to their small sample size and restricted research area, the findings of this study cannot be generalized, so I would suggest further research on a large sample to validate the findings.*

Keywords: *E-governance, Higher Education, Information and Communication Technology (ICT), Quality Education*

INTRODUCTION

Higher education provides opportunities for lifelong learning, enabling people to upgrade their knowledge and skills in a continuous manner based on the societal needs. Higher Education Institutions help in developing the power of the mind and cultivating right attitude, interest, moral and intellectual values so that the youth will develop their potentials which will help them in their all walks of life and they will provide their professional services to the society. HEIs also try to reduce social and cultural differences and promote equity and social justices through proper diffusion of education. Technology enriched higher education system is not only required for development of the education system but also makes for a significant impact on the overall development of the nation.

Technology based higher education adopted by the HEIs provides services to teacher and student community as far as the dissemination of education is concerned. However, for long-term benefits and sustainability in today's competitive environment, it is

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also important to ensure transparency, accountability and effectiveness in the HEIs administration. The model of e-Governance can play a vital role in this regard.

HEIs are one of the major consumers of ICT products and services as well as a major provider of services using ICT. ICT has helped the improvement of a range of activities such as teaching, learning, research, administration, etc. Significant developments have been made in the area of online teaching and learning. HEIs are no exception and e-Governance can equally be applicable to them for the benefit of all the stakeholders such as teachers, administrators, students, parents, various organizations and community or society. E-governance is very useful in the field of education regarding admission, evaluation and selection process of students and staff. Proper adaptation to the support processes and activities of e-Governance by an HEI can effectively enhance quality in the services offered by it.

The idea of starting a University at Lucknow was first mooted by Raja Sir Mohammad Ali Mohammad Khan, Khan Bahadur, K.C.I.E. of Mahmudabad, who contributed an article to the columns of "The Pioneer'' urging the foundation of a University at Lucknow. In the year 1920, University of Lucknow was set up with rich inheritance, both materially and intellectually, and it brought with it also the richest of all heritages. With the mission to develop human resource for the furtherance of knowledge through teaching, research and innovation, and ranking amongst the top educational institutions of the world for the better service to the humanity in general and our nation in particular, University of Lucknow is almost ready to complete their 100 years. E-governance is very useful for the university system and University of Lucknow has been no exception where they provide all the information about the university, the ordinance, governance, academics, departments, admission, examination, career and contact. Latest news, circulars, government orders, online submission of form, queries, etc., are also part of the University's e-governance practices. Apart from these facilities, there are few challenges which were faced by students while they accessed information from the University's web portal. The present paper tries to find those issues and also suggest some measures for minimizing these hurdles and ensure effective e-governance practices.

REVIEW OF LITERATURE

E-governance is the application of ICT for delivering government services, exchange of information and interaction within the entire government framework. The aim of e-governance is simply to improve governance and enable people's participation in

governance through electronic means and there is no doubt that e-governance is an effective tool for good governance.

Definitions of e-Governance ranges from "The use of information technology to free the movement of information to overcome the physical bounds of traditional paper and physical based systems" to "The use of technology to enhance the access to and delivery of government services to benefit citizens, business partners and employees". The common theme behind these definitions is that e-Governance involves the automation or computerization of existing paper-based systems that will prompt new styles of leadership, new ways of debating and deciding strategies, new ways of transacting business, new ways of listening to common people, new ways of serving the citizens and new ways of organizing and delivering information.

Table 1: Benefits of E-governance

Benefit to University	Benefits to Students	Overall Education System
Centralized information access from anywhere	Increases participation in education affairs	Long term impact on organization goals
Instant statistical report generation	Personalized login for each student	Improve education system
Increase in student enrollment ratio	Extensive saving in time, cost & Efforts	Empowerment of faculties, students & encouragement for their participation in the system
Provide quality e-services, e-participation,	Information & transaction services	
Increase clearness	Job opportunities	
Innovative teaching tools	Social connectivity for collaboration	
Less paper work	Students can access virtual lectures	
Helpful for NAAC accreditation	Students can solve their problems like examination queries, result verification etc.	
	Students can submit feedback to the university	

The fundamental motivation for the campaign of e-governance in India and elsewhere is a slogan—to provide SMART government—"SMART" being an acronym for Simple, Moral, Accountable and Responsive Government. Disintermediation and low corruption or zero corruption is possible through e-governance only. Government services through this will reach the beneficiaries quickly and effectively without any bias.

Effective e-governance needs to satisfy the requirements of the user and government information. E-Governance in higher education system will facilitate a variety of stakeholders to influence the better operational competence in a variety of key processes like grant, operation certificates, endorsement processes, feedback mechanism etc. Indian higher education system (IHS) would be implemented not only to satisfy the needs of students by making them more employable but also combat possible competition from the foreign universities.

OBJECTIVES OF STUDY

The main objective of the paper is to assess how e-governance can be implemented by the University of Lucknow and what are the challenges that students face while using e-governance services. Following are the objectives:

- To study the impact of e-governance on the students of University of Lucknow.
- To assess the perception of students towards e-governance facilities provided by the University of Lucknow.
- To explore the major e-governance services that students accessed most form the University's Website.
- To explore the major problems that students encounter while accessing the University's Website.
- To explore the major services which students want but are not available on the University's e-portal.
- To analyze the difference in perception towards e-government facilities based on the demographical variables.

HYPOTHESES OF STUDY

- There is a significant impact of e-governance on students of the University of Lucknow.
- There is difference in perception of students towards e-governance facilities provided by the University of Lucknow.
- There is difference in perception towards e-governance facilities based on the demographical variables.

METHODOLOGY

The study is based on the exploratory and descriptive survey design. Firstly, focused interview has been done with 10 students. The attempt has been made to explore the various factors which are associated with e-governance and the facilities provided by the University of Lucknow. Secondly, structured questionnaire has been made and circulated online to the students of undergraduate, postgraduate course and research scholars of the University of Lucknow. Convenience sampling technique was used in collecting the primary data. In all, 100 respondents were used for the study. Data obtained from the selected respondents were analyzed by using descriptive statistics such as frequencies of response, percentages and hypothesis has been checked by one way ANOVA and chi-square.

Data Analysis and Discussion

Demographic characteristic of the respondents are shown in the Table 2 and Figure 1. From the total number of 100 respondents that are students of various courses in the University of Lucknow, there are 54% male and 46% female respondents. Respondents are in the age group of 20-23 years (46%) along with the students of age below 20 (38%). The age groups of 24-27 years and above 27 share the equal percentage of students, i.e. 8%. Table also depicts that 22% of the respondents have postgraduate degree, 8% are research scholars and majority of the respondents (70%) are undergraduate students.

Table 2: Demographic Profile of Respondents

Characteristics		Percentage
Gender	Male	54
	Female	46
Age	Below 20	38
	20-23	46
	24-27	8
	Above 27	8
Academic Level	Under Graduate	70
	Post- Graduate	22
	Research Scholars	8

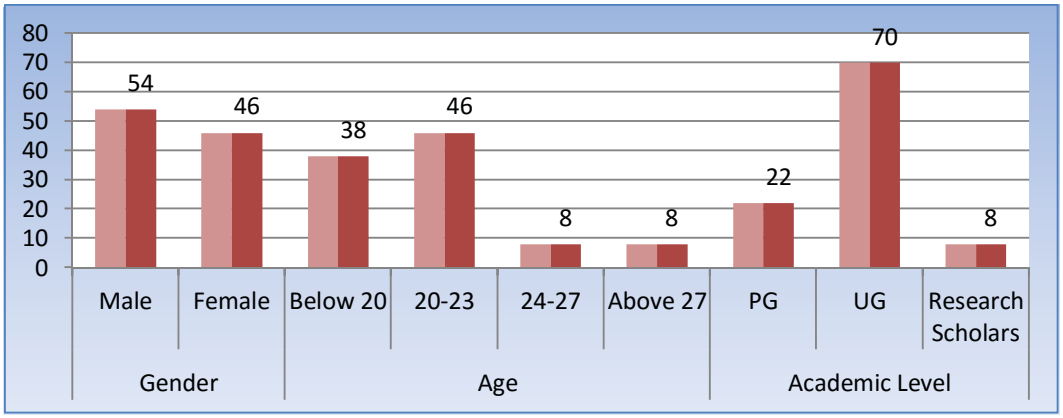

Fig. 1: Demographic Profile of Respondents

Objective 1: To study the impact of e-governance on students of the University of Lucknow.

H1: There is a significant impact of e-governance on the students of University of Lucknow.

Outcome: At 5% level of significance, the critical (tabulated) value of $\chi 2$ for degree of freedom (df) is (20) = 31.47 (As $\chi 2$ calculated > $\chi 2$ tabulated). Since the value of chi-square calculated is more than the tabulated chi-square (Table 3), Null hypothesis is rejected and alternative hypothesis is accepted. There is a significant impact of e-governance on the students of the University of Lucknow.

Table 3: Chi-square Value of Selected Attributes

Dimension	Calculated Chi-Square Value	Degree of Freedom	Table Value (at 5%)	Null Hypothesis	Result
Impact of e-governance on students of University of Lucknow	172.53	20	31.47	Rejected	Significant Impact

For the determination of the level of impact of e-governance services on the students of University of Lucknow, percentage distribution (Figure 2) has been used. Majority of the respondents (72%) prefer to use e-governance facilities rather than going by themselves to the University. Almost 46% of the respondents reported that the University's portal is unable to provide all the information which they need. 34%

respondents are neutral and only 20% agreed upon the concerned fact. For the proper flow of information, there is a requirement of user-friendly system and while assessing this fact, mixed responses was noted like 30% (disagree), 38% (agree) and 30% remain neutral. Although impact of e-governance services on students is significant but satisfaction level of students towards the services is only 24%. 36% were dissatisfied and 40% are neither satisfied nor dissatisfied.

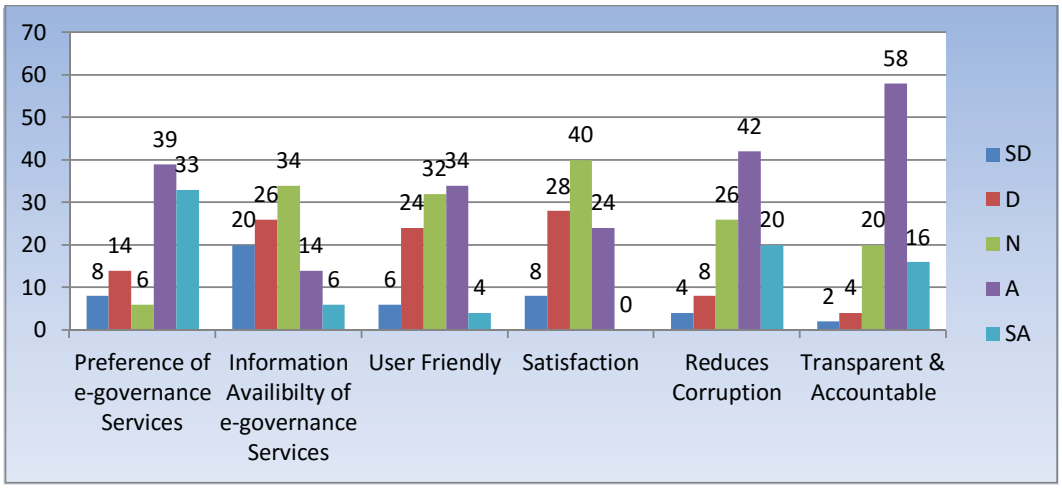

Fig. 2: Percentage Distribution of Respondents

While assessing the effectiveness of e-governance services, 62% of the respondents ensure that e-governance system will help in reducing corruption in the university. Majority of the respondents (74%) also reported that e-governance services not only provide transparency to the University's system but fix accountability as well.

Objective 2: To assess the perception of students towards e-governance facilities provided by the University of Lucknow.

H2: There is difference in perception of students towards e-governance facilities provided by the University of Lucknow.

Outcome: To determine whether any of the difference between the means of perception of students towards e-governance facilities (given in Table 4) provided by the University of Lucknow is statistically significant, compare the p-value at significance level to assess the null hypothesis

Table 4: ANOVA Table of Perception towards E-governance Facilities

ANOVA						
Source of Variation	**SS**	**df**	**MS**	**F**	**P-value**	**F crit**
Between Groups	13935.22	3	4645.073	14.67581	2.65E-07	2.755481
Within Groups	19307.24	61	316.5122			
Total	33242.46	64				

In this case the table value (2.75) is less than the calculated value (14.6), so null hypothesis is rejected and it is concluded that all of population means are not equal. It also indicates that students' perception towards e-governance facilities provided by the University of Lucknow is not similar or equal.

Objective 3: To explore the major e-governance services that students accessed most from the University's Website.

Outcome: The particular objective is to explore the major e-governance services that students accessed most from the University's website and these are:

Table 5: E-governance Services Accessed by the Students

Result and Examination Schedule	Syllabus
Fee Submission	Examination Form
Scholarship	Student Login Facilities
Recent Updates	Academic Calendar
Question paper pattern	Fee Receipt
Merit List	Faculty Information
Hostel allotment	Notification
Admission criteria	Counseling schedule
Online study materials	Rectification of any date which was incorrectly mentioned in the student's ID card, marksheet, etc.

Objective 4: To explore the major problems that student face while accessing the University's Website.

Outcome: Here is the list of major problems that students face while accessing the University's Website.

Table 6: Problems while using E-governance Services

Information overload	Not up-to-date information
Lack of accurate information	Results not properly updated
Site crash	Disorganized
Mobile version is not user friendly or compatible	Data traffic
Problem in creating UDRC	Difficulty in finding syllabus
No access to e-library	No class schedule
Lots of bugs	Examination form is not updated
e-books not available	Difficult to use helpline services
Unavailability of Lecture notes	Not secure site

Objective 5: To explore the major services which students want but are not available on the University's e-portal.

Outcome: For this particular objective, the students were asked to mention any two services or information which they want but somehow it is not available on the University's website. Their responses are mentioned in table no. 7.

Table 7: Services Demanded by Students

Online study materials	Virtual Lecture
Video Lecture	Class Schedule
E-library	Student records
Syllabus	Online attendance record
Faculty information	Scholarship details
Holiday information	Student feedback/enquiry system
Proper information of events in new campus	Previous year question paper (Question Bank)
Workshop details	Placement updates
Contact details of faculty	Teacher complaint facility

Objective 6: To analyze the difference in perception towards e-governance facilities based on the demographical variables.

H3: There is difference in perception towards e-governance facilities based on the demographical variables.

Outcome: To determine whether any of the differences between the means of gender, age and academic level are statistically significant, compare the p-value at significance

level to assess the null hypothesis. The null hypothesis states that the population means are all equal. Usually, a significance level of 0.01 works well. A significance level of 0.01 indicates a 1% risk of concluding that a difference exists when there is no actual difference. Table no. 8 shows the difference in perception towards e-governance facilities based on gender, age and academic level.

Table 8: Difference in Perception towards E-governance Facilities on Demographic Basis

Dimensions	$F_{calculated}$	$F_{tabulated}$	Null Hypothesis	Result
Perception towards e-governance facilities provided by University of Lucknow based on Gender	33.22	6.59	Rejected	All population means of two groups are not equal.
Perception towards e-governance facilities provided by University of Lucknow based on Age	2.07	3.49	Accepted	All population means of four groups are equal.
Perception towards e-governance facilities provided by University of Lucknow based on Academic Level	1.27	4.06	Accepted	All population means of three groups are equal.

This table depicts the assessment of perception towards e-governance facilities provided by the University of Lucknow based on gender. The table value (6.59) is less than the calculated value (33.22). So, null hypothesis is rejected and it is concluded that all of population means are not equal. It also indicates that the perception towards e-governance facilities is different for male and female. In the case of age, means of four groups are similar as null hypothesis is accepted. The table 8 shows that the calculated value of (academic level) F is 1.27 which is less than the table value of 4.06 at 1% significance level. This analysis accepts the null-hypothesis of no difference in sample mean. Therefore, it concludes that the difference in the perception towards e-governance facilities provided by the University of Lucknow due to qualification is not significant.

CONCLUSION AND RECOMMENDATION

For the University's administration, online mode is the most powerful way to attract and serve large segment of students, parents, teachers and other stakeholders. Using more and more enriched online mode will not only lead to effective e-governance but also ensure quality education. The study proves that there is a significant impact of e-governance on the students of the University. Almost 72% of the respondents prefer online services rather than going personally to the University. This shows the

popularity and acceptance of e-governance as the students are also satisfied with the services provided by LU (64%). E-governance will not only ensure proper and authentic flow of information, but also encourage transparency in the system and it also helps to reduce corruption. There is no doubt at all that any individual can use e-governance for his/her development in a right way. It helps the people to solve their problems also. Apart from satisfaction, the study also states the difference in perception of students towards e-governance facilities provided by LU. These facilities are like information about result, examination, admission, fee, virtual lectures, attendance, class timetable, placement, etc., and about 92% students do registration and admission electronically which shows the acceptance of the particular system. While accessing e-governance facilities, students face various problems like not up-to-date information, problem in creating UDRC, no class timetable and many more. The concerned department of the university should ensure that the outdated information should not be displayed on the website, especially at the home page. Relevant information should be displayed in the separate categories so that the students or the concerned parties may easily explore the information as per their personalized requirement.

The study also helps to explore the various other services which were not available on LU website but were always demanded by the students and other stakeholders like online study materials, virtual lectures, e-library, syllabus, placement and interview schedule, class timetable, workshop details, student feedback system, teachers complaint system, etc. These findings will not only help LU to modify their system but also strengthen the connection or bond between the University's administration and students.

The present study also depicted that the entire population regardless of age and academic level had same perception towards LU e-governance facilities. However, the population means of gender are not same; it means that both male and female had different perception towards e-governance facilities. The particular study ensures that effective use of e-governance in education will provide new ways of communication, imparting education, organizing and delivering information and services. Proper implementation of e-governance services should provide electronic information which reduce duplication and improve the level and speed of service at a lower cost. Uttar Pradesh government should support the universities by enacting favorable legislations and updated amendments for maintaining standards of education through e-governance. The government should also provide financial assistance for developing infrastructural facilities of university related to e-governance. Future studies should recommend for more descriptive research and sample size could also be increased to ensure more external validity.

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Interactive Advertisement: Emergence of a New Dimension

Harshmit Kaur Saluja[1], Vinod Kumar Yadav[2] and K.M. Mohapatra[3]

Abstract—*Interactive Advertisement is considered to be the regime that has changed the whole view of the advertising sector. Interactive Advertisement focuses on consumers' perspective by knowing the consumers' needs and desires, understanding their online activity, etc., which helps to present an advertisement in such a way that the consumers are influenced towards it. The paper shows the evolution of Interactive Advertisement. The paper further discusses the growing need and importance of Interactive advertisement. This research paper is an attempt to frame the Interactive Advertisement process and also to distinguish it from the Traditional Advertisement process. An exhaustive literature review has been carried out. The paper concludes that the Interactive advertisement has shifted the advertising sector from traditional methods to technological involvement and has a significant impact on influencing the customer.*

Keywords: *Interactive Advertisement, Traditional Methods, Technological Involvement, Evolution*

INTRODUCTION

Advertising in India has shifted from oblivion to identity. Priorly, there was no need for affinity but now to promote products, brands, services, etc., by online and offline media; there arose the need of Interactive Advertisement. Li and Leckenby (2000) in (Paul A. Pavlov, 2000) has elucidated Interactive Advertising as "paid as well as the unpaid promotion of the products, services, and ideas by an identified sponsor through mediated means which is involving mutual action between the consumers and the producers of the product and service."

Before the twenty-first century, the term advertising initially was advertiser-oriented and focused only on the sale of the product and service. No one at that time had ever thought that one day the means of advertising would change the complete scenario of the advertisement industry. The advertisement industry which we all live in today had used many media vehicles starting from the stone age to newspapers, magazines, and hoardings, banners (Print Media) to the era of radio to the television era, when this black and white screen attracted most of the consumers and it was one of the most effective media at that time.

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After the television era, the most revolutionary era is the internet era of the advertisement industry which changed the wayfaring of advertisement sector. It molded this industry from advertiser-oriented to consumer-oriented where knowing the consumers' needs and desires, understanding their lifestyle and other factors relevant from a customer's point of view started gaining colossal importance.

Further came the era when internet combined with the most exciting advent of Steve Jobs, i.e., the iPhone. That was the time which made consumers connect, consume and exchange information strikingly and significantly. The mobile world continues to grow faster for advertisements and no one had ever forecasted that its dedicated application would offer all the features in a more intuitive, convenient and accessible way, so much so that the advertising industry would become consumer-controlled.

The advertisement industry is moving from a traditional form of advertising to modern advertising, but it should not be misunderstood that it can be done only if there is internet. It is making advertisement interactive even if they are offline. But to a major extent, it becomes interactive when we are online. It can be understood as developing two-way communication between the advertisers and consumers. It is consumer-controlled and, therefore to achieve success, knowing the consumer's choices, needs, desires, attitudes, perception, e-lifestyle, etc., need to be understood, and that is what interactive advertising is all about.

Lombard and Ditton (2013) have also defined Interactive Advertisement "as a medium in which the user can influence the form and content of the mediated presentation or experience through advertisement." It then reveals that the internet is considered to be the factor that created a revolution in the advertising sector and the advent of mobile became the facilitator in the advertising sector.

The advertising industry has gone through various stages. The research objective of this paper can be broadly classified as:

- To showcase the growing need for Interactive Advertisement.
- The paper has attempted to design an Interactive Advertisement process and further differentiate it from Traditional Advertisement process.
- To show how technological up-gradation has changed the whole view of the advertisement sector.

LITERATURE REVIEW

Advertising in India dates back to the Indian civilization. Relics of Harappa, Mohenjo-Daro indicates names engraved on exquisite earthen, stone or metal works.

Paintings or writings on the wall indicating slogans or stone engravings; indicates a form of advertising. The advertising was at that time used for religious purposes. The rock and pillar edicts of that time can be called the forerunners of poster advertising of today.

Banner advertisements today are not considered as effective online advertising mediums because of its required designing, it is considered to be highly time consuming and also expensive to create. Not surprisingly, by mid-2000 the banner advertisements started to dry up and have become obsolete at the time of writing. Earlier the banner ad studies were found to be effective in appealing and creating brand awareness and positive attitudes among customers (Hoffman, 1996). Due to the changing scenario of the advertisement industry, Ad intrusiveness at that time has been thought to be a leading cause of annoyance to some extent (Bauer & Greyser, 1973).

On the other hand, at the time when drift started between Traditional Advertising and Interactive Advertising, (Ronald T Rust, 1996) had predicted that the ads in new media is less intrusive and engaging. Further, Li *et al.* (2002) report that online consumers seem to be goal-oriented, and also it was observed that they perceive online ads as even more engaging than those in other media. The advertising effectiveness measure should be related to the actual behavior of the consumer. The most concrete action of interactivity is looking at consumers actual behavior of interactions, e.g., clicking, searching, bookmarking, etc. However, at the other side, few also said that internet advertising is deemed as nonsensical, uninformative, forgettable, and ineffective (Scott Mccoy, 2004).

So modern advertising techniques had to face many ups and downs, as it was not so easy for people to accept and further adapt in their lifestyles. But as it was accepted, we found that the consumers' response rate is high in the advertising on the Internet as compared to the advertising in traditional media, concerning traditional measures of advertising effectiveness. The Internet and the other interactive media like television have been found to be powerful and customizable than the traditional means of media that are be used for interacting with people (Jennings Bryant, 2009). But success cannot be felt so easy. Hence, with acceptance, there came a lot of difficulties. It found a response to the advertising on the internet to be similar to the response to advertising in other means of media, except that advertising on the internet, appeared to be easier to ignore which was seen as the biggest limitation of internet advertising (Dimitris A Drossos, 2011). But later it was found that as Interactive Advertisement started growing it became easy and convenient for the consumer to access.

After that, the advent of the Internet is considered to be the point where the evolution of Interactive advertisement started, but at that time no one had ever thought about the scenario that prevails today. The year 1994 has seen the first online advertisement and it was then followed by a period of experimentation on the advertiser. This phase remained only for a small period as with the launch of first advertisement technologies; the double click came in 1995.

The Internet is considered as the emerging niche medium with some peculiar creative capabilities and constraints. The rise in the internet led to the evolution of commerce age into an electronic age (Maamar, 2003). As such, we have seen that internet represents a huge opportunity for advertisers regarding the response for efficient and effective communication with customers (Faber *et al.,* 2004)

Shortly after the advent of mobile phone services, a new and innovative way of conducting business on an 'anywhere, anytime' basis had emerged (Shankar & Balasubramanian, 2009). According to Bruner and Kumar (2000), the advertising measurements employed in the traditional media can be transferred to the internet environment. This research applied this concept in both the internet and mobile phone settings (i.e., in the interactive digital advertising environment). Prior attitude scales items from traditional advertising and e-advertising were collected and subsequently formed the basis of the original advertising attitude scale items.

With the growing internet mobility and in-app advertisements, there came the virtue of understanding valuable advertising which satisfies customer for which 5 A's have taken considerable place in valuable advertising, i.e., Attraction, Attention, Attitude, Action, and Aesthetic (Awais, 2012). Gauzante (2010) studies reveal that how consumers' needs, desires, lifestyle, etc., have become such an important determinant in deciding the content of the advertisement. A survey by Koshksaray (2015) explores that consumers' e-lifestyle is affecting, to a great extent, their choice towards the product/ service which is being advertised. To be clear and precise with the text in-built in the advertisement that is for the consumers and then providing knowledge, is important to clinch the consumer cognizance for advertisements (Bilal Aslam, 2017).

RESEARCH METHODOLOGY

As the study reveals, there is lot of depth to the premise and attempts to distinguish between traditional advertisement process and interactive advertisement process. Therefore, the primary aim of this advertising study is to portray how technological advancements have led the evolution of interactive advertisement. After studying

the evolution of interactive advertisement, we have tried to design an Interactive Advertisement process and differentiate it from the traditional advertisement process. For this, we have reviewed various papers on Advertisement and then on Interactive advertisement. The research papers are mostly from the Interactive Advertising area. Thereafter, the available body of research work has been carefully studied and presented in this paper.

Need & Evolution of Interactive Advertisement

Traditional advertising was always seen from the point of view that it is advertiser-controlled. This may be true as in print media, radio, media or, to some extent, in television media, as at that time the main focus was just to sell the product or service without knowing as to how much effect that advertisement has on consumer's mind and in their purchasing behavior. But, now it has become essential and evident to understand that the consumer's choices, attitude, preferences, behavior, personality, etc., have become the most important criteria for advertisers for the formation of advertisement content, and making the customer aware as well as for satisfying and retaining the consumer.

Slowly and gradually, the Internet Era has changed the view of the advertiser that the selling of product or service to the customer is not the only important intent. It is even more important to gauge the consumer's preference for what to buy, and the advertisers should aim to focus on that. So, there has been the genesis of the need to understand that advertisements should be two-way controlled (customer-controlled and advertiser-controlled). Moreover, advertisements should be seen from the view that the whole sole power from seeing the advertisement to finally buying the product, is in the hands of the customer.

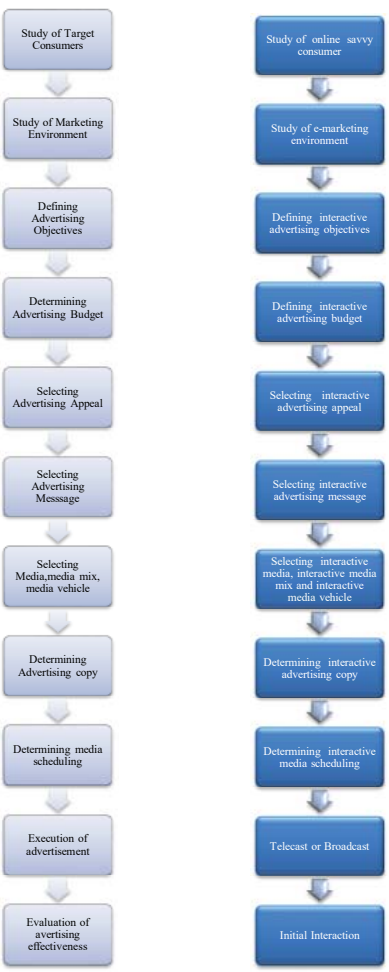
To sell the product in such a competitive environment, there are a lot of parameters from a customer's point of view. These could include psychological, socio-economic, demographic, etc., because customers buying pattern is changing due to a change in their lifestyle, attitudes, etc. The most important factor for their change in attitude is their online activity which has changed the pace of advertisements. Hence there is a pertinent need to study the interactive advertisement and its increasing importance due to the change in consumers' e-lifestyle which is evolving their thought process, attitude, behavior, etc.

The table below represents the type of advertisement and the key indicators and characteristics of response from the traditional advertisement to modern advertisement. This mainly depicts how the response activities are changing.

Table 1: Representing the type of Advertisement, their key Indicators, and Characteristics of Response.

Type of Advertisement	Key Indicators	Characteristics of Response
Print Media (Banners, Hoardings, Newspaper, Magazines, etc.)	Single Channel	Not Recorded
Electronic Media (Radio, Television, etc.)	Multi-Channel	Not Recorded
Digital Media (Computer, Laptop, Desktop, etc.)	Multi-Channel Data consumption and generation increased	Recorded when consumer response is there
Modern Media (Mobile, in-app, etc.)	Multi-Channel Technological Up gradation (Big Data analytics, Artificial Intelligence)	Recorded when consumer responds and also it is recorded by their online activities.

Process and Characteristics of Interactive Advertisement



Traditional advertising is a process comprising 11 steps which we have been studying till now. Though, the interactive advertising process has not yet been made which can be followed. Therefore, the process below is an attempt to show how interactive advertisement works and how traditional advertising process differs from the interactive advertisement process.

We have observed that in the traditional process there is no interaction in advertiser and consumer. On the contrary, in the interactive process there was interaction among the advertiser and consumer as the consumer feedback was important and it was considered even if the consumer's response is negative. This was done with the intent to know the reason behind the ignorance or unlinking. And if it is positive, then how to retain the customer was the major challenge as a consumer nowadays daily seeks for something new and more.

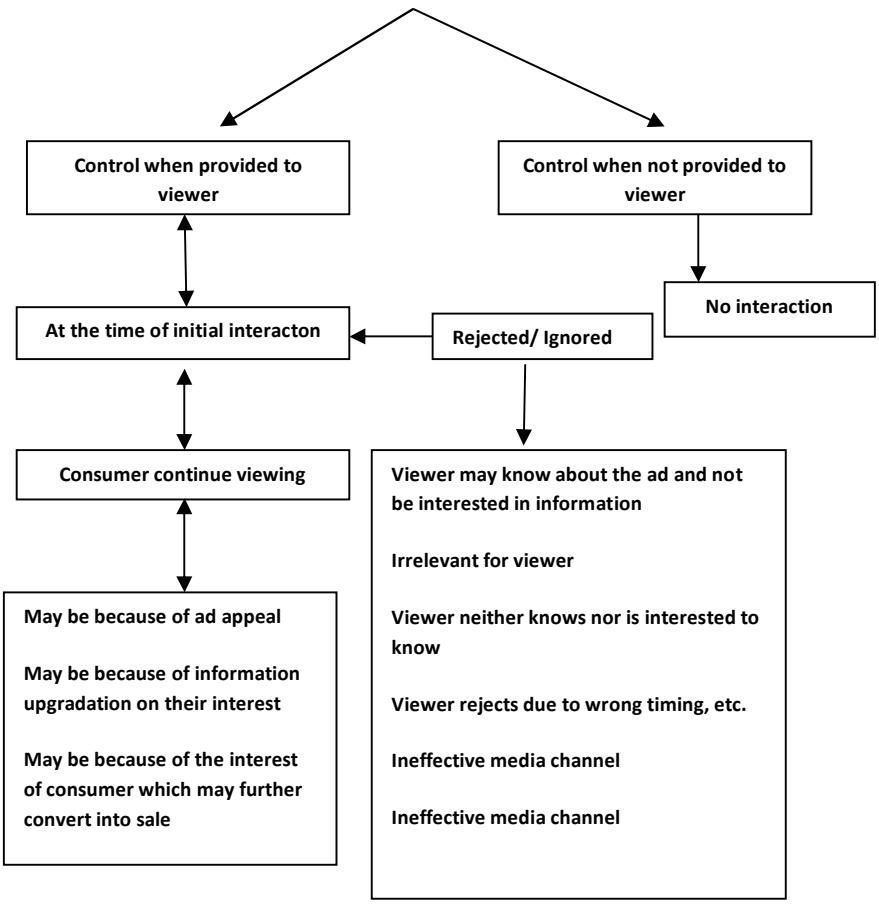


Fig. 2: The Above Chart Distinguishes between the Traditional Advertising and Interactive Advertising

CONCLUSION

Unlike the traditional advertisements which depend on the advertiser's outlook, Interactive advertisements are premised on the customer's perception. As we have observed that advertisements always have the perspective of interacting with the customer through various platforms which may be print, radio, television, etc., but at that time the customer's response/ feedback was not recorded. This became the base for the advertisers to target the customer according to their likings, preferences, etc. This pattern is evident from what we have observed of the traditional advertisement vis-à-vis the interactive advertisement process. But, with the advent of the Internet, the response is now recorded and this can make the advertisement interactive from the point of view of both (advertiser and consumer). Therefore, the interactive advertisement has become the essential need for the advertisement sector as it focuses on knowing the customer's needs and also an attempt is made to ensure customer satisfaction. It has also served as the parameter for prediction due to continuous technological innovation.

FUTURE SCOPE

This paper is based on the theoretical aspect. And further, this study can be checked through empirical research.

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Skill Development in India and Financial Involvement of Private Sector

Harshil Sharma[1]

Abstract—*India is currently moving through 'demographic dividend' and is touted to be one of the fastest emerging economies of the world. India currently has the lowest percentage of skilled workforce where less than 5% of India's workforce of 500 million has received any form of formal vocational training. This paper tries to analyze the Skill Development System in India to understand policy approach of Indian TVET system. This paper adopts an exploratory historical approach by understanding the historical evolution of vocational and skill development policies in India from pre-independence period to current administrative structure. It is followed by the critical evaluation of the current skill development reforms taking place in India and finding how helpful they are in solving skill deficit problem of India. In the next section there would be discussion about the passive role played by the private sector in skill development system. This article finds out that firms are not involved in curriculum designing, providing training, hiring apprentices because of which skill development in India is not demand driven. Private sector is not involved in financing of training due to free rider and moral hazard problem. There are four players that play a major part in development of skills i.e. Government, Private industries, Vocational training institutes/schools, and Youth/students. The process remains incomplete even if one of them does not fulfill their duties. In the concluding section there would be a brief discussion about the future reforms and how the skill development system in India can be made more inclusive. There is a discussion about alternative of levy based financing and how it can help in making the skill development system more demand driven.*

Keywords: *Skill Development, Demographic Dividend, Vocational Education, Indian Economy, Education Policy*

INTRODUCTION

India is currently moving through 'demographic dividend' and is touted to be one of the fastest emerging economies of the world. To achieve the tag of 'knowledge based economy' there is a dire need for India to produce skilled labour force. According to a study conducted by Boston Consulting group, India would have a surplus labour of 47 million by 2020 at the same time when there will be shortage of 56 million workforces in the rest of the world (BCG, 2007; Ernst and Young *et al.*, 2009). India, currently, has the lowest percentage of skilled workforce where less than 5% of India's 500 million workforces have received any form of formal vocational training (MSDE, 2016). Those who are trained in vocational education lack skills required in labour market and are not able to secure a decent job (Pilz, 2016). At present, around 5 million workers in

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the country are trained per year but the requirement is for around 20 million workers to be skilled every year (Mehrotra, 2014).

Skills and education system needs to be complementary to each other. There is a misconception regarding skill development that skill formation refers only to vocational education. General education and vocational education do not need to function as two separate entities and are required to work together for producing educated as well as skilled workforce. There is a need to understand the education system and skill impartation system as it works and how future can be improved in case of Indian Economy (Mehrotra, 2014). Education has a much higher purpose, i.e. of learning cognitive skill and conceptualization but at some time every educated person requires a decent means of livelihood. Various studies have argued about the inseparable link between school and work but the same link is struggling to find its place in case of India (Aggarwal, 1993). There are four players that play a major part in development of skills, i.e. the Government, Private industries, Vocational training institutes/schools, and Youth/students. If any one of them does not fulfill their duties, the process is hampered.

Policy approach to skill development in India is supply driven and less attention is paid to the demand side factors (Singh, 2003; Mehrotra, 2014; (Berman, Somnathan &Tan, 2005)). There is a strong linkage between the skilled workers and unemployment. The unilateral focus on creation of more skilled labourers and no correction of demand side constraints is an attempt of correcting macro policy distortions through micro interventions. Policy options for skill development in India have, in order to quantifiably achieve targets, limited their focus on generating more aggregate demand. This has the tendency of overcrowding and bumping out of low skilled workers and leaving the economy with a large pool of unemployed, both skilled and unskilled workers. Employment is always relative to the absorption capacity of sectors and if a skilled worker is not able to realize the price of his labour power, it means it has only intrinsic and not extrinsic labour power. Inspite of the skill being marketable, it does not fetch exchange value till the skill is put to use (Singh, 2003; Debroy, 2009).

One must question the skills that an individual learns are related to routinization of same works, i.e. converting a man into a machine and also explore the question as to why are the training institutes like ITIs (Industrial Training Institute), polytechnics and the like being looked down upon with the perception that only the 'ones who are not good enough for college' take a vocational training degree. There is little integration in strategies, evaluation, or implementation of training. The worker training, that is provided, often gives the appearance of being haphazardly designed and delivered. Education system only concentrates on transfer of knowledge and not on developing skills. These include

the ones which the industry needs the most (Venkatram, 2015). India also suffers from prejudice against the manual work and its vocational education is largely stigmatized. There is a negative attitude to manual work, perception of the "vocational education system is only for poor" and educationally backward (Singh, 2012).

Even after the problems pointed above, there are a lot of positives which can be taken from the analysis of treatment of skill development in case of India. With the amount of funding and formation of separate skill development ministry, the base for wider policy reforms is set in India. This article tries to present the current structure of Skill development in case of the Indian Economy. The second section talks about the historical evolution of vocational and skill development policies from pre-independence period to current administrative structure. Third section would concern with the critical evaluation of the current skill development reforms taking place in India and whether they are actually helpful in solving the skill deficit problem of India. In the fourth section there would be discussion about the passive role played by the private sector in the skill development system. Firms are not involved in curriculum designing, providing training, hiring apprentices and the like because of which the demand side linked to skill development program is not connected. In the concluding section, there would be a brief discussion about the future reforms and how the skill development system in India can be made more inclusive.

REVIEW OF LITERATURE ON VOCATIONAL AND SKILL DEVELOPMENT POLICIES

There are number of committees and commissions formed for bringing change in the current education system. They have aimed to develop appropriate importance of vocational education but most of the efforts have been futile. Vocational education finds its first mention in case of India in 1882 Hunter commission report on the Indian education system. It recommended splitting of secondary curriculum into two parts and follow the dual mode of education where one part is general education and the other is vocational which is now also known as the German Dual model. Hartog Commission (1929) recommended for the male workforce, which had achieved middle secondary education, to be diverted to industrial and commercial career but this was less to do with better education and skill standards, and more to do with the industrial needs. Sapru Committee (1934) recommended new vocational courses at secondary level to solve the ongoing unemployment problem but the policy had very little impact on the education administration at that time. Abott and Wood Report (1937), Sargent Report (1944) again laid stress on dual mode of education to give prominence to vocational education (Ajithkumar, 2015). Educational policies in India

had strong linkage to Anglo-Saxton model due to its colonial legacy and to this day still remain focused on general academic education with a fringe role being played by vocational education (Singh, 2003).

After gaining Independence, Craftsmen Training Scheme (CTS) started with the training of craftsmen through vocational education provided by the ITIs. It was accompanied by Apprenticeship Training scheme (ATS) which was backed by the Apprenticeship Act, 1961 for companies to hire and train prospective employees as interns. Both the programs, launched at a small scale, were not taken up as lucrative options for attaining skills as general education was more preferred and more focused option by the workforce and policy makers. Kothari Commission (1966) (MOE, 1966)) laid foundation of the concept of vocationalization (introduction of work experience) where the target was set to raise vocational education to 50% in higher secondary education but enrollment in 1985 was just 2.5%. Kothari commission tried to remove stigmatization of vocational education and undertook steps to generate vertical mobility under vocational education. This led to the introduction of Socially Useful Productive Work (SUPW) as a subject in school curriculums from 1978 in 10+2+3 system. In 1985, Kulandaiswamy Committee was formed as a working group for reviewing vocational education programs in India. Its recommendations led to the development of the Centrally Sponsored Scheme (CSS) and prominence was given to vocational education in New Policy for Education, 1986. National Policy of Education (1986) had a large portion of report on vocational education with the help of which vocationalization of secondary education scheme was launched in 1988 where 10,000 schools with intake capacity of 1 million students were covered. Here, only 4.7% of all were enrolled in vocational stream against the target of 25%. It was proposed to increase the same to 20,000 schools and 2.5 million students but the scheme was unsuccessful due to inadequate monitoring. MHRD launched a revised version of Vocational education at secondary level in 2012 under the National Vocational Education Qualification Framework (NVEQF) which focused on generic and soft skills to gain employability.

The World Bank report (2008) on skill development helped in the formation of National Skill Development Policy (NSDP) 2009. The Indian government, in 2011, set a target with vision 2022 in mind of creating over 500 million skilled workers being made available in the Indian economy. This claim is said to be an overestimation and approximate targets as calculated by Mehrotra (2016) were around 320 million. It was thought that every year around 12 milion workers will be added to the workforce where in reality that

figure is just around 2.5 million per year. Major schemes that were introduced to attain this aim were SDIS (Skill Development Initiative Schemes) which is involved in training for the informal and uneducated workers) and CITS (Craftsmen Institute Training Scheme) which is involved with the training of the trainers. Government ITIs, Private ITIs and SSCs (Skill Sector Councils) in concordance with National Skill Development Corporation (NSDC) were looked as the options with the help of which training was sought to be provided with cooperated efforts from central and state ministries (Hajela, 2012). Under the National Skill Development Mission (2009), Ministry of Labour and Employment (MOLE) and National skill Development Corporation (NSDC) were major departments that were given the burden of providing skill to Indian population. NSDC is totally government sponsored and runs on schemes for which budget is allocated by the government. It was formed as Public Private Partnership (PPP) but the actual partnership with private players has not been smooth for NSDC. For funds, it is totally reliant on the government as many of the investments made by NSDC in the past have turned out to be Non-Performing Assets (NPA) (MSDE, 2016). Institutional framework under this policy included National Skill Development Agency (NSDA) for administrating and applying National Skill Quality Framework (NSQF). NSDC acted as the link between government and private sector to make skill policy more demand driven. Skill Sector Councils (33 SSCs are currently operational) offered specialized training in different sectors. Authority-Responsibility relations were not well defined and it led to overlapping of work performed. There was lack of coordination among all the different skill providing agencies with over 35 different functioning agencies in India providing skill development programmes (Hajela, ibid).

With formation of separate Ministry of Skill Development and Entrepreneurship and launch of new National Skill Development Policy (2015) (MSDE,2015), the complexities and overlapping of tasks previously observed were attempted to be remedied, as now under one ministry most of the skill development policies are designed and implemented. This is also accompanied by formation of currently working 33 skill sector councils to have sector specific skill development. All the ongoing vocational education schemes by various ministries list can be found in the Appendix section.

Through the launch of Pradhan Mantri Kaushal Vikas Yojana (PMKVY) there is mushrooming of Kaushal Vikas Kendras for which the government loan is given to private trainers for providing training where placement will be facilitated by the government. There is also launch of two new World Bank projects SANKALP and STRIVE which are focusing on training of trainers and training of unorganized sector.

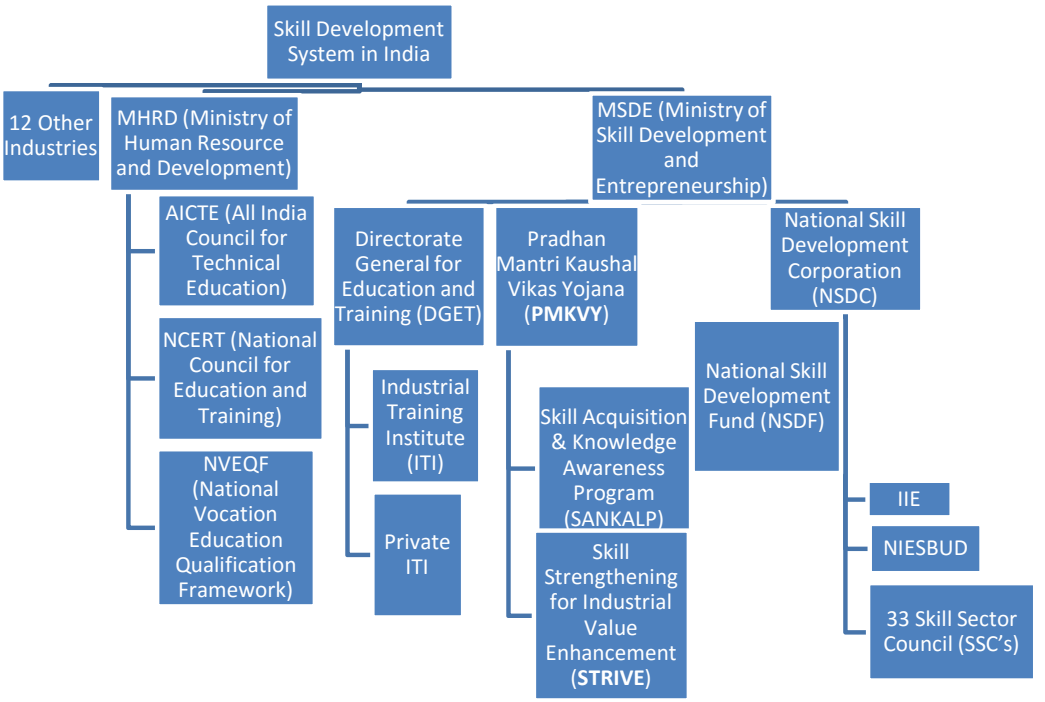

Fig. 1: Structural Framework of MSDE

Source: Author's own illustration

THERE ARE TWO TYPES OF SKILL DEVELOPMENT MODELS

- Germanic model: Germanic system involves broad vocational education training with room for flexibility and linking of the general and vocational education. It sees market as the most efficient way for basic framework for education and training where state plays a substantial role only at the time of market failure. Firms play a proactive role in skill development and training where focus is 'on the job training' and internships and work experience are an internal part of the system. Industrial training happens parallel with theoretical training in the classroom. This system is mainly operative in Germany, Austria and Switzerland.
- Anglo Saxon model: This system defines skill specifically with least level of flexibility. This model focuses more on theoretical aspect of skill development and less on the 'on the job' learning. Firms play a passive role in providing training which is done mostly by the state led institutions. Focus is on class room training and after completion of training the trainee can go for work experience. This system of skill training is done in Anglo Saxon countries beginning in United Kingdom and also in countries like US and India.

Every country has their own experience with skill development with respect to economic and political conditions of the country and adoption of a particular method of skill development. There is a general misconception that state led skill development policies are less effective than the market led policies but empirical evidence does not support the same. There were dirigiste skill development policies in Singapore and minimum government intervention in Hong Kong. Data confirms that Singapore is more successful with their skill development policies than Hong Kong is. India follows Anglo Saxton model of skill development where majority of skill development work is done by government. Skill education training here is very narrow and rigid and the trainees find it difficult to jump from one job to another. (Srivas, 2017)

DATA ANALYSIS ON SKILL DEVELOPMENT POLICIES OF INDIA

One of the studies by Mehrotra *et al*. (2012), projected that the workforce by 2022 of the world would be around 580 million and the total amount of trained workers by 2022 in India would be around 290 million, where 136 million will be trained through formal vocational training, 55 million through informal vocational training and another 100 million through general education.

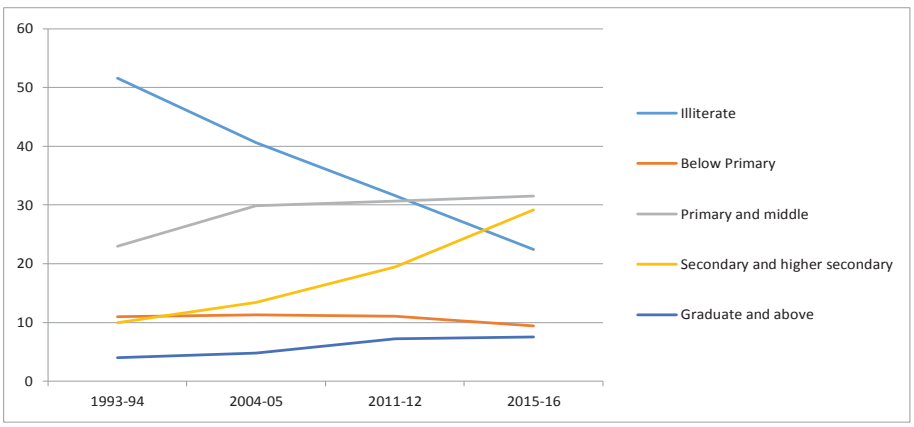

Fig. 2: Enrollment of Education in India

Source: NSSO (Various Rounds) and Labour Survey (2015)

Graph shows years of education completed on average by different percentage of the Indian workforce. It highlights all the forms in which general and vocational education has been attained by the workforce of India. Educational attainment in the past two decades has been positive for India. Between 2004-05 and 2015-16, the number of illiterates has fallen down drastically which is possible due to the implementation of the Right to Education Act. Even after such improvements, the overall numbers

are still very poor for a sound skill development system. Only around 50 percent of the Indian workforce had passed 8th Standard till 2015-16. More specifically, 22 percent of the labour force was illiterate, 31 percent had studied up to the primary level and the middle level. When elementary education, a preliminary requirement of the existing skill development system and programmes, has not been completed by majority of the workers, the failures of such programmes are inevitable. Only 0.02% of total workforce attends school level vocational education compared to 12.26% attending general education. Also, at senior secondary level enrolment is 6.14% in general education and only 0.48% in polytechnics and 2.26% in CTS and ATS schemes which clearly indicate the worrying state of vocational education in India. According to the current training capacity, around 5 million workers are trained per year but the requirement of skilled workforce is around 20 million workers (Mehrotra, 2014).

Even though the enrollment in ITIs and polytechnics is rising but these figures are marginal in comparison to the whole workforce. These figures give a broad idea regarding the level of progress that is needed not only in vocational education but general education as well. Basic academic education is a precursor to vocational education and the growth of vocational education would not hamper the growth in general education unlike what is thought to be the conventional notion.

Table 1: Per 1000 Distribution Of Persons In the Age Group 15–59 Years By Status of Vocational Training Received or Being Received

Category of Person	Received Vocational Training		Did not receive Vocational Training	Total
	Receiving formal vocational training	Learning on the job		
-1	-2	6	-9	
Rural				
Male	8	42	864	1000
Female	3	14	931	1000
Person	5	28	897	1000
Urban				
Male	19	82	794	
Female	13	16	911	
Person	16	50	850	
Rural+Urban				
Male	11	55	842	
Female	6	15	925	
Person	9	35	883	

Source: NSSO (2015)

Table highlights the level of vocational training prevailing in India. Overall, all the figures are at a marginal level but situation in rural area is far worse in comparison to the urban areas. Female vocational training is worse off in both rural and urban areas and situation is much worse in the urban areas as the gap between total male receiving vocational training in any form is very large.

School Level Education

CBSE offers over 40 vocational courses consisting of 100 subjects and in 313 affiliated schools with approximately 37,095 students (CBSE, 2013; CBSE, 2014). Under Schools and Enrolment under Vocationalization of Education in Secondary and Senior Secondary Schools, there was approval given to 7448 schools and the programme has been implemented in 4817 schools having 4,47,350 students (MSDE, 2016).

Through NSDP (2015) there was a recommendation that by 2022, 25% of the schools should be integrated with the skill development programs (NPE, 2016). Through Rashtriya Madhyamik Shiksha Abhiyan (RMSA) numerous schemes to impart skill training to students at secondary level have been introduced, but the response to the schemes has not been motivating due to the prejudice against vocational education in the Indian society. The major complaints by the schools and program coordinators are that schools don't have adequate logistics, workshop, industry linkage and qualified trainers to make the program a success (NPE, 2016).

Major limitation seen in the Indian school education system is that general education promises higher chance of employment whereas vocational education creates a sense of second class citizenship (Venkatraman, 2013). Despite trying to double the number of vocational schools, no change has taken place on the ground in this regard (Nayantara and Kumar, 2015).

ITI

ITIs provide training in 133 trades where 70 are in engineering and 63 in non-engineering programs. The duration of the training programs vary from 6 months to 3 years with varying minimum qualification from 8th Standard to 10th and 12th Standard (Kumar, 2015).

Characteristic	Government ITI's	Private ITI's	Total
Functioning ITI's till 2016	2051	10361	12412
Seating Capacity	693925	1857405	2551330

Source: MSDE (2016)

Percentage of functioning for government ITI is 17.5% and the same for Private ITI is 82.5 % and this gap is consistently rising according to the recent trends. The rising number of private institutions should not be taken as a positive influence as the trouble lies in the actual functioning of the institutes and their very low ITI intake. ITIs spend almost 90% of their allotted funds in salaries of the workers of the institute which leaves very less support for the maintenance and upgradation of facilities and other operational expenses (Khare, 2015). According to a study by Mehrotra (2014), major problems related to ITIs are that placement is low, dropout rate is high, instructors are not well qualified and they draw a very low salary, and the actual staff strength is less than the sanctioned posts. Comparing government and Private ITIs, it was observed that government owned ITI had more classrooms and practiced more trades but placement was better in private ITIs. Of the people who got trained, 67% had household income of less than Rs. 5000. Around 60% of the teachers themselves are ITI graduates and thereby underqualified to teach. Knowledge and skill of labour are not at par with the new technology. Crafts Instructor Training Scheme (CITS) was introduced in 1948 for training of trainers but the scheme did not work efficiently. Only 40% of the 55,000 TVET instructors have undergone instructor training course (Ajithkumar, 2015). One of the major reasons among youth of not opting for ITIs are that there is neither job mobility nor enhancement of skills. As mentioned above, the number of ITIs and Skill Centres are rising but the training offered in these centres is short term and very narrowly defined which does not transform into employment. Questions that still need to be addressed regarding the training is the curriculum design, training of trainers, quality of training, infrastructure facilities and overall financing of skill development program (Mehrotra *et al*., 2013).

National Skill Development Agency has started with the Skill Exhange portal of Labour Market Information System (LMIS) to meet the problems of labour demand supply mismatch. Employers can get data of registered trainees with respect to a particular course, duration and region, which is a positive step by the government.

ROLE OF PRIVATE SECTOR

There are four players that play a major part in the development of skills, i.e. Government, Private industries, Vocational training institutes/schools and Youth/ students. The process remains incomplete even if one of them does not fulfill their duties. The private sector employers have issues with the workers that are not properly trained in job specific skills. This calls for immediate solution that involves private sector in training of workers. Private sector needs to be at the heart of skill training as they are aware of the skills required in the job. They do not get involved

in training of workers due to high labour and attrition cost. Students gain skills from the government institutions and work for the private sector. Private sector has been a free rider of public education system which wants to minimize the labour cost as that helps in increasing the value added share of profits. This may be sustainable in a short run but in long run, the products produced by the unskilled workers would lose out to the products made by the other countries with better technology and trained workforce. On-the-job training is provided by most of the companies to overcome the skill gap. In-company training helps employee use their knowledge and skills acquired by executing a set of task (Chenoy, 2012). This training is imparted by more than 80% companies in Germany and China and the same for India is only 18%. This is mostly provided by large firms (majorly foreign firms) while the micro, medium and small enterprises do not provide any sort of skill development training due to capital constraints. Companies are apprehensive about investing in training due to fear of 'free rider', i.e. of employee leaving the firm and joining a competitor after being trained and the benefits of their training going to the same. There is also experience of high turnover cost among private firms which needs to be addressed. Sabharwal (2013) finds three issues in private financing on training which needs to be addressed which are learning issue- if the employee fails skill test, productivity- even after training the productivity remains low and attrition- the employee leaves the firm (the three issues not clearly presented). So 'moral hazard' problem combined with a 'free rider problem' needs to be addressed by private firms to develop more in-house training of employees (MSDE, 2016).

Conventional notion among skill development policy makers in government is that skill development takes place majorly at schools and training centres whereas the most successful examples of skill development have taken place where investments are made by enterprises (IAMR, 2014). According to a World Bank survey conducted in 2009, only 16 % registered enterprises conducted any sort of in-house training and the same data showed its rise to 36% in 2014. This is a positive sign but still has a lot of scope for improvement. The main issue involved with the application of Apprenticeship Act, 1961 is that there is low participation of workers due to low wages and it is restricted to handful of trades, while majority of trainers don't keep apprentices due to limited nature of their work. ATS (1961) makes it compulsory for employers to hire trainees with a penal provision in the act for the same. Of a country with a 460 million workforce, 52 million are in manufacturing (as on 2009-10), the miniscule number of 2,11,000 apprentices are in training. There is a proposition through the National Apprentice Promotion Scheme to increase apprentices which at present are 2.3 lakhs to 50 lakhs by 2020 (MSDE, 2016). The courses offered are not at par with the industry requirement. Soft skills imparted are not up to the standard

and majority of the trainees are unsatisfied with the training as a whole. There is rise in number of institutes offering technical education but that rise is not at par with the general education institutions (Venkatram, 2015). At a philosophical level, the policy makers have linked ITI as the agent leading students to transition from school to world of work. Due to short length of courses and numerous other limitations, ITIs are not desirable source to make a move towards 'Skill India' (Kumar, 2015). Through the launch of PMKVY there is mushrooming of many Kaushal Kendras which are believed to be a game changer. These Kendras are run by private players which are jointly funded by NSDC and Government sources. These skill centres, irrespective of their potential, are looked as profit making business opportunities by small private players who don't have capacity to hire workers. Big private firms are not investing in these Kendras. This leads to market failure and closing down of many centres as the centres are unable to provide employment which is guaranteed at the start of the training. So the link between private sector and training which was planned to be achieved with the help of PMKVY is not being achieved.

CONCLUSION

After more than 70 years of independence, Right to Education was implemented in 2009 to help reduce illiterate section of the population. From 2004-2011, results have been positive regarding workforce gaining higher level of education but problem still persists with the quality of education offered. School education system produces half-educated workers who after undergoing skill development programs are only quarter trained (MSDE, 2016). There are two perspectives on education which can be suggested for improvement of the education levels and in turn skills per se. The first perspective, i.e. the liberal one says that education should be looked at creating a dynamic and transformative space where minds have the freedom to think and explore the boundaries towards national development. This educative space should help in increasing curiosity and encourage citizens to ask searching questions (Kumar, 2015). It is believed that this type of education is associated with the development of humanities, arts and literature. This is kind of education system may benefit both arts and science and is very much needed to bring out tremendous innovation and development. In the second perspective, education is viewed as a means of producing skilled workers which can imitate the jobs that are created in the economy. These skilled workers should carry out repetitive and imitative jobs efficiently which can lead to least wastage of resources and growth of economy.

Skill Development model, as in case of India, is supply driven and the reason for the same is believed to be its government driven and government funded character.

Government driven models can be successful too and be made demand driven as government can affect demand of products by complementing skill development policy with industrial, trade and import and export policy. There can be a political economy approach to collective skill formation but the link currently in missing.

Latest figures of number of trained people in India are yet to come out. It may show a drastic rise in formal vocational training as 3 to 6 months short term courses and certificate distribution through Recognition of Prior Learning (RPL) is rising. These may result in rise in numbers of people trained, but the huge question on quality of training would still persist. Bureaucratic hurdles, lack of coordinated action between centre and state government, lack of on-the-ground initiatives and poor execution has worsened the skill development policies situation in India (MSDE, 2016). A work by Young and Allias (2011) reveals that unlike many other countries, India is diverse and huge and needs to achieve many aims like social and economic justice. They have suggested that the first step should be a cooperation between the employers, the state, unions and TVET providers to develop the framework, i.e. involvement of all the stakeholders from the starting.

Issue that needs a close scrutiny is regarding financing of the training models where India's skill System is government sponsored and government driven (Mohanty, 2013). Studies have recommended for formation of training funds in private sector and the funding taking place through private route, i.e. in order to attain efficiency. Corporates should be compulsorily made to spend 3-5% of their total earnings on skill development of its employees. Levy based financing can help in solving problem of free rider and moral hazard as is held by the private sector (Mehrotra, 2016). This levy based system cannot be introduced overnight and small changes are needed to be done in the present system to improve the current system and set up base for strategic reforms towards levy based training funds.

- Need to see growth of formal apprentices where state will play a role. Need a rise in internship opportunities.
- Incentivize teachers from private sector to take up training- before sending them for training impartation they should be given some pedagogic training to make them a better instructor.
- Curriculum designing has non-involvement of private sector- states are not ready to let go of their power and lack vision of making a skilled workforce for future.
- Certification process needs to be improved- have stakeholder from all departments, i.e. Trade unions, firms and government. Currently there is little

or practically no work experience requirement before certification of skills. Apprenticeship should be made mandatory for certification.

- Placement counseling system is needed to be put in place for not only the ITI passouts but improving upon the newly formed LMIS.

In the current standing where there is abundant supply of institutions, a long term strategy for skill development is needed for educated students which can be fit for work globally (Venkatraman, 2015). Revamping of the whole education system cannot be offered as a recommendation as it is practically impossible but steps in making the system more accommodative is needed. Curriculum needs to be work based and link between jobs and education need to be reconnected. Skill agenda is necessary to be put forward as national and global priority.

"The illiterates of 21st Century will not be those who can't read and write but those who cannot learn, unlearn and relearn"- (DSKMAG, 2009)

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APPENDIX

Details of Schemes for Skill Development of various Ministries/Departments

S. No.	Name of Ministry/Department	Name of the Scheme
1.	Pradhan Mantri Kaushal Vikas Yojana (PMKVY)	Apprenticeship Training Scheme (ATS) Craftsmen Training Scheme Craftsmen Instructor Training Scheme Skill Development Initiative Scheme (SDIS)
2.	M/o Rural Development	Deen Dayal Upadhayay Grameen Kaushalya Yojana
3.	M/o Housing and Urban	Rural Self-Employment Training Institute (RSETIS) Poverty Alleviation National Urban Livelihood Mission (NULM)
4.	M/o Textiles	Integrated Skill Development Scheme (ISDS)
5.	M/o Agriculture and Farmers Welfare	
		National Food Security Mission-Farmers Field school
		Agri-clinic and Agri-Business Centres Scheme
		Extension Reforms—Farm School
		Krishi Vigyan Kendras (KVKS)
6.	M/o Micro, Small and Medium Enterprise	Entrepreneurship Development Programmes(EDPS) Entrepreneurship Skill Development Programmes (ESDPS) Management Development Programmes (MDPS) Assistance to Training Institutions Scheme (ATI SCHEME) Skill Upgradation & Quality Improvement and Mahila Coir Yojana (MCY)
7.	M/o Tourism and Culture	Scheme of Capacity Building for Service Provider
8.	M/o Human Resource Development	Hunar se Rozgartak Initiative Vocationalization of School Education Scheme of Community Development through Polytechnics National Institute of Open Schooling Distance Vocational Education Programme (Practical Learning through Accredited Vocational Institutes (AVI) Jan Shikshan Sansthan
9.	M/o Communication & IT	Scheme for Financial Assistance to States for Skill Development in Electronic System Design and Manufacturing (ESDM) Sector Skill Development in ESDM for Digital India
10.	M/o Tribal Affairs	Vocational Training for Tribal Youth
11.	M/o Women and child	Support to Training and Employment Programme for

S. No.	Name of Ministry/Department	Name of the Scheme
	Development	Women (STEP)
12.	M/o Commerce and Industry	Indian Leather Development Programme
13.	M/o Development of North	Eastern Region
		Capacity Building & Technical Assistance
14.	M/o Home Affairs	UDAAN
15.	M/o Minority Affairs	Seekho aur Kamao
		Nai Roshni (The Scheme for Leadership
		Development of Minority Women)
16.	M/o Social Justice and Power Empowerment	Financial Assistance for Skill Training of persons with Disabilities Special Central Assistance (SCA) to Scheduled Castes Sub Plan (SCSP) National Scheduled Castes Financial & Development Corporation (NSFDC) National Safai Karamcharis Finance & Development Corporation (NSKFDC) National Backward Class Finance & Development Corporation (NBCFDC)
17.	M/o Food Processing	Skill Development Programmes under NIFTM and IICPT
18.	M/o Chemicals and Fertilizers	Central Institute of Plastics Engineering and Technology

Source: Vol. 2, MSDE (2016). Report of the Committee for Rationalization and Optimization of the Functioning of the Sector Skill Councils

The Growing Importance of Oral History: Preserving Testimonies of the Partition of India through Digitalization

Parul Srivastava[1]

Abstract—*This paper will be focusing on the Partition of India in 1947 and how it is always looked at from a political angle and that is what is taught to us in our history books as well. The paper presenter will be talking about how we can explore the unconventional aspects of Partition by speaking directly and recording and preserving the oral narratives of people born before 1947, people who actually saw Pre-Partition India and migrated to this side of the border with great difficulties and write a differential history of the common people. With this intent, the author has begun with giving a background of communalism and how, eventually, the country was struck by Partition. Further, the author reviewed the works of various subaltern and oral historians who have done significant work related to the Partition of India. Before we can delve into the oral narratives, we need to understand the true meaning of oral history, due to which the paper also mentions the opinions of various scholars on this. Thereafter, the study talks about the non- profit organization called the 1947 Partition Archive and how it aims at recording, preserving and archiving the oral narratives from around India's Partition. Towards the end, the study also throws light on the Partition Museum which has come up in Town Hall in Amritsar, and how it is safeguarding the memories of India's Partition through Digitalization, just like the 1947 Partition Archive.*

Keywords: *Renaissance, All India Muslim League, Partition, Hindu-Muslim community*

INTRODUCTION

The Hindu-Muslim relationship passed through a series of ups and downs with the arrival of the Europeans, especially the British. India's power politics was gradually transferred from the Muslims to the British who developed resentment. The Hindus welcomed western education whereas the Muslims resisted it. Owing to the impact of western education through the medium of the English language, the process of modernization fostered India's own 'Renaissance', especially among the Hindus. The setting up of the Indian National Congress in 1885, social and religious reforms, the National Movement for Independence, etc., were the different manifestations. Muslims were more or less aloof. Some Muslim leaders, in particular Sir Syed Ahmed Khan, saw this as a threat to the Muslim community. They thought that the Muslims were lagging behind. They, therefore, wanted to modernize Muslims by establishing Muslim community institutions. The most notable thing of which was the Mohamedan Anglo-Oriental College in 1875, which later came to be known as was the Aligarh

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Muslim University. Mohamedan Anglo-Oriental College became a centre of the Muslim Renaissance.

Colonial power politics also played its part in driving a wedge between the Hindus and Muslims. The British changed their policies with their 'divide and rule' strategy. After the Sepoy Mutiny in 1857, they realized that the Hindu-Muslim conflict would determine their chances of survival in India. Then, the British began to favour the Muslim community[1]. The division of Bengal, separate Muslim voters, was a deliberate step in favor of the Muslim community. The division of Bengal in 1905 created hope among the Muslims and was further authenticated on 30th December 1906 by the establishment of the "All India Muslim League". Tension between the two communities kept aggravating which eventually led to the Partition of India. In the northern part of India, partition was experienced and the wounds of partition have still not healed. People who experienced partition directly have gone but the wounds remain. These wounds reappear in different forms. For example, the partition created Indo-Pak tension which continues till today. It has further aggravated and has taken the shape of war and we don't know what more dimensions will be added to it in the coming future. Another sample of the Partition wounds is the dispute of Kashmir and communal riots.

These kinds of riots used to happen in India, but post partition the division between communities became incredibly specific. Whatever be the issue, be it Partition, refugee influx, internal communal riots, war, etc., the one section which has to bear the load of it is women. One of the experiences that have not been paid a lot of attention to is, "what women lived through"? It ultimately comes down to them. Women during the partition became extremely vulnerable. They were raped, abducted, sold into prostitution, coercively married, etc., and the narrative of the sexual violation of women during the violence of partition has been a narrative that was quite silent until recently. There is another narrative underneath this that is still hardly talked about, i.e. of people killing the women of their own family and of women taking their own lives.

For instance, the Thoa Khalsa massacre during Partition, in the village of Thoa Khalsa, men killed their own wives, daughters and mothers and sometimes committed suicide after doing so.

Another example is the Bibighar Massacre of Kanpur during the siege of Cawnpore in 1857. This again proves that it is women who have to bear the wrath of the enemy

[1]R.A. Geaves, India 1857: A Mutiny or a War of Independence? The Muslim Perspective, Islamic Studies, Vol. 35, No. 1 (Spring 1996), pp. 25–44

at all times. This was a case of racial difference and 100 years later, Partition was a case of religious differences. During Partition several Muslim women were captured by Hindus and Hindu women were similarly kidnapped by Muslims. Many women married their abductors and later on when the Governments sent the Social service agencies to bring them back to their home, which was defined only on the basis of religion, they refused to come back to their home country because they said that marriage in their own country or marriage with their abductors is one and the same thing for them, i.e: marriage was synonymous with kidnapping for those women. What needs to be noted is that when the State of India and Pakistan was giving a right to everybody to choose their own country or whichever country they thought they belonged to, they did not give this right to women. They acted as arbiters and made a choice on behalf of women because according to them, women do not know right from wrong. In the case of Partition, women were made to dislocate for the second time by the State which was extremely inconsiderate on the part of the Government.

Emotionally, the partition was such a huge wound especially for the Punjabis and the Bengalis as well as for the minorities, for example: the Parsees, the Sindhis, the Christians. Urvashi Butalia talks about what happened to the Dalits during Partition.[1] She says that the Dalits were politically quite strong in Punjab and they also demanded a homeland of their own. We need to start looking at those histories so that they may give us an understanding of our histories today. The desire to shame and corrupt rival religious communities via sexualized violence including rape and mutilation is now being exposed in the testimonies published by historians and feminist scholars. Through these personal records, extremely brutal details are coming to the surface.

Analyzing New Voices

A shift in Partition historiography started in the 1980s[2] (Writers like Ranajit Guha wrote a lot on this) with subaltern influences[3] and began to emerge a decade later, first with Menon and Bhasin's article in Economic and Political Weekly in 19934. This

[1]Urvashi Butalia's lecture on Partition where she spoke at length about the different questions we need to ask and not just be satisfied with the narrative that is given to us.

[2]Ranajit Guha (ed.), Subaltern Studies Writings on South Asian History and Society, Delhi: Oxford University Press, 1982.

[3]The Subaltern Studies Group arose in the 1980s, influenced by the scholarship of Eric Stokes and Ranajit Guha, to attempt to formulate a new narrative of the history of India and South Asia. The group started at the University of Sussex and then continued. Their anti-essentialist approach is one of history from below, focused more on what happens among the masses at the base levels of society than among the elite.

[4]Pippa Virdee, Remembering Partition: women, oral histories and Partition of 1947, Oral History, Autumn 2013, pp. 49–62.

is a significant piece of work by feminist writers who have done much to reconstruct the debate surrounding the plight of women during partition. They have uncovered these 'hidden histories' and brought them into the public realm of discussion while challenging the nation to come to terms with the gloomy and divisive past. The use of oral history in the study of Partition has been embraced in recent scholarly work because it has allowed the researcher to delve deep into the human dimension, an attempt to understand through emotions the impact on everyday life[1]. Urvashi Butalia's book on India's partition emerged out of the terrible violence that gripped Delhi in 1984. In Butalia's oral histories, both perpetrators and victims of the violence in Punjab reveal startling stories of complicity and action. She contextualizes the stories by narrating an official history of partition that covers the major events, including the story of her own divided family. Linking varied narratives illuminates facets of the partition story that are often buried by concentration on political histories. **'The Other Side of Silence: Voices from the Partition of India'** by Urvashi Butalia chronicles the stories of partition which were never spoken of.

Butalia's revelation that violence against women during the partition was not always connected to the narrative of religious identity gone off beam is an important step in creating a gendered history of partition that shows how women became mere pawns in a national game of honor. The Partition that Butalia talks about was not about the politics surrounding partition, not merely about two newly-created states, their disputes and their contradictory and hate- filled versions of the 'other' but this partition was about 'people'—people on both sides who had to leave their homes and undertake an extremely painful journey of dislocation, search for a new identity to an unknown land. Employing a qualitative, interview-based, oral historical approach, the focus is on smaller and invisible players of partition, whom mainstream history and politics have sidelined—namely ordinary people, women, children, schedule castes[2].

Veena Das's work focuses on the accounts of many women whose conciliation with an event like partition revolves around day to day things like that of domesticity, not borders, property, and possessions[3]. In her accounts, the home of a woman holds much more importance than a Nation. She has very interestingly found the topic of Partition in the narratives of women talking about love, separation, betrayal and loss.

Anam Zakaria's book, 'The Footprints of Partition' traces the journey of four different generations since the subcontinent's Partition. Zakaria's book explores the emotions

[1]Ian Talbot and Darshan Singh Tatla, 20. Epicentre of Violence, Delhi: Permanent Black, 2006.
[2]Urvashi Butalia, The Other Side of Silence: Voices from the partition of India, p. 11.
[3]Veena Das, "The act of witnessing: violence, poisonous knowledge, and subjectivity." In Das *et al.* Violence and Subjectivity.

of those who left a little part of themselves behind on the other side of the border. These individuals share their memories from before the Partition and Zakaria wanted them to remember a time before the blood, gore and violence and talk about the relationships that existed. Zakaria's book provides a very subjective view of these Partition stories. Her book discusses the animosity that seems to be entrenched into the minds of the younger generation.

The book does not negate the violence that happened or the struggle that people went through to create Pakistan. In fact, she adds perspective to it and contextualizes from a more humanistic angle—talking about the families that were forced to separate, the homes lost and the friends left behind and forgotten. Through her lens, Partition appears to be more than just a violent tragedy. The powerful trauma left in the wake of Partition and the fluid, unreliable memories it produced stand against the supposed one-dimensionality of the past, transmuting it into something timeless. Through the collection of these oral histories, Zakaria argues that the Partition is still happening in the hearts and minds of Indians and Pakistanis who lived through it, in the collective imagination of those who inherited a filtered version of it, churning out new sets of consequences and processes that are neglected in national discourses regarding 'the other'. These direct accounts of what people went through bring an 'alternative' understanding of the partition, something that we do not find in official versions of the same and history textbooks. The effort is to uncover the silence shrouded in speech, memory, healing, pain, violence, identity and even a disregard of the 'uncomfortable' associations with partition.

As far as Ritu Menon and Kamla Bhasin's book, 'Borders and Boundaries: Women in India's Partition' is concerned, the dominant theme in this book is the sense of belonging. They have argued that Partition has posed the question of "belonging" by polarizing choice and allegiance in such a way as to aggravate old antagonisms, denying a shared past. It postulates the Indian state as the abductor in the programme of forcible recovery of abducted women, where women's rights as full-fledged citizens were sacrificed in the patriarchal pursuit of protecting the purity of the "legitimate" family and religious community. Menon and Bhasin demonstrate how in a time of communal violence each one of the women's identities is set up against the other-as women, as members of a family and community, and as members of a nation-state, and therefore, their emergence as citizens with equal rights were compromised. Menon and Bhasin argue, "because women have used speech much more widely than the written word, oral history practitioners have found in interviews and testimonies a rich vein to mine and to surface what, so far, has been hidden from history."[1]

[1]Kamla Bhasin, Ritu Menon, Borders and Boundaries, p. 14.

Another book 'Remnants of a Separation' by Aanchal Malhotra is an anthology of visual as well as textual sources that emphasizes on the individuals and mainly the objects that they took with them while leaving their home and migrating on the other side. It probes into how objects of daily/ every day use can be powerful storehouses of memories. This assemblage of assorted data by Aanchal Malhotra that she has mainly collected through interviews on both sides of the Pakistani-Indian border pays homage to the first generation of people who experienced Partition, many of whom are not even with us anymore. Highlighting material objects provides us with a distinct contact with testimonies and it also tells us that people carried small and large items of interest even in an emergency situation.

Oral History

Oral History aims at recording and preserving various narratives and testimonies of living individuals in an attempt so that we do not lose out on any important detail or facet relating to any particular event of historical importance. It safeguards first hand information which might otherwise be lost. In the field of academics, these narratives are usually not taken to be having a lot of credibility as a lot can be said and recorded on heresays as well. Things in this context have started to change off late and a lot of disciplines like History, Archaeology and Sociology have started to realize the richness and the importance of Oral History.

Once the oral narratives are recorded in the form of video files they need to be labeled properly and preserved. Upon archiving, this information can be accessed digitally through various platforms. This is because history writing has always been done from a political point of view wherein it gives us a fairly well idea about significant rulers, political figures, important events, etc. Usually, this is the history of men, the ruling elites, the politically strong people and people in power. We often tend to neglect the history of women and other such groups because they have always been marginalized.[1] Due to the patriarchal society that we live in, we do not record or pay heed to the experiences of subaltern during any important event in the history of our country. Oral history can help us to record the history of the subaltern that includes women, tribals, Dalits, backward classes, etc.

There is a need to record these oral narratives as it is going to be quite beneficial for the Modern Indian society. There is an urgency to record the experiences of people who were born before 1947 and have witnessed the catastrophic event or rather the

[1]Ravinder Kaur, Since 1947: Partition Narratives among Punjabi Migrants of Delhi, New Delhi and Oxford: Oxford, 2007.

process of Partition as it has already been 72 years since Partition, and we cannot risk on losing the limited number of Partition survivors who are still amidst us.

In the 1950s, historians in Africa began to evaluate oral tradition for its historical content and to lay down procedures for its collection and interpretation.[1] Initially, it was mainly sociologists and anthropologists who would use oral traditions to look into various research problems but as of today, a historian cannot overlook the vast source that is oral history.

Many different scholars and academicians have given numerous definitions of oral tradition. Jan Vansina is of the opinion that oral traditions are verbal messages which are reported statements from the past beyond the present generation.[2] Vansina argues that oral history is acknowledged as an activity and academic practice that examines numerous events and situations that occurred during the lifetime of the interviewee/ subject. Oral historians have a process in which they interview people about certain historic events. Responses to this type of investigation are recorded and compared with the existing secondary written literature or other information from other sources, such as radio and television, to form an historical analysis. The central idea behind this whole process is to avoid losing these sources. A. Feder supplies an additional distinction between the first hand and second hand traditions: that between anonymous traditions and traditions of which the authorship is known.[3] Under second - hand traditions, he has a group of sources such as rumors, anecdotes, historical proverbs and pithy sayings, and another group of sources referring to more remote periods of the past, which he calls folk tradition or oral tradition in the strict sense of the term. To this second group belong historical lays and spoken traditions or sagas. Bernheim has different categories of oral traditions: narratives, legends, anecdotes, proverbs and historical lays. For J. C. Miller, an oral tradition is a narrative describing, or purporting to describe eras before the time of the person who relates it.[4] W. Bauer divides oral traditions into two groups.[5] One that encompasses all sources, irrespective of whether they survived or were distorted in the transmission process and the sources for which no personal authorship can be found. He assigned rumors, myths, sagas, legends, anecdotes, proverbs and folk songs to this group. David Henige further states that oral tradition in a given culture should be common or universally known.[6]

[1]John Tosh, The Pursuit of History, London, 2010 (5th edition), p. 305.
[2]Jan Vansina, Oral Tradition as History, London, 1985.
[3]*Ibid*.
[4]J.C. Miller (ed.), The African Past Speaks: Essays on Oral Tradition and History, Kent, 1980.
[5]*Ibid*.
[6]D. Henige, Oral Historiography, London, 1982.

Partition Archive and Partition Museum

Here, I would like to bring into picture the 1947 Partition Archive which is a Non Profit Organization and is in collaboration with the Stanford University Libraries' Digital Repository. It aims at digitally archiving the life histories of Partition survivors. All interviews will be available to everyone worldwide via online streaming via the digital repository in the coming years. This will help a large number of researchers in various interdisciplinary fields of social sciences and humanities to know and further research about the Partition of India in the near future. Therefore, technology here is positively affecting the field of research and academics with reference to the easy accessibility of primary source material with the help of digital archives.

The 1947 Partition Archive is a non-profit organization that aims at recording and preserving the narratives of Partition. It was started by Dr Guneeta Singh Bhalla who herself comes from a migrant family who migrated from Lahore to Amritsar during the Partition. This organization has volunteer Citizen Historians as well as people who have been given fellowships in India, Pakistan, United Kingdom as well as the United States of America. This facilitates the process of conducting interviews and is thus helping the disciplines of History, sociology, etc., to fill in the gaps that arise due to lack of primary sources for any event in History. "That segment of the population is disappearing really, really fast," said Guneeta Singh Bhalla, the Berkeley, Calif.-based executive director and driving force of the archive, "Within the next five years the vast majority of what's remaining is going to be gone." In 2008, she visited the Oral Testimony Archives at the Hiroshima Peace Memorial and realized that we in India do not have any such thing to record and preserve the stories of the Partition survivors and eyewitnesses. Hence, she was inspired by this and started interviewing Partition survivors in 2010. She herself has interviewed over 100 Partition survivors and mobilized volunteers all over India and Pakistan to work together towards constructing the foundations of this organization which is run by volunteers to a great extent.

As mentioned on their website[1], the mission of this organization is that it is a non-profit, non-governmental organization dedicated to institutionalizing the people's history of Partition through:

- Documenting, preserving and sharing eye witness accounts from all ethnic, religious and economic communities affected by the Partition of British India in 1947. To do this, we have created a digital platform for anyone anywhere in the world to collect, archive and display oral histories that document not

[1]In 1947 partitionarchive.org: Website of the Non Profit Organization '1947 Partition Archive' founded by Dr. Guneeta Singh Bhalla.

only Partition, but pre-Partition life and culture as well as post-Partition migrations and life changes.

- Collecting, preserving and sharing personal items and artifacts associated with the people's memory of the 1947 Partition.
- Bringing knowledge of Partition into widespread public consciousness through creative and scholarly expression, including but not limited to, literature, film, theater, visual arts, other creative medium and academic research.
- Proactive worldwide primary education curricula.
- Traveling exhibits as well as physical 'Centers for Learning' designed to memorialize the people's history of Partition and serve the public for research and educational purposes.

I have been associated with the 1947 Partition Archive as a Citizen Historian and also under the Story Scholar Programme which is a 6 month Fellowship programme. I have thus interviewed 61 people in cities like Lucknow, Kanpur, Noida, Gurugram, Hyderabad and Secundrabad. The interviewees come from different socio- economic and religious background. They belonged to different regions of the country like for example, Telangana, Karnataka, Maharashtra, Uttar Pradesh, Rajasthan, Punjab (both Indian and Pakistan's Punjab) and Sindh. The experiences that I was able to record over a period of 6 months is something which we do not find in our text books, both in the school and college. The Archive is in collaboration with the Stanford University, United States of America and so far few of the oral narratives can be easily accessed on the Stanford University Library Archives. It is also in collaboration with few Indian universities as well which would allow researchers, academicians, scholars as well as a common person to listen and see these oral narratives online through the internet at any time.

The Partition Museum Project (TPMP) was started by The Arts and Cultural Heritage Trust (TAACHT) in October 2016 to have a museum in Town Hall of Amritsar city, dedicated to the memory of the Partition of the subcontinent in 1947 — its victims, its survivors and its lasting legacy. The present Museum exhibition has been set up in the restored portion of the Town Hall. It was opened to the public in September 2017. It also contains video recordings of various Partition survivors who migrated to the Indian side of the territory and they share their stories of struggle and despair. Researchers and scholars can easily use the headphones provided with every screen and listen to the Oral narratives of people who came to India from Pakistan during Partition. This is a firsthand account of the experiences which we do not find worthy of getting published in the form of academic books. With the help of technology and with the process of digitalization, such projects are getting benefitted.

CONCLUSION

There is absolutely no shortage of material that has been written and probed into as far as Partition of India is concerned. The Archives of various states are full of administrative files, refugee camp reports, constitutional assembly debates, official records and apart from that there are private documents and papers, newspaper coverage of that time, etc., which talk about the epic tragedy of Partition. Scholars and historians belonging to different schools of thought have covered Partition according to their ideology. The discipline of History has mainly concentrated on the political aspects of the Partition of India and over the years, historians have given various theories pertaining to the same. Due to this, we are all missing out on the human aspect of Partition. This is an event which needs to be explored from various angles like: social, psychological, economic, etc. Slowly and gradually, the subaltern school of thought is coming up and is prying to look into what this event of Partition was like for the common citizens of the Indian subcontinent who was the denominator who actually suffered the implications of Partition at the ground level. It has been 71 years since the Partition of India happened and due to this we have some eyewitnesses amongst us. These people crossed borders and migrated to alien lands which suddenly became their homeland, not by choice though. Today, we have a huge number of migrants residing in various parts of the county. The youngest Partition survivor/ migrant/ eyewitness are of 71 years of age, as of today. Therefore, there is an urgent need to find and interview them. The urgency is there because we do not want to miss out on any experience that was lived by them. With each Partition survivor/ eyewitnesses' demise, we are losing out on a whole Pandora's Box of human dimensions of Partition. Every individual is distinct and so are their experiences. Even two brothers or sisters who have lived a major part of their lives together will have a different story to tell about the same things. For history to hold some importance in our future, we need to look at themes such as cultural, socio- economic, people oriented, science and technology as well as gender. In this way, we can move ahead and showcase the other implications of Partition which go beyond the title of political.

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Digital Learning and the Shifting Paradigm of Higher Education in India: A Study

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Abstract—*This paper aims to explore the multifarious impact of digital learning on the higher education system and on the academic performance of students in the Indian context. In recent years, students have shown a preference to complete their assignments using digital technology like podcasts, Power Point presentations, E-books and digital libraries. Higher education institutions are adopting E-learning as their chief mode of teaching due to its efficiency. This paper intends to analyze the various ways in which this huge change has actually revolutionized the teaching-learning process in India and how it helps in the academic progress of students who are no longer confined to the traditional classroom experience. The paper also demonstrates how it has helped educators to overcome the limits of time and space, since students can now study from anywhere and at any time. This study uses qualitative descriptive methodology which includes participant observation method. The research finds that an adequate faculty trained in the use of ICT as E-learning enhances student participation in the teaching-learning process because technology opens up new prospects. It also brings out that People are more inclined to enroll for virtual courses that can be taken online. Digitization has enabled job holders and housewives to study part time as per their time and convenience. Our government has taken many active measures to overcome the challenges of introducing E-learning and to boost the bright future of E-learning in India. This paper argues that it must be ensured that E-learning reaches the rural population so that its benefits can be fully incorporated into the country's higher education system.*

Keywords*: E-learning, Digital library, ICT, Academic Progress, E-books*

INTRODUCTION

Since the advent of the 21st century, higher education in India has undergone a gradual change in the mode of teaching-learning practices, owing to the internet revolution. Earlier the education system was characterized by the traditional classroom model which has now metamorphosed into "e-Learning." According to S. Dhanavandan, "the term e-Learning was coined in the late 1990s to describe the use of technology to deliver learning and training programs. E-Learning refers to acquisition of knowledge and skills with the use of electronic means for training, teaching and educating a mass". The rapid growth of internet connectivity in the past few years has been an important catalyst for the spread of e-Learning in India. Higher education institutions in India have incorporated this digitized form of learning in order to enhance the effectiveness of education. Education in our age needs to be constantly available irrespective of

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time and space, which can only be achieved through digital learning. One of the major reasons behind the success of digital learning is that it gives students greater access to education as compared to the traditional methods of teaching since students can now undertake their study anywhere and at any time convenient to them. Digital learning has transformed the education system by simplifying the sharing of information and data. The use of interactive features of e-Learning greatly enhances the interest, motivation and concentration of the students. E-Learning has, in a way, brought the classrooms straight to the learner's home. Along with the obvious benefits of digital learning, this paper illustrates that there are a few challenges to be overcome before India can boast of its immense potential for digitized higher education system.

Across a broad range of subjects in higher education institutions, students are encouraged to complete assignments using digital tools like podcasts, Power Point presentations, e-books and digital libraries. In order to be more effective, educators have always experimented with the art of teaching. The adoption of new approaches, methods, tools and technologies is essential for the thriving of education. Otherwise education would become stagnant and learners would lose interest quickly. Pedagogical practices have been greatly benefitted by the advent of digital learning. There are basically two types of e-Learning: Synchronous learning and Asynchronous learning. Synchronous learning involves interaction of learners with an educator via the Web in real time, that is, at the same time. Asynchronous learning involves the learner's participation without live interaction with the educator. It can be done conveniently at one's chosen pace. The recent years saw the emergence of a new form of e-Learning, which is known as Blended learning. The name is self-explanatory. It is a juxtaposition of Synchronous and Asynchronous learning forms. Along with the education sector, e-Learning is also used extensively in the field of training. Employees are trained by the companies in order to upgrade their mode of functioning. In fact, the earliest introduction of e-Learning in India has occurred in the corporate sector where it is used to achieve business goals. The incorporation of e-Learning in the higher education sector in India has not been uniform throughout the country, a major challenge which is being addressed gradually through the combined efforts of our government and higher education institutes. This Digital Divide between the rural and parts of the country shall be discussed in detail later in this paper.

E-LEARNING IN THE INDIAN HIGHER EDUCATION CONTEXT

India has enormous potential for e-Learning. India's education system is already one of the largest in the world, with a network of more than one million schools and eighteen thousand higher education institutions. More than half of the country's

population falls in the target market for education and related services. As such, it is crucial to explore the impact of e-Learning on the academic performance of students, particularly in higher education institutions. A survey conducted among a select group of postgraduate students in the University of Burdwan has brought to light certain key issues of the introduction of digital learning in higher education.

- Almost all the interviewees said that the adoption of ICT in the field of higher education enables educators to reach a wider audience than ever before. Courses are available to a larger student body. Universities are now offering virtual courses that can be taken online. Digital learning ensures that even those learners who hail from far off places can learn without having to be physically present in the classroom. Hence it also helps people to take a course full-time or part-time, according to their convenience. As a result, job holders and homemakers can also enroll in any course they want to pursue.
- Majority of the interviewees said that e-Learning has made knowledge resources abundant and available in various formats. This keeps the learners more interested than what was possible when printed books were the only source of knowledge. The use of multimedia has a greater appeal for all age groups, and it also has a greater impact on the learner's mind according to the survey. Most of the interviewees believe that knowledge imparted through digital platforms gets better imbibed in the learner's brain. However, a few interviewees gave contrary opinions. They are apprehensive about the acceptability of digital learning in the Indian context. They opine that nothing can replace the traditional classroom teaching. Virtual classrooms lack the real world interaction between the students and teachers.
- The interviewees are of the opinion that digital learning has enabled educators to overcome barriers of time and place, which is a great boon in this age of globalization. For traditional classroom mode of teaching, all the learners need to be present at the same place and at the same time. Since the onset of e-Learning, learners from different time zones from across the world can learn from their homes, according to their convenience. Digital platforms allow students and teachers to interact effectively. Some interviewees however said that digital technology is still in its infancy and needs to further develop before it can be fully accepted.
- According to the interviewees, a major advantage of digitization of education is that the study materials can be very easily reused and shared multiple times and has the potential to reach very large audiences. This allows the teachers to spend more time in interacting with their students. Almost half of the interviewees pointed out a possible disadvantage. They believe that it may increase the pace of the class, making it quite difficult for the slow learners to cope with the teaching. On the other hand, it takes much time and energy on

the part of the educators to prepare digitized study materials and they need technical support in preparing and using them.

Academic Performance of Learners

About three-fourth of the interviewees believe that the introduction of Information and Communication Technology (ICT) in education in general and the introduction of smart classrooms and e-books in this university in particular, has had positive impact on the overall academic progress of the postgraduate students of this university. This fact is well supported by the comparison of academic results of the students of this university in the past decade with those of the recent years. When compared to traditional lectures, the usage of digital tools provides students with a better learning experience, even apart from the result paradigm. This is because e-Learning carries a slight entertainment value attached to it which makes the whole process much more enjoyable for the students. Instructors are using presentation, simulation and even animation in making their lectures more expressive and demonstrative for their students. The interviewees agree that presentation software such as Power Point, Keynote or Prezi has changed the way of teaching-learning in India. But they have also expressed concern that the effectiveness of these tools depends very much on the pedagogical style adopted by the teacher or instructor.

Educational Videos

Educational videos created by professors from universities in other parts of the world are also easily accessible to students on free vide hosting sites such as YouTube and Vimeo. Most of the interviewees claim that such educational videos are extremely helpful since students can control the pace of these online lectures and watch them as many times as required to understand the content completely. But on the other hand, nearly one-third of the interviewees have expressed concern about the quality of these educational videos because anyone with the right tools can create and share such videos without necessarily having the adequate knowledge. So it is necessary for the learners to ensure that the online content is of standard quality.

E-Books

When asked about the utility of e-books, the interviewees' opinions are divided between the benefits and the new challenges posed by this electronic form of the traditional paper based books. The interviewees almost unanimously agree that the e-books have much better portability which is a great advantage in this fast-paced world where one has to be always on the go. E-books cost less than the paper based

books. Hence, it is favoured by all sections of students. The third advantage of e-books is that they often contain interactive animation and simulation to describe concepts which makes the reading experience more wholesome. E-book is also customizable and this is an advantage which the paper based book lacks. The e-book has stabilized its place in the academia and its use is only going to increase in the coming years. Some of the e-books allow teachers to view student activities in the e-book like exercise completion. But the digital mode of writing poses a few challenges for the students. An extra space or comma or a slight typos can mark the response as incorrect. This can be truly frustrating for the students. According to the survey, another challenge posed by e-books is that many interviewees complain of eye fatigue. This means that the readers feel more tired after studying electronic books than after studying the paper based books. It is, however, true that the dynamic properties of many e-books have reduced the effort on the teacher's part, allowing them more time to interact with students creatively. But it must be remembered that interactive material is not necessarily high quality material. E-books are being published by publishers as well as groups and individuals. Therefore, educators must check the quality of an e-book before recommending it to the learners.

Digital Library

The growth in e-Learning has posed new challenges for library services, which is an integral part of higher education and research. New technologies require librarians to remodel the way they develop, manage and offer library resources and related services. The first use of computers for libraries began in the early 1950s with IBM and punched card applications and with the development of machine readable cataloguing (MARC) standard for library catalogues. In our age, the local libraries are no longer the only source of knowledge available to college and university students and researchers. In the recent years, digital libraries have become an indispensable part of higher education and research. A digital library can connect e-Learners to library catalogues, licensed journal databases, electronic book collections, internet resources, lesson plans, tutorials and also to various forums for communicating and interacting with others working in the same field. When interviewees were asked about their experience with the use of digital libraries, about two-third of the respondents gave positive feedback about how this new technology gives them free access to resources from across the world at just the click of a mouse or a tap of the finger. Researchers opined that they feel better equipped to do their work due to it. But the remaining interviewees said that the proper use of digital libraries requires learners to be a lot more adept at using ICT than what they are at present. This is particularly applicable for underdeveloped and developing countries like India

where a large proportion of the learner community is still not sufficiently digitally comfortable. This is an extremely noteworthy point because proper usage of a digital library requires more digital expertise than simply using the search engine Google for looking up something. Another challenge which surfaced in the survey is the difficulty of extracting relevant information out of a computer system which returns "zero results" or "no matches found" in response to a query that does not match the character strings in its database files. Our government has taken many positive steps to facilitate the use of digital libraries for helping students across the country.

Challenges Faced by E-Learning in India

E-Learning is still quite new in many parts of India, and as such there are a number of challenges which need to be overcome in order to make it a truly viable option for the college and university goers as well as researchers in our country.

- The most prominent obstacle in the spreading of e-Learning in India is the traditional mindset of a large proportion of our population who are unwilling to accept virtual learning, particularly those residing in rural areas. Making them aware of the benefits and utility of e-Learning is indeed a major challenge.
- E-Learning can be really difficult for those learners who are not efficient in the English language. This problem is again concentrated in the rural parts of India, where most people prefer their native language.
- This Digital Divide between the urban and rural parts of the country has occurred chiefly because of the fact that almost all highly skilled professionals are based in big cities and this deprives the rural population from getting trained in using the digital technology.
- Scarcity of adequate infrastructure in terms of connectivity and availability of required devices and fast internet in some parts of the country is another issue. But, fortunately, our government has taken many proactive measures in order to boost the e-Learning environment in India.
- There is a palpable lack of faith of people in online degrees and online courses, though the scenario has already started to change.
- Although e-Learning has enabled students to access abundant study materials, the trouble is that the digital nature of many resources often makes it difficult for the students and teachers to preserve or archive the resource. Digital resources are transient in nature. They can be deleted or edited at any time, which is a major drawback. Assessing the quality of e-resources is also vital; otherwise the purpose of e-Learning will be defeated.

CONCLUSION

The Indian market is yet very young for e-Learning, but it has enormous potential if the concept of e-Learning is promoted and marketed in the appropriate way, especially in the rural parts of the country. One of the greatest criteria for the success of e-Learning is to understand how learners interact with the digital tools vis-à-vis their real world interaction with the teachers. The overall improved academic performance of learners after the introduction of digital learning, as many studies have revealed, shows the sustainability of digitized pedagogical practices. Adopting new technologies in teaching-learning methods has its own challenges. It can be difficult as well as time consuming. But the rich dividends one gains in return makes it worthwhile. Higher education institutes should provide more support and incentives for adopting e-Learning. The success of digital learning methods in higher education depends upon the effectiveness of delivery. Therefore, the training of the staff is a major factor. In our country, some of the faculty members are still reluctant in accepting digital technology in teaching. Educators that are not well trained also might face difficulties in digital learning. Well trained staff in higher education institutes would help to increase the motivation of learners and also help them to become self-reliant. With the emergence of new technologies, educators are required to develop their courses in way that fits the virtual environment. Government initiatives have already benefitted the e-Learning environment in our country and it can be further upgraded with the cooperation of institutes and educators.

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Policies and Performance of Social Sector in India since Independence: A Critical Evaluation

Vikram Chadha[1] and Ishu Chadda[2]

Abstract—*Free India inherited a dilapidated and shattered economy with rampant poverty and retrogressive socio-economic antecedent of a monolithic population. Not only income needed to be pushed up, but they needed to be fairly distributed. Although the commencement of planning process in India began in 1950, all the previous Five Year Plans did not devote that much attention to social sector development as it deserved. The financial outlays by the central and state governments were generally sparse. Nevertheless, the chief objective of India's economic policy was to forge a socialistic pattern of society through which an economic growth with self-reliance, social justice and alleviation of poverty could be attained. But apparently, growth has failed to be sufficiently inclusive. Whatever policies and programmes were adopted, they did not bear the right fruits. The present paper is an attempt to elucidate and critically evaluate the India's policy effort at expanding its social sector with the aim of promoting inclusive growth.*

Keywords: *Social Sector Development, Poverty Alleviation, Inclusive Growth, Employment Generation, Participation*

INTRODUCTION

Indian Economy at the time of Independence was characterized as rural and agricultural, wherein majority of the people earned their livelihood engaging with low productive techniques in agriculture and related pursuits. The state was far from being self-sufficient in food and raw materials for industry in spite of the massive population engaged in agriculture. Thus, the independent India inherited a stagnant economy, plagued with problems of deprived population and a decadent industrialization, low agricultural output, low national income per capita, considerable unemployment and underemployment and the rampant poverty. Later, post independence, Indian economy passed through other major crisis and was caught up in a vicious circle of poverty. India was, thus, in dire need of a rapid growth and social justice for the poor masses (Kapila, 2010).

The euphoric Nehruvian/Mahalanobis model of development envisaged and advocated trickle down approach to development, which continued till the Fourth Plan. But the Sen and Jean Derze model of growth hinged on the precedence to social sector

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development, an approach which is an adjunct to the capability approach and, hence, involves growth inclusiveness (Acharya, 2013). It advocates creating employment opportunities and engagement of the deprived and marginal segments of population. The chief objective of the India's economic policy was to forge a socialistic pattern of society through which an economic growth with self- reliance, social justice and alleviation of poverty could be attained (Parikh, 2002).

REVIEW OF LITERATURE

In the recent years, social sector development in concomitance with inclusive growth came into the limelight because of the concern of policy makers towards rising unemployment and poverty. The present study attempts to evaluate the functioning of all the policies and programmes of the Government aimed at employment generation and poverty eradication so as to make growth more inclusive. Shariff, Ghosh and Mondal (2002), Dev and Mooij (2004) and Dev (2006) elaborated the number of programmes and strategies adopted in planning related to Wage and Employment Programmes, Housing and Urban Development Programmes, Social Security Programmes, Education and Health related Programmes like Sampoorna Gramin Yojana, Food for Work Programme, Integrated Rural Development Programme, National Old age Pension Scheme, National Family Benefit Scheme, Public Distribution System, Operation Black Board, Mid Day Meal, Integrated Child Development Programmes, etc., that ameliorate the weaker section of the society. The prime objective of most policies of the government is to help the poor by employment generation, poverty eradication and social development. The policy makers have to set up the plans with the focus on participation to make growth more inclusive. Panchamukhi (2000), Prabhu (2005), Sarma (2005) and Dev (2010) emphasized on the components of social sector that contributed to the promotion of such values, both at micro individual level and macro societal level. Social sector schemes are community oriented and the sector related problems faced at the ground level are best known to the local community itself. It is the states and the local bodies that should have predominant presence in social sector spending. Inclusive growth implied an equitable allocation of resources with benefits incurred by every section of the society. But the allocation of resources must be focused on the intended short and long term benefits of the society such as the availability of consumer goods, people access, employment, standard of living, etc. *A strategy of inclusiveness also calls for new emphasis on education, health, and other basic public facilities along with sectoral policies which aim at improving livelihood support and increasing employment.* Mukhopadhaya and Saha (2005) and Shukla and Mishra (2013) stated that the financial and local constraints should be considered while framing the policies with special attention to poor and the vulnerable sections

through participatory process. There is need to increase the investment in social sectors, health and education. There exists a huge gap between policy making and implementation phase. Local authorities need to be involved in planning, implementing and monitoring of developmental programmes. Many flaws and leakages were found while implementation such as favoritism in selection of beneficiaries, allocation of schemes without looking into basic needs and lack of follow up.

OBJECTIVES OF THE STUDY

In this light, the objectives of the study are:

- To trace the progress of various programmes, policies and schemes related with poverty alleviation and employment generation in retrospect.
- To examine the status and growth of social sector development in India since economic reforms, both from the perspective of physical and financial milestones.
- To carry out a critical assessment of policies and programmes pertaining to social sector development since independence.

METHODOLOGY

The study is based on secondary data taken from various reports of Planning Commission, Economic Surveys, Annual Budgets, newspapers and magazines. The study covers the period from First Five Year Plan to Eleventh Five Year Plan. To gauge the degree of variation in different variables related with social sector development over time, coefficient of variation has been computed. Coefficient of Variation is a relative measure of dispersion based on standard deviation. It was used to check the consistency. There exists an inverse relationship between the coefficient of variation and consistence. The distribution with more CV depicted that the series is more variable or more heterogeneous and with less CV explained the less variability or more homogeneous than the other (Gupta, 2013). It was computed using following,

$$\text{C.V.} = \frac{\sigma}{\bar{X}} * 100$$

Where,

C.V. = Coefficient of Variation

σ = Standard Deviation, and

$\bar{X}$ Mean

The secondary data related with financial expenditure have been deflated by using appropriate GNP deflator to arrive at real values based on 2003-04 prices.

Policies and Programmes or Social Sector Development Since Independence

Free India inherited a dilapidated and shattered economy with rampant poverty and retrogressive socio economic antecedent of a monolithic population. Not only income needed to be pushed up, but they needed to be fairly distributed. The socio economic traits of the population needed to be braced up so as to make growth inclusive. That's why wherein following Nehruvian and Mahalanobis Model of big push and trickle down approach, a concerted effort was made to generate employment, alleviate poverty and provides socio and economic justice to teaming masses. Although the planning process commenced in 1950, the first four Five Year Plans did not devote that much attention to social sector development as it deserved. The financial outlays by the central and state governments were generally sparse (Ahmad and Bhakta, 2008).

The first major development programme launched in India was Community Development Programme (CDP) in 1952 during the First Five Year Plan. Core philosophy was integrated development of rural areas and people's participation. This programme was formulated to provide an administrative framework through which the government might reach to the district, tehsil / taluka and village level. All the districts of the country were divided into Development Blocks and a Block Development Officer (BDO) was made in charge of each block. Below the Block Development Officers were appointed the workers called the Village Level Workers (VLW) who were responsible to keep in touch with 10-12 villages. So, a nationwide structure was created (Government of India, 1952).

In order to specifically cater to the agriculture and rural development, Intensive Agriculture Development program (IADP) was launched in 1960-61. The core philosophy was to provide loan for seeds and fertilizers to farmers. It was launched on pilot basis in one district of 7 states at that time. The IADP was expanded to the rest of the country and later a new Intensive Agriculture Area programme (IAAP) was launched to develop special harvest in agriculture area. The eight years between the commencement of the Third Plan and the Fourth had been years of great significance for Indian agriculture. High Yielding Varieties Programme and Multiple Cropping Programme (1966-67) constituted the two major planks of the new agricultural strategy under the Fourth Five year plan, which aimed at attaining self-sufficiency in food by the end of 1970-71. The Programmes were initiated in areas having necessary organization and facilities which were considered essential prerequisites for rapid agricultural growth (Chandra, 2008).

Among the various programmes and schemes that were introduced for rural development, the Accelerated Rural Water Supply Programme (ARWSP) was introduced in 1972-73 to assist the States and Union Territories to accelerate the pace of coverage of drinking water supply. It aimed at maximum inflow of scientific and technical input into the rural water supply sector and ensured adequate supply of safe drinking water (Government of India, 2010). Drought Prone Area Programme (DPAP) was the earliest area development programme launched by the Central Government in 1973-74. The basic objective of the programme was to minimize the adverse effects of drought on production of crops and livestock and productivity of land, water and human resources ultimately leading to drought proofing of the affected areas (Government of India, 2007). The Minimum needs Programme was introduced in the first year of the Fifth Five Year Plan. The basic needs of the people identified for this programme are Elementary Education, Adult Education, Rural Health, Rural Roads, Rural Electrification, Rural Housing, Environmental Improvement of Urban Slums and Nutrition (Government of India, 1974).

The Integrated Child Development Services (ICDS) Scheme was conceived in 1975 with an integrated delivery package of early childhood services. The objective of the ICDS scheme was holistic development of children below 6 years of age and proper nutrition and health education of pregnant and lactating mothers starting with 33 projects and 4891 Anganwadi centres (AWCs) in 1975. The scheme improved the nutritional and health status of vulnerable groups including preschool children, pregnant women and nursing mothers. A package of services includes supplementary nutrition, preschool education, immunization, health check-ups, referral services and nutrition & health education provided to the needy (Government of India, 2011).

The strategy adopted for the Sixth Plan focused on strengthening the infrastructure for both agriculture and industry so as to create conditions for accelerated growth in investments, increased opportunities for employment, especially in the rural areas and the unorganized sector and meet the minimum basic needs of people. The concept of an Integrated Rural Development Programme (IRDP) was first proposed in the Central budget of 1976-77 but was launched in 1980, i.e. in the Sixth Plan. This programme was intended to assist the rural population to derive economic benefits from the developmental assets of each area.

Indira Awaas Yojana (IAY) 1985, a flagship scheme of the Ministry of Rural Development, had been providing assistance to BPL families who are either houseless or having inadequate housing facilities for constructing a safe and durable shelter. It had its origin in the wage employment programmes via National Rural Employment Programme (NREP), which began in 1980, and the Rural Landless Employment Guarantee Programme (RLEGP), which was started in 1983 (Government of India, 2013).

The thrust areas of the Seventh Five-year Plan were social justice, usage of modern technology, agricultural development, anti-poverty programs, full supply of food, clothing, shelter, increasing productivity of small and large-scale farmers and making India an Independent Economy. The Technology Mission on drinking water and related water management was launched in 1986. It was also called the National Drinking Water Mission (NDWM) and was one of the five Societal Missions launched by the Government of India. The NDWM was renamed Rajiv Gandhi National Drinking Water mission (RGNDWM) in 1991 (Government of India, 2010).

The National Policy on Education, 1986, recognized that the empowerment of women is possibly the most critical precondition for the participation of girls and women in the educational process. The Mahila Samakhya programme was launched in 1988 to pursue the objectives of the National Policy on Education (Government of India, 2013). The Eighth Five Year Plan focused on reorientation of the development policy in such a way that it gave primacy to the immediate and urgent needs of the poor, namely, employment opportunities, access to adequate means of livelihood and skills, supplies of food, education, health and child care services and other basic necessities. Thus, Prime Minister Rozgar Yojana (1993) was initiated to provide seven lakh tiny units in industry, service and trade areas and to create about ten lakh employment opportunities. Swarna Jayanti Shahari Rozgar Yojana (1997) was implemented to provide employment and training to individuals including women of urban areas. Mid day Meal Scheme (1995) was executed to enhance enrolment, retention and participation of children in primary schools and simultaneously improving their nutritional status (Government of India, 1991).

The objectives of the Ninth Plan arising from the Common Minimum Programme of the Government aimed at providing Basic Minimum Services. These were viewed in the context of the four important dimensions of State policy viz., (a) quality of life of the citizens; (b) generation of productive employment; (c) regional balance; and (d) self-reliance. Nirmal Bharat Abhiyan (1999) was deployed to motivate individual households so that they realize the need for good sanitation practices at rural areas. Pradhan Mantri Gram Sadak Yojana (PMGSY) was put into service in the year 2000, to provide connectivity to all unconnected habitations in the rural areas through pucca roads. Swarna Jayanti Gram Swarozgar Yojana (1999) was for eliminating rural poverty and unemployment and promoting self-employment. Sarv Shiksha Abhiyan (SSA) (2000-01) and Shiksha Sahyog Yojana (2001-02) was brought to endow the relevant elementary education for all children of age group 6-14 years. Annapurna Yojana (1999) and Antyodaya Anna Yojana (2000) were to provide food security to

indigent senior citizens who were not getting pension under the National Old Age Pension Scheme and to below poverty line families (Government of India, 1998).

Tenth Five year plan was proposed to establish specific targets covering the economic, social and environmental dimensions of human development. These included targets on reduction in poverty ratio, access to primary education, raising literacy rate, decline in infant mortality rate and maternal mortality rate, raising employment growth rate, improving coverage of villages in terms of access to potable drinking water, reducing gender gaps in literacy and wage rates, cleaning of major polluted river stretches, increase in forest cover and reducing the decadal population growth rate. Bharat Nirmaan Programme (2005) was executed for development of rural infrastructure including six components: Irrigation, Water Supply, Housing, Road, Telephone and Electricity. Mahatma Gandhi National Rural Employment Guarantee Act (MNREGA was initiated in 2005 for wage employment, strengthening natural resources management and encourage sustainable development. National Rural Health Mission (NRHM) (2005) was implemented for accessible, affordable and accountable quality health services to the poorest households in the remotest rural regions (Government of India, 2000).

The central vision of the Eleventh Plan was to make growth more inclusive by significantly increasing the outlay for priority sector programmes. This plan included several interrelated components like rapid growth to reduce poverty and create employment opportunities, access to essential services in health and education, especially for poor, equality of opportunity, empowerment through education and skill development, environment sustainability, recognition of women's agency and good governance. The Plan intends to offer an exclusive Identification number to every Indian named as Aadhaar (Government of India, 2006). The overall objective of the government was to improve the standard of living of the people.

The Twelfth plan aimed for faster, sustainable and more inclusive growth. It set the vision for the next five years of growth (Government of India, 2011). The Ministry for Housing and Urban Poverty Alleviation had launched a new scheme 'Rajiv Awaas Yojana' (RAY) (2013-2022) with a vision to 'create a slum-free India' with inclusive cities in which every citizen had access to basic infrastructure, social amenities and decent shelter (Government of India, 2013).

Table 1: depicts a panoramic view of all the schemes and policies for strengthening social sector and employment generation and poverty alleviation for an inclusive growth.

Social Sector Development—Financial and Physical Performance

Social Sector consists of those components which play an important role in human development. Any improvement in the social sector may bring about a little growth but it's a vital component of development (Panchamukhi, 2000). The philosophy of social sector development is in line with Sen (1989) who visualizes economic development as an outcome of human welfare first, rather than Bhagwati (2013) who insisted on the trickle down approach which evidently failed to achieve its objective in initial phase of Indian development.

Table 2: Presents the outlays allocated to various components of social sector during different Five Year Plan periods. The allocation on education in 1951-56 was Rs. 149 crore which increased to Rs. 2.9 thousand crore in 2007-12. The percentage of education was 7.2 percent in the First Five Year Plan which rose to 8.2 percent in Eleventh Five Year Plan. The allocation to medical & public health in 1951-56 was Rs. 65.2 crore which boosted up to Rs. 9.7 thousand crore in 2007-12. Family welfare outlays increased considerably from 0.01 percent to 1.3 during the same period. Water supply and sanitation accounted for Rs. 7.9 crore in the First Plan and Rs. 1.12 lakh crore in the Eleventh Plan with its proportionate share lying between the lowest of 0.4 percent to the highest of 4.0 percent. Housing & urban development revealed the rising trend both in allocations over the period of First Five Year Plan to Eleventh Five Year Plan. The amount apportioned for housing and urban development in the First Plan was Rs. 85.2 crore that had escalated to Rs. 2.85 thousand crore in Eleventh Plan with the percentage of 4.0 percent to 7.8 percent, respectively.

The plan allocation for the welfare of underprivileged classes rose marginally from Rs. 39 crore to Rs. 7.7 thousand crore during the period of First Plan to Eleventh Plan with the increase of 2.1 percent and 3.0 percent, respectively, in Eleventh Plan. From the Fourth Five Year Plan, two more components were introduced, i.e. Labour & Employment and Social Security & Welfare. Labour & employment accounted for Rs. 39.9 crore in the Fourth Plan with the percentage of 0.3 percent which increased to Rs. 1,47,32 crore with the increase in 0.4 percent. Social Security and Welfare showed the increasing trend but at the marginal rate. The allocation in the Fourth Plan was Rs. 41.4 crore respectively which increased to Rs. 93714 crore in Eleventh Plan. The Plan outlay allocated for rural development from the period of First Plan to the Eleventh Plan bolstered up to Rs. 30 lakh crore from Rs. 47 crore with the percentage lying between 5.5 percent to 8.7 percent of total plan allocation. Food Storage & Warehousing of the states was initiated since the Seventh Five Year Plan. Rs. 89.4 crore had been allotted in the Seventh Plan which rose to Rs. 3619 crore in the Eleventh

Plan. The coefficient of variation is found to be the highest in social security & welfare, education, labour & employment, housing and urban development followed by welfare of the underprivileged classes, water supply & sanitation, health and family welfare. The insignificant contribution had been observed for the improvement of Health and Family Welfare though several efforts have been made by the Government of India.

Table 3: Explains that gross enrolment ratio increased from 42.6 to 100.1 from 1951 to 2015 at primary level. At the upper primary level, it had been increased to 91.2 from 12.7 over the period of seven decades. Dropout rate reduced to 19.8 in the year 2015 from 64.9 as registered in the year 1961 at the primary level of schooling. At the elementary and secondary level, dropout rate has shown declining trend by 42 and 35.1, respectively, during the period of 1961 to 2013. Number of schools, colleges and universities increased from the year 1951 to the year 2015 in India. The country's literacy rate in 1951 was 18.33 per cent which significantly increased to 82.14 per cent in the year 2015. More women literates got added in the recent decade compared to men literates, so the gap also reduced from 24.82 in 1991 to 16.68 in the year 2015.

The upward trend from 725 to 1.9 lakhs health centers in rural areas is commendable. Many sub centers, primary health centers and community health centers were also opened in the rural areas. The number of dispensaries and hospitals and beds had risen up from 9 thousand and 1.1 lakhs, respectively, to 63 thousand and 21 lakhs, respectively, during 1951-2015. The number of nurses and doctors had also climbed up from 18 thousand to 5.5 lakhs and 61 thousand to 9.2 lakhs during 1951-2015. There is meager contribution given public sector as compared to the private sector. Rural and Urban areas access of potable water supply had increased from 1.9 percent to 91 percent and 41.9 percent to 97 percent, respectively, over the period of 1961 to 2015. Sanitation facilities had also gone up from 0.7 percent to 30 percent and 14 percent to 70 percent in rural and urban areas, respectively, over the same period.

Social Sector Development Policy since Independence— A Critical Evaluation

As discussed above, right since independence to overcome deprivation, hunger, inequality and poverty, prime importance was given to Nehruvian Model based on heavy industrialization so that the benefits would spontaneously trickle down to the grassroot population. But this approach remained too fragile to create adequate surpluses, and benefits did not percolate to the masses on the lowest wing. It was realized that the strategy based on growth cannot be effective in isolation. Thus, since the Fifth Plan, the focus was shifted to Sen and Dreze Model of growth which

hinges on the social sector growth to development, an approach which is an adjunct to the capability approach and, hence, involves growth inclusiveness (Acharya, 2013). In spite of the above mentioned achievements, growth has failed to be sufficiently inclusive. Whatever policies and programmes were adopted, they did not bear the desired fruits. Its achievements have, however, created new challenges.

In the domain of education, the Gross Enrolment ratio at the primary level is 100.1 percent, at the upper primary level is 92.1 percent, secondary and senior level is 65.3 percent and at the higher level it is only 24.3 percent. Poverty and lack of employment opportunities hence impinged upon the rise in GER. In the sphere of employment, the quality of employment has remained poor. Over 92% of the workforce is employed in unorganized sector which is deprived of social security and job performance. As per the NSS Survey, only 3.07 crore persons are working in the organized formal sector and employment in this sector has declined by 27 lakhs in the last five years to 3.34 crores in 2004-05 (Mathur, 2014). In the areas of providing housing for the poor, Sabke liye Awaas is one of the comprehensive programme for providing houses for Economically Weaker Sections (EWS) and Lower Income Groups (LIG) in Urban and rural areas. At the end of 2014-15, it targeted the construction of 3 lacs dwelling houses, but 84 thousand houses only were constructed in urban India (Government of India, 2015). There is still a shortage of 14.8 million houses as in 2015 in the rural areas (Government of India, 2017).

Likewise, in the relevance of providing drinking water and sanitation for villages, the Government of India introduced many programmes. Yet there is no adequate potable water for urban as well as rural areas. Kumar and Das (2014) stated that India has been lagging behind in context of safe drinking water and sanitation facility. 70 percent of the India's rural and slum population are exposed to water borne and vector borne diseases due to lack of basic sanitation facility, unsafe water and unhygienic condition. The mission of epidemics control leaves a lot to be desired. Malaria, polio, typhoid, small pox and chicken pox have been controlled but new diseases like dengue and chikungunya have posed major problems for the public health care system in India. In 2012, there were 14,277 clinically confirmed cases of chikungunya fever as it was 1985 cases in 2006. In 2012, as many as 24 Indian states were hit by dengue. It caused 37,070 confirmed cases of dengue. A total of 227 deaths were reported (Palaniyandi, 2013). Since independence, malnutrition is rampant. India faced the problem of undernourished and hungry population. About 63% of the under-5 year children in India were malnourished, 53% were moderately and severely underweight and 52% were stunted (Mukhopadhyay, 2015).

Critical Appreciation of Policies

- There is a lack of principal role in planning by the Gram Panchayat. Gram Panchayats start activities to use the funds without even planning the benefit from the works. Panchayat Raj Institutes (PRIs) need to be involved in planning, implementing and monitoring of developmental programmes. Both PRIs and delivery system should be sensitized to needs of vulnerable sections (Government of India, 2000).
- Many flaws were found in implementation of social sector such as favoritism in selection of beneficiaries, allocation of schemes without looking into the basic needs and lack of follow up (Government of India, 2000).
- People preferred to do work in farms instead of working under MGNREGA because of more wages and facilities available there. Females are more interested in MGNREGA because market wages for males are much higher. There were also delays in wage payment up to three to four months in some villages (Parshad, Sinha and Khan, 2013).
- Mid Day Meal Scheme has been shabbily implemented. Many complaints of poor quality meal, pilferage, lack of proper management and storage of food items have been noted. Some used gunny bags and did not have proper doors for the store room also. (Government of India, 2010).
- Parents prefer to send their children to private schools. Despite the increase in Sarva Shiksha Abhiyaan (SSA) infrastructure budget, there is shortfall in the number of teachers, classrooms, drinking water facilities, kitchen, playground and complete boundary wall (ASER, 2012).
- Nirmal Bharat Abhiyaan (NBA) had led to enormous increase in sanitation facilities with social cohesion and harmony in rural areas. There is no regular cleaning staff to clean the streets. In the urban areas, the financial allocations for sanitation were not provided to households.
- There is a shortage of human resources in public health institutions with shortfalls of even specialists, doctors and staff nurses. Quality of services of staff nurses at all levels of facilities is not conversant enough. There is lack of basic facilities like cleanliness, electricity and potable water, etc., (Parshad, Sinha and Khan, 2013).
- People are not aware about the programmes. The delivery systems need to be streamlined as to make them more responsive to the people. Wide publicity should be given through Radio and Television (Government of India, 2000).

Policy Implications and Conclusion

In the light of the above discussion, the following policy implications emanate:

- Strict monitoring and overseeing of implementing and devolution of funds to the targeted sections.
- There is lack of public awareness about programmes. Raising the level of community participation, programme design modifications, community base with strong community participation, social mobilization through advocacy, information and communication needs to be reinforced (Dhaked and Gupta, 2016).
- Panchayat Raj Institutes (PRIs) need to be involved in planning, implementing and monitoring of developmental programmes. Both PRIs and delivery system should be sensitized to the needs of vulnerable sections (Government of India, 2000).
- Mid Day Meal scheme was working well in the selected school, with some schools even using donations to supplement this effort and serve better food. Some schools had good storage facilities like tin boxes.
- Committees and Sub committees should be formed. Proper accounts and ledgers should be maintained so that there must be transparency and accountability.
- The whole ground of policy framework which has been astutely designed by the policy makers for an inclusive growth must be clearly monitored for effective implementation.

At the time of independence, India followed the trickle-down approach to embark on the path of development and then by inclusive growth strategy. No doubt, the government is spending huge sums of money in order to remove poverty in the nation; still about 20 percent of the country's population is poor. The study reveals that social sector expenditure has eradicated poverty in the nation significantly, but reduction in poverty does not indicate reduction in hunger, malnutrition and deprivation. Poverty alleviation programmes could lead to increase in incomes which could have additional spin-offs in the form of higher nutrition, better health and productivity. The vision of inclusiveness must go beyond the traditional objective of poverty alleviation to encompass equality of opportunity, as well as economic and social mobility for all sections of society, with affirmative action for SCs, STs, OBCs, minorities and women. Inclusive development includes social inclusion along with financial inclusion and its major dimensions like poverty alleviation and employment generation.

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Ethnic Identity: A Basic Right of Migrant Workers in Metropolitan City of India

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Abstract–*Today, the number of people living outside their place of birth is larger than at any other period in history and this is due to globalization. On the one hand, globalization and liberalization has opened the door of trade and commerce both for labourers and businessmen. On the other hand, it creates several boundaries like regionalism, politics, ethnic-identity, etc. Migration to Mumbai, a metropolitan city of India, has always remained a matter of serious concern for the researchers, planners, politicians and policy makers. It is a major factor behind the increasing population of the city. Mumbai is the first Indian city to experience the economic, technological and social changes associated with the growth of capitalism in India. Economic diversification and increasing development of the city resulted into steady growth of employment in the city which in turn have attracted heavy influx of migrants and, consequently, a very rapid growth in the city and nearby urban areas. At present, Mumbai has migrants from different parts of India. Most of them have migrated due to economic reasons and for better employment opportunities. No doubt the migrants get employment opportunities in this destination but at the same time they have to compromise with their ethnic identity and other rights. Therefore, this present paper focuses on the nature of discrimination and challenges faced by the migrants who come from "Different Ethnicity" in Mumbai City. It also tries to explore the nature of violation of their basic rights within their own country, although the Indian Constitution has given equal rights to all the Indian citizens across the country.*

Keywords: *Migration, Labour, Ethnic Identity, Human Rights and Mumbai.*

INTRODUCTION

Migration is an essential part of human existence throughout the history of humankind. Approximately 175 million populations reside outside of their own nation as reported by the World Commission on Social Dimension of Globalization (2004). It is estimated that around 50 per cent of the population will live outside of their home countries in near future which will be in linear way (rural to urban). There is an increase in rural to urban migration as cities become centers of economic activities. Migration has always occurred for the purpose to find food, shelter, to flee enemies, to find work, safety, etc. Employment is the primary cause behind migration since a long time (Brix 2010). The growing pace of economic globalization has created more migrant workers than ever before. Unemployment and increasing poverty have forced many workers in the developing countries to seek work somewhere else. At the same time, there is an increase in the demand for labour by the developed countries, especially the unskilled

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labour. As a result, millions of workers and their families travel to countries other than their own to seek work. Half of the 175 million migrants around the globe are unskilled workers (of these, around 15% are estimated to have an irregular status) (Report of the Committee on Migrant Workers 2004). Migrant workers often get little social protection; therefore, they are more vulnerable to exploitation. ILO standards on migration provide tools for both migrants sending and receiving countries to manage flows and ensure adequate protection for this vulnerable category of workers[1]. The Human Development Report 2009 (HDR) reported that *"being able to decide where to live is a key element of human freedom"*. In the Indian Constitution, Article (19e) also grants freedom to every Indian "to reside and settle in any part of the territory of India". However, the legislation for migration is not completely translated into practice. Thus, there is a need to focus on internal migration and migrants' conditions.

Migration in India

Migration in India is not a new phenomenon, people move from one place to another from historical times for different purposes like employment, religious persecution and political conflict. However, improved communications, transportation networks and laissez-faire have created extraordinary levels of mobility of people.

It is confirmed from various studies that poor migrant labour is the most preferred labour by agriculturalists, industrialists and service providers for operations that do not require sophisticated skills. Migrant workers provide the ultimate flexible workforce to employers who can hire them without any obligations whatsoever and extract cheap labour for very little payment. These workers have played a huge role in sustaining and building India's economy but their contribution remains unrecognized because of the lack of data or lack of policies in favour of migrant labourers.

Disparity in the levels of development is at the root of migration in India. Indian states that have industrial development such as Gujarat, Maharashtra and Punjab attract labour from the agriculturally backward and poor regions such as eastern Uttar Pradesh, Bihar, Southern Madhya Pradesh, western Orissa and Southern Rajasthan. These labourers migrate from their native place to their desired destination in the hope of better and decent employment opportunities. Migrants prefer to work in better paying non-farm occupations in urban areas and industrial zones like in Mumbai. Delhi and the states of Gujarat and Maharashtra are top destinations for inter-state migrant labour. Labour movement has grown and continues to grow until

[1]http://www.ilo.org/public/english/standards/relm/ilc/ilc92/pdf/pr-22.pdf on 5/10/2013.

the unequal development will not end (Akhter and Deshingkar 2009). Historically disadvantaged communities such as the Scheduled Castes, Scheduled Tribes and the Other Backward Castes are heavily represented in migration. Generally the poor migrants are absorbed in the informal sector jobs, much maligned for being insecure, poorly paid and unproductive, but offering the only option for labourers to improve their capabilities.

Migration and Labour

Migrant labourers make enormous contribution to the Indian Economy through major sectors such as construction, textiles, small industries, brick-making, stone quarries, mines, fish and prawn processing and hospitality services. However, migrants remain on the periphery of society, with few citizen rights and no political voice in shaping the decisions that impact their lives (Kabeer 2005 cited in Akhter and Deshingkar, 2009).

Generally, migrants comprise mostly unskilled casual labourers or those who own or hire small means of livelihood. Due to lack of skills required for work and limited assets, they tend to end up in the unorganized sector, for example, farm labourers, construction workers, rickshaw pullers, taxi drivers and street vendors (mainly in the urban areas) (NCEUS 2007). In number of cases the recruitment is done through middlemen (Srivastava and Sasikuma 2003). Migrant workers are exposed to large uncertainties in the informal sector. They are exploited by their employers and the middlemen who help them to get employment in the destination away from the place of their origin. This results in low bargaining power in the labour market that further reinforces their existing vulnerable state and traps them into vicious circle of poverty and deprivation. Most of the time they are underpaid and, in this context, a study on low-income household in Mumbai found that 80 per cent of the population was migrants (Acharya and Jose 1991).

Magnitude of Migration in India

There are two main sources of data on Migration, the National Census and the National Sample Survey (NSS); and most estimates of migration are based on these. The NSS 64th Round, 2007-2008; 55th round, 1999-2000; 49th Round, 1993; 43rd Round, 1987-8; and the 38th Round 1983 have gathered diverse data on migration. In the NSS 64th round, information was collected on the household migration, migration particulars of the household members, short-term migration, out-migrants, and remittances of out-migrants and uses of such remittances by the households. Such detailed information

on migration was not collected in the NSS 49th round or in the NSS 55th round (NSS Report 2010).

The total population of India was over a billion as covered in the 2001 census. According to Census for 2001, 30% of the population or 307 million were migrants. Both the NSS and the National Census use definitions of migration that are not employment related. These are change in birthplace and change in last usual place of residence. The National Census (2001) revealed that interstate migration has grown by 52.6% from 42.3 million. Both NSS and Census of India (2001) revealed that the highest number of outmigration was found in the states of Bihar and UP. UP (-2.6 million) and Bihar (-1.7 million) were the two states with the largest net outmigration. Cities that observed the highest number of in-migration are Greater Mumbai (7,141,583), Kolkata (3,735,752) and Delhi (5,550,323) (Census of India 2001 cited in India Urban Poverty Report 2009). A large number of migrants who move to Mumbai prefer to live in the slum areas of Mumbai and majority of them come from the economically weak states such as UP, Bihar and Madhya Pradesh as compared to the states like Maharashtra and Gujarat (Singh, 2006 cited in India Urban Poverty Report, 2009).

Definition of Migration

Mobility is an integral part of human existence or human behavior. However all types of human mobility are not migration. In NSS surveys, those movements which resulted in the change of the usual place of residence (UPR)[1] of individual are treated as migration and a household member whose last usual place of residence was different from the present place of enumeration was considered a migrant (NSS Report, 2010).

Everett Lee (1969) defines migration "broadly as a permanent or semi-permanent change of residence. No restriction is placed upon the distance of the move or upon the voluntary nature of the act, and distinction is made between external and internal migration".

Definition of Ethnicity

Ethnicity can be defined as "a group of people (whether majority or minority) with cross-cutting class membership, sharing a consciousness which could be based on caste, religion, regional identity, language, etc. Such a group is formed to act cohesively and to differentiate it from other collectivities in a social system in order to compete for wealth, power and prestige" (Noronha, 1996 cited in Noronha and Sharma, 2002).

[1]Usual place of residence: UPR of a person was defined as a place (village/town) where the person had stayed continuously for a period of six months or more.

OBJECTIVES

In some regions of India, three out of four households include a migrant. The effects of migration add up to a significant impact on the individual as a single entity or as a member of a group. Despite the considerable number of migrants in India, very little is written on the migrants' rights in the Indian context. This paper reviews the key issues related to migrant labour's rights in Mumbai, especially ethnic right. It also attempts to focus on various other issues of migrant labourers in Mumbai.

METHODOLOGY

This paper relies mainly on the exiting data (i.e., secondary data) and analysis has been done with a different perspective.

Migration in Mumbai

One of the most important social phenomena that accompany the process of industrialization is the migration of the people from one region to another. Mumbai being a central area in commercial, administrative and industrial activities attracts a large number of migrants from various parts of the country. It represents its professionals, skilled workers and even casual labourers from far off districts and linguistic states in India (Michael 1989).

Migration has played a significant role in the growth and development of Mumbai (the commercial centre of India). After independence (1951-61), migrants constitute about 50 per cent of the total population growth in Mumbai. No doubt, later, the growth rates of migrants have declined but it still remains high. The Census data 2001 show that migrants account for about 37 per cent of the decadal growth of population of Mumbai. The migrants from Maharashtra state in which Mumbai is located constitute about 43 per cent of the city's population according to the survey. Migration from other states, mostly UP and Bihar, has increased over the last two decades (Singh n.d.). A study conducted by the Tata Institute of Social Sciences (TISS) reveals that about 59 per cent of the migrants come mainly from 34 districts in the country and majority of them are from the state of UP and Maharashtra. According to the Census of India (2001), the highest percentage of migrants within the state of Maharashtra was 37.4% followed by UP (24.3%) and Gujarat (9.6%). Other states—Karnataka (5.8%), Rajasthan (3.9%), Tamil Nadu (3.1%), Andhra Pradesh (2.4%), Kerela (2.2%), and West Bengal (2.0%)[1].

[1]http://blogs.hindustantimes.com/hindi-heartland/2010/02/02/but-who-is-migrating-to-mumbai-any-ways/ on 15/9/2012.

K.C. Zachariah (1968) noted that it would not be surprising if, "one thinks of the whole population of Greater Bombay as migrants or descendants of migrants who moved into the area during the last 100 or 150 years". The increasing migration of the people from various regions of India has made Mumbai a multi-ethnic and poly-cultural metropolitan center. Hence, today, Mumbai is a cosmopolitan centre of varied cultural currents and cross-currents.

Growth of Mumbai City as well as Ethnic Clashes

Bombay is recognized as the "India's Most Modern City". It is considered as India's first city to experience economic, technological and social changes associated with the growth of capitalism in India. In the late 19th century and early 20th century, Bombay's economic expansion attracted to it a range of ethnic groups from the north, east and the southern parts of India. Bombay had established the identity of being a city to many tongues and many cultural expressions by the twentieth century.

In the late eighteenth century, Bombay was mainly a marine supply point unlike Calcutta and Madras, and has fed linkages with hinterland. The expansion of trade and wealth attracted migrant groups to the city. When the British established their base in the city, their indigenous partners and collaborators had also migrated with them. These were the Parsis and the Gujarati traders. Soon Bombay became the home of migrants from the north, principally members of the various trading castes of Gujarat state. In addition, Bombay attracted distress migration that occurred as a result of famines and floods. Displaced peasants and agricultural workers as well as artisans migrated to the city to become workers in the port and other transport facilities being developed in the city (Patel 2006). Therefore, the recent migration from north India to Mumbai is not a new phenomenon. It was prevalent even during the British rule. The setting up of the mills encouraged another wave of migration, that of the mill workers. By the end of the nineteenth century, Bombay had grown to a population of 800, 0000 (Patel 2006). That was the time when the city became the headquarters of finance and corporate houses as well as the stock market; their orientation remained linked to the imperialist interests (Patel 2006).

As economic and trade activities increased in the city, migration also increased. Ethnic and caste divisions became originally linked with the economic structure of the city. The junior partner of the colonial elite came from the trading and business caste of Gujarat: Hindu, Jain and Muslim as well as some Baghdadi Jews, Marathi and Konkani speakers. A significant number of labourers also came from south, from the coast of Konkan. Therefore, Bombay was host to other ethnic communities from different parts of the country (Patel 2006: 253).

From 1940s, Bombay saw a significant change in its economy and this was a time when the city experienced enormously high migration. Between 1941 and 1971, two-third of the city's residents had been born outside the city. This spur made Bombay a haven for migrants of all kinds, upper castes and deprived castes from Maharashtra and also from the backward regions as well as from the other regional groups from Punjab, northern, eastern and southern states (Sheikh, 2011).

Shiv Sena, in 1995, emerged as a chauvinist ethnic party and came to power in Maharashtra and officially changed the name Bombay to Mumbai. This move of Shiv Sena was considered as a chauvinistic act that destroyed historical expression, experiences and processes which were part of the inherited colonial epoch. However, the act of changing the name was an act of erasing a multiethnic and multilingual cosmopolitanism being nurtured in the city (Patel 2006). After the formation of the state of Maharashtra in 1960, the city became firmly integrated within the boundaries of Maharashtra and its ethnic and cultural heritage. Henceforth, Marathi speaking regional political elite set the agenda for the city. These developments initiated a process of fragmentation of the existing class, community and language identities amongst the elites. Therefore, from the sixties, Mumbai started being redefined both politically (with the Marathi speaking groups asserting their domination of the elite block) and in imagination [ibid].

Division of Space on the Basis of Ethnic Identity

The division of city space on a regional basis is also quite marked. Rajasthani and Gujarati community are largely concentrated in the western suburbs, and within the western suburbs the major areas are Dahisar, Bhoiwada, Girgaum-Malabar Hill, Majalaxmi, Ghatkopar (East) and Sandhurst Road. Mamarathi community is mainly concentrated in Central Mumbai: Dadar, Parel, Worli and Lalbaug remain their bastions. Those living in Chita Camp are manly South Indians (Andhra Pradesh, Tamil Nadu, Karnataka and Kerela). Some other areas of South Indian communities are Dharavi, Chembur (W), Sion and Matunga. People from UP and Bihar are located in Kurla, Sonapur-Bhandup, Govandi, Bandra (East), Mahim, Goregoan, Jogeshwari, Nagpada and Byculla. The wealthiest communities in the city live in Malabar Hill, Worli, Tardeo, Bandra (W), Juhu, Andheri (W), Versova and Powai, (Shaban 2010: 60-13). There is also Socio-spatial division in slums - firstly on the basis of religious identities, secondly on the basis of regional identities and third on the basis of caste.

Politics of Outsider and Insider

Bhumipotra is a Malaysian expression. The literal meaning of Bhumiputra is "native of the soil" and it refers to a native- born Malaysian. It is used to differentiate between

the citizen of Malaysia and an indigenous Malaysian. Bhumiputra connotes the strong nationalistic tendencies in Malaysia. The concept of Bhumiputra is a rather extreme form of nationalism and it reflects the sentiments of many countries around the world to require multination companies to recruit more local personnel in local operations (Agthe and Penderast 1983).

Myron Weiner (1978) in his work *Sons of the Soil: Migration and Ethnic Conflict in India* examined movements of demanding preferential hiring policies for members of the indigenous ethnic group or "sons of the Soil", in five Indian cities, which includes the amount of work on migration and ethnic conflict in India. Few other works (Mary Fainsod Katzenstein; Sanjib Baruah and Dipankar Gupta) have presented the scenario of late 1970s and early 1980s. Katzenstein *et al.* (1998) mentioned that the mass migration from the less prosperous region to the more prosperous region has developed the clashes between the migrants and the indigenous population and this prominently occurred in the post-independent India and still persists. The subject related to the cultural identity and job opportunity between the local and migrant workers is a widely contested issue in the Indian context. It is quite likely that the Hindu-Muslim division has become more visible and overshadows the earlier regional chauvinism of the "sons of the soil" agitation.

The clash between the migrant and the indigenous population have been a prominent feature of the post independent politics within multiethnic developing countries. In Nigeria, violent attack against Ibo settlers in the north led to the civil war. In Malaysia, the Chinese migrants face antagonism. The antagonism between Malay and Chinese has been defined in terms of a conflict between the indigenous residents (known as *Bhumiputra* or *son of soil*) and the Chinese migrants. African countries have readily violated the spirit of Pan-African states. The Violent clashes between native Bengalis and migrant Biharis have occurred in Bangladesh. In Cambodia, hostilities have been directed against the Vietnamese. In India, tensions have erupted time to time between the migrants and the local population in various states such as Assam, Chota Nagpur, Maharashtra, and Andhra Pradesh (Weiner 1978).

In Mumbai, the issue of 'outsider-insider' has always been a matter of serious concern. It was raised by the nativist political groups from late 1960 onwards and has captured the national attention. Shiv Sena has systematically targeted different sections of minorities in order to build its mass support. Such minorities have included non-Maharashtrians, Muslims and Dalits. Earlier they targeted South Indians and derogatorily branded them as the "Yandu Gundus". This has been the beginning of political ideology of the 'Sons of the Soil'. Such ideology is based on the argument that the native population of Mumbai stands deprived of access to job opportunities

and other related amenities due to outsiders. This aggression against the outsider has gone to the extent of suggesting restriction of further influx of population to the city from other states. The native prefers to follow the policy of protectionism (Singh, n.d.).

Thackeray regularly wrote provocative pieces in "Marmik" (Marathi Weekly) since the inception of Shiv Sena. He highlighted instance of injustice with Maharashtrians in Mumbai, especially in the white collar crime. It regularly published the list with the names of officials in government concerns and private companies, underlining that most of the officers were non-Maharashtrians, mostly South Indians. The target was always the "outsiders" who were snatching away jobs from the "Sons of Soil" (Dhawale, 2000).

During the 1990s there was yet another wave of hatred against the migrants of north India, especially UP and Bihar. This time it was not the issue of white collar jobs but about the informal jobs. Discrimination against Bihari and UP migrant labourers is highlighted as a dispute between Marathi workers and Bihari workers rather than the bourgeoisies and proletariats ideological differences. However, the dispute which Mumbai is facing now is not inter-working class conflict, while it is a conflict between two antagonistic classes, where bourgeois hegemony becomes very strong ideologically (like Shiv Sena and MNS[1] have strong ideological influence on Mumbai) (Awanish, 2009).

In Mumbai, the multiple geographies and identities often arise not from their conscious creation by the people, but from the politics of differences and violence based on these identities. The embedded identity of individuals and communities has acquired more prominence in India than their national identity. The claim of some communities to national identities has been disrupted by some political parties who have sought to anti-nationalise their sub-national, religious and linguistic identities, and cultural symbols (Shaban 2010: 59). Shiv Sena started the provocation on linguistic identity and with the help of it, got state party status. Same Politics has been played by MNS and people with identity of Bihar and UP faced hatred by MNS.

Migrant Labour in Mumbai

In the present scenario, industrialization and globalization are the main causes of the birth of different kind of identities like class, caste, regional, ethnic identities. Especially, in the cosmopolitan cities work has been divided on the bases of workers' caste and region. The Study conducted by Noronha and Sharma (2002) revealed that

[1]Maharashtra Navnirman Sena

the competing groups in Mumbai Port Trust (MBPT) were the Maharashtrians on one hand, and the migrants from other states like UP, Madhya Pradesh and Tamil Nadu on the other hand. The Maharashtrian occupied the better jobs in MBPT and the 'dirty' jobs were left for the migrants as they come from different ethnic background. The issue of *son of soil* was a noticeable problem. This led to clash between the locals (agri-community called *gaonwallas*) and the outsiders who came to Mumbai for better job opportunity from the other city. Tally workers and supervisors were traditionally from Maharashtra, Goa or Mangalore. The Baggers were Tamil speaking, loaders were Maharashtrians and stitchers were Guajaratis. The reason for the migrants being concentrated on jobs on-board the ship may be because the workers from Maharashtra chose jobs which were less hazardous. And, those from the other states had to take the jobs left over for them, which were more hazardous and dangerous. The lower wages of on-board workers may be another reason that could partly explain the concentration of non-Maharashtrians on-board jobs. The Ethnic factors played major role for unionization of workers. The workforce stood more divided on Maharashtrian and non-Maharashtrian lines. In fact, North India identity was the principal identity for mobilizing the workforce mainly from Madhya Pradesh. There seemed to be a lot of rivalry between the Maharashtrians and non-Maharashtrian on especially Tamilians and migrants from UP and Madhaya Pradesh. In this process, the ethnic groups developed a number of prejudices against each other (Noronha and Sharma, 2000). The Maharashtrian dock workers called the worker from UP '*Bhayas*', the non-Maharashtrian groups called the Maharashtrian ghatis who cannot understand English and were 'good for nothing'.

Migrants and Human Rights

In India, it is clearly seen how Bihari and UP migrants in Mumbai and Bengali migrants in Assam (at national level) and Bangladeshi migrants (at international level) are treated. It is not only revanchist politics that target migrants but government also views migration as an unwelcome event both for the migrants as well as for the communities involved. In this regard, the United Nation has endorsed a report which foregrounds migrant rights by not only demonstrating the net advantage of migration to both the migrants as well as the host communities but at the level of human rights too.

In Mumbai, earlier, South Indians were discriminated in different spheres of life because of their ethnic identity. Coming from different parts of India, they were not treated as co-national but they were always treated as outsiders. In day to day life they had to bear different racist remarks such as "Yandu Gundus" and forced to do jobs that were left by the local workers. No doubt now the condition of South Indians

in Mumbai is better but still they have to compromise with their ethnic identity or ethnic right. Jerome (2011) in his study found that the third generation migrants of Tamil Naidu were exposed to the various changes in the city of Mumbai. They have learnt the local language (Marathi) and are taking part in the local politics by holding positions in the parties like congress and the NCP. Their dressing and food pattern have undergone a change from the traditional to more modern trends as suitable to the city life. However, these changes are neither due to the result of integration to the city life nor due to the result of traditional pattern. On the other hand, it leads to mobilization of identity, which gives birth to the indigenized way of life. The expression of this identity is neither the assimilation of the native culture of the city life nor total faithfulness towards Tamil traditional way of life. In this way the Tamil migrants are neither integrated into the city life nor are living the native Tamil traditions and culture. Therefore, this gives birth to the expression of identity, which they frame by themselves with the interactions of changing reality in the city, which are evolving constantly over the period. In each stage, migrants respond to the change in the city in their own indigenized way. This is neither homogenization identity nor heterogenisation identity.

At present, the migrants from UP and Bihar are facing same discrimination as the South Indians. In fact, their situation is even worst than that of the South Indians. They are always blamed for all corruption and crime in the city by the political parties. Local workers blame the migrants for snatching their jobs. However, the reality is different as the migrants always do *3D jobs* (*Dirty, Dangerous and Demeaning*) or the jobs that are looked down upon by local workers. Their difficulties and pain do not end here. They face derogatory remarks and are forced to live in ghettos where they do not get any facility. In fact they have to survive on minimal resources. In such a situation, all their basic rights are violated by their own fellow citizens. Migrants from UP and Bihar neither enjoy the constitutional rights (better conditions of employment, non-discrimination, right to work, right to move anywhere in any part of the Indian territory) nor international rights (rights that are given in ILO and in other Conventions). At the workplace, their working hours are not fixed and migrant workers have to work under extremely harsh conditions. Different kinds of harassment are meted out to migrant workers by the police, owners of the establishments, owners of the workers' dwellings, shopkeepers, labour contractors and the railway police during their journey.

CONCLUSION

Migrants are treated as precarious residents, living in the state that possesses few social, political or economic rights. They are highly vulnerable to deportation and have

little or no option for securing their stay outside their place of birth. They depend on the sympathy of native people where they live. Treating migrants as guests/outsiders in the state, violates their moral as well as continual rights like the right to live with dignity, right to work, right to move in any part of the country. It is also against the will of various international conventions which provide several rights to migrants and their families. If one wants to help these migrants, one needs policies and practices that address these conditions. These policies and practices need, however, to be completed by serious steps to make the experience of migrants less precarious, less exploitative and less dangerous.

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Waste Management Policies and E-Governance Programmes in India: A Study on E-Kranti—Electronic Delivery of Services

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Abstract—*The Digital India Programme (DIP) is a flagship programme of the Government of India. DIP envisions transforming India into a digitally empowered society and knowledge economy. One of the major objectives of DIP is to transform the entire ecosystem of public services through the use of information technology. In this context, the pillars 4 and 5 of the DIP, namely 'E-Governance: Reforming Government through Technology' and 'E-Kranti - Electronic Delivery of Services', respectively, is directly linked to the e-Kranti: National e-Governance Plan (NeGP) 2.0. The implementation of e-Kranti is vital for Digital India and for the delivery of e-governance, easy governance and good governance in the country. The vision of e-Kranti is 'Transforming e-Governance for Transforming Governance' and its mission is 'To ensure a Government-wide transformation by delivering Government services electronically to the citizens through integrated and interoperable systems via multiple modes while ensuring efficiency, transparency, and reliability of such services at affordable costs.' Along with DIP, the Government has given a tremendous boost to the ICT (Information and Communications Technology) sector with domestic demands of technology products and services, along with internet services.*

The paper attempts to analyse the present E-governance policies of India and examines its linkages with E-waste issues in India and also the management of E-wastes. With a special focus on e-Kranti—Electronic Delivery of Services Programme of the Government of India, the paper looks into its programme aspects concerning E-waste management due to DIP and e-Kranti. The methodology adopted for this paper is using Primary data from the government websites, official websites and secondary data from reputed Journals, Books, and Newspapers, etc.

The paper posits a very important link and that is connecting the aspects of ICT Sector and environment. Digital Technologies should have the aspect of sustainability and be environmental friendly in nature. The paper focusses on this very aspect in E-waste management and, thus, is justified for relooking and redefining the present E-governance programmes in India in the context of generation of e-wastes and its management.

The paper also attempts to provide policy suggestions and policy recommendations in rethinking and redefining e-business, e-society and e-governance issues for a brighter digital India.

Keywords: *Digital India Programme, E-governance, E-kranti, Information and Communications Technology, Waste Management, E-wastes, E-waste Management.*

INTRODUCTION

The Digital India Programme (DIP) is a flagship programme of the Government of India. DIP envisions "to transform India into a digitally empowered society and knowledge

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economy" ("Digital India | National E-Governance Division (NEGD)", n.d., para 1). One of the major objectives of DIP is "to transform the entire ecosystem of public services through the use of information technology" ("Office Memorandum on e-Kranti," 2015, p. 2). In this context, the pillars 4 and 5 of the DIP, namely 'E-Governance: Reforming Government through Technology' and 'E-Kranti—Electronic Delivery of Services', respectively, is directly linked to the e-Kranti: National e-Governance Plan (NeGP) 2.0. The implementation of e-Kranti is vital for Digital India and for the delivery of e-governance, easy governance and good governance in the country.

The vision of e-Kranti is 'Transforming e-Governance for Transforming Governance' and its mission is "To ensure a Government-wide transformation by delivering Government services electronically to the citizens through integrated and interoperable systems via multiple modes while ensuring efficiency, transparency, and reliability of such services at affordable costs" ("Office Memorandum on e-Kranti", 2015, p. 1). Along with DIP, the Government has given a tremendous boost to the ICT (Information and Communications Technology) sector with domestic demands of technology products and services, along with internet services ("Electronic System Design & Manufacturing", 2018). With these developments in IT and digitalization of India going on a rapid pace, the problem associated with such rapid ICT sector growth is an exponential generation of Electronic wastes in India. Not only E-wastes is emerging as a major threat to India`s waste management in general, it has become a major environmental and also a public health issue. When DIP and related ICT developments focus on IT infrastructure and IT services, the consequent problem of E-wastes is somewhat neglected and, thus, deserves equal attention at the Policy level.

The paper attempts to analyse the present E-governance Policies of India and examines its linkages with E-waste issues in India and also the management of E-wastes. With a special focus on e-Kranti—Electronic Delivery of Services Programme of Government of India, the paper looks into its programme aspects concerning E-waste management due to DIP and e-Kranti. This paper underlines a very important issue of connecting the aspects of the ICT Sector and the environment. Digital Technologies should have the aspect of sustainability and environmentally friendly nature. The paper focusses on this very aspect in E-waste management and, thus, is justified for relooking and redefining the present E-governance programmes in India in the context of the generation of e-waste and its management. The paper also attempts to provide policy suggestions and policy recommendations in rethinking and redefining e-business, e-society and e-governance issues for brighter digital India.

The paper is organized as follows. In the next section, there is review of literature on the Digital India Programme (DIP), E-Kranti programme and its relation with the E-Waste Management policies. Thereafter, the following sections describe DIP and E-Kranti programme, then it will cover the salient features of Digital India programme (DIP) and its relation with E-waste management policies. Later, it will analyze the e-Kranti—Electronic Delivery of Services' programme and its relation to E-waste management and the methodology followed for the study. Then the findings part includes relooking and redefining present E-governance programmes in India in the context of the generation of e-waste and its management. Lastly, the paper concludes with discussion on the findings and giving policy recommendations.

REVIEW OF LITERATURE

Among the latest books published on Digital India, the book titled 'Digital India Reflections and Practice' by (Kar, Sinha and Gupta, 2018) focussed on topics viz., Role of ICT and Sustainable Development Goals (SDGs), Social Networking, Industry 4.0, Smart Cities, Internet of Things (IoT), etc. Considering E-governance in India, it is evident that most of the research in e-government assessment has focused on citizens (Singh *et al.* 2017). It explains the importance of citizens for any e-government assessment. The focus on other stakeholders is insignificant. (Singh, Ilavarasan and Kar, 2018).

Another aspect of E-governance and Digitalisation in India is reflected in a latest book, 'Strategic Planning and Implementation of E-Governance' by (Suri, 2017). It discusses about Measuring E-Governance Performance, creating a Strategic Framework for Improving E-Governance Performance, Strategic Planning, Strategy Implementation, etc. While all these aspects address the conceptual and strategic ways to make E-governance programmes a success, the book also details few case studies for empirical evidences.

Coming to Digital India Programme specifically, many research papers and authors have focused on various challenges faced by Digital India programme in its implementation. Majority of them focussed on the aspects of multicultural diversity in India, intergovernmental co-operation both between the departments in Central Governments and between Centre and the States. High digital illiteracy in India along with poverty and cyber security is also a threat to the entire Indian Digital Infrastructure. Majority of the challenges were driven by the motive to increase digitalisation, improve infrastructure and ensure the penetration of digitalisation in the remotest areas in India. Similar challenges for Digital India Programme were observed by S & J(2018). Going further with the challenges, few of them like the lack

of integration of various technologies, timely upgradation of systems, information security have also been highlighted by Prakash, Y & Sagarika, Y. (2017).

While a lot of conceptual and empirical studies and research was done on the above topics, there was little or no emphasis on where the waste generated from Digital India`s ICT led Infrastructure could find a new perspective while looking at Digitalisation in India. Majority of the research work done is on the areas of Digital India, E-governance, ICT and so on. There is little emphasis on focussing on waste generated by waste electrical and electronic equipment (WEEE). Since, digitalisation generates a large infrastructure of physical equipment, these are to be managed after they become obsolete, lose efficacy and remain discarded.

Research Gap and Research Objective

In literature review exercise, it was clearly evident that the researches and studies of Digital India, E-governance, ICT are focusing on physical digital infrastructure, planning and management of ICT based e-governance programmes. The perspective of e-waste from the growth of digitalisation, although crucial, has not been the focus of the research literature on Digital India, E-governance, ICT.

The above research gaps led us to derive objectives of this research. An effective assessment of the present Digital India Programme (DIP) and its relation with the E-waste Rules, 2016, would direct to sustainable way of becoming a digital society, environmental friendly management of e-wastes and, therefore, clear and larger benefits for stakeholders and the society in general.

Keeping these points in focus, following research Objectives have been identified**:**

- To examine the Digital India Programme (DIP) and its relation with E-waste management policies.
- To examine the E-Kranti—electronic delivery of services' Programme and its relation to E-waste management.

METHODOLOGY

The methodology adopted for this paper is using primary data from the government websites, official websites of the government agencies involved and secondary data from the reputed Journals, Newspapers, etc. Then using the findings from the literature review and its analysis, the paper gives policy- specific recommendations.

The Digital India Programme (DIP) and its relation with the E-waste Management Policies

The Digital India programme (DIP) is centred on three key vision areas namely:

- Digital infrastructure as a utility to every citizen
- Governance and services on demand
- Digital empowerment of citizens" ("Vision and Vision Areas | National E-Governance Division (NEGD)", n.d., para 2)

Firstly, The first vision area of Digital infrastructure as a utility to every citizen focuses mostly on the aspects of: "High-speed internet as a core utility, digital identity, participation in digital & financial space through mobiles & banking, easy access to a Common Service Centre (CSC), shareable private space on a public cloud and, lastly, on shareable private space on a public cloud" (Vision and Vision Areas | National E-Governance Division (NEGD), n.d, para 2).

Dr. Ashalekshmi B.S., Assistant Professor at Central University of Kerala, observed that even though the majority of the aspects of DIP take into consideration the need for boosting Information Technology and its applications for wider usage to citizens, it does not reckon in the view of creating a sustainable infrastructure where the unused and obsolete electronic equipment needs to be disposed of in a sound environmental friendly manner (Personal Communication, September 2018). Thus, the DIP being a prime policy on ICT and E-governance in India had neglected to address the issue of creating suitable infrastructural arrangements for managing the large amount of E-waste which will be generated by consequent DIP implementation.

Secondly, the second vision area of DIP is Governance and services on demand. This vision area has given importance to the aspects of following objectives namely: "Seamlessly integrated services across departments or jurisdictions, services available in real time from online & mobile platforms, all citizen entitlements to be portable and available on the cloud, digitally transformed services for improving ease of doing business, making financial transactions electronic & cashless, leveraging Geospatial Information System (GIS) for decision support systems & development", (Vision and Vision Areas | National E-Governance Division (NEGD), n.d, para 2).

The most important aspect from the point of view of an ordinary citizen would be to avail services to dispose of E-wastes. When DIP focuses on digitally transformed services for improving ease of doing business, business, in the long run, should be sustainable and eco-friendly. Such digital transformation should be accompanied by a

parallel transformation in managing E-wastes generated. This aspect should be integral to the implementation of making the Governance and services on demand a reality.

Thirdly, DIP focuses on Digital empowerment of citizens as its third vision area. This includes: "Universal Digital Literacy, universally accessible digital resources, all documents/certificates to be available on the cloud, availability of digital resources/ services in Indian languages, collaborative digital platforms for participative governance" (Vision and Vision Areas | National E-Governance Division (NEGD), n.d, para 2).

With a crucial objective of increasing the much needed digital literacy and create platforms for engaging with citizens in a participative manner, this vision area rightly serves the citizen-centric aspects of DIP as a whole. However, the need to increase awareness and education of problems of E-wastes and to educate on the need to dispose of E-waste in a proper manner is needful, but lacks space and solutions in the current DIP vision areas.

E-Kranti—Electronic Delivery of Services' Programme and Its Relation to E-Waste Management

As per the official policy, the Government of India has accorded highest priority to the Digital India programme that is an umbrella programme for "transforming India into a digitally empowered society and knowledge economy" ("e-Kranti", 2015, para 1). The pillars 4 and 5 of the Digital India programme, namely: 'e-Governance: Reforming Government through Technology' and 'e-Kranti—Electronic Delivery of Services', respectively, are directly linked to the e-Kranti: National e-Governance Plan (NeGP) 2.0 ("e-Kranti", 2015, para 1). With increasing welfare policies and high-level policy push on E-governance, service delivery by electronic mode has become a norm. In this context, E-Kranti is focussing mostly on the Electronic Delivery of Services. The government policy says that, "the implementation of e-Kranti is vital for Digital India and for the delivery of e-governance, easy governance and good governance in the country" ("e-Kranti", 2015, para 1).

E-Kranti programme has the vision of e-Kranti which is: "Transforming e-Governance for Transforming Governance", and its mission is: "To ensure a Government-wide transformation by delivering Government services electronically to the citizens through integrated and interoperable systems via multiple modes while ensuring efficiency, transparency, and reliability of such services at affordable costs." ("e-Kranti", 2015, para 2). Looking at the vision and broad mandate of E-Kranti, again here it has been under broader framework of DIP and, hence, has lacked the same priority on

managing E-wastes in its electronic service delivery aims and objectives. The focus has been mostly on providing services to citizens for ensuring good governance but has lacked similar service objectives to manage resultant E-waste generation. The logic for prioritizing E-waste management in service delivery is simple. It would involve providing good governance as well as ensure that ecofriendly mechanisms to dispose of e-wastes secure both the environment and the human health.

Going further, the details of E-Kranti need to be looked at for effective analysis of its E-waste generation. The key Principles of e-Kranti are as follows:

- Transformation and not Translation
- Integrated Services and not Individual Services
- Government Process Reengineering (GPR) to be mandatory in every MMP
- ICT Infrastructure on Demand
- Cloud by Default
- Mobile First
- Fast Tracking Approvals
- Mandating Standards and Protocols
- Language Localization
- National GIS (Geo-Spatial Information System)
- Security and Electronic Data Preservation

Source: Office Memorandum on e-Kranti", 2015, p. 3.

A cursory glance at the objectives for E-Kranti shows that software related and service-related aspects are focused on in their vision and principles. What has not been given importance is the hardware aspects as the services and likely achievement of the objectives require electronic equipment(s) in physical form. The hardware aspects of India's flagship programme of Digital India is not being given importance and, thus, it can be logically inferred that E-waste generation and its proper management had been neglected in ICT and E-governance policies itself.

FINDINGS

While there is enough emphasis added on the need to manage E-waste in the Digital India Programme (DIP) itself, the E-waste Management Rules, 2016 (here onwards as Rules, 2016) came into force in March 2016. These rules came into effect after the DIP and its detailed implementation was formulated in 2015. The rules were

framed mainly to address the leakage of e-waste to the informal sector at all stages of channelization. Another reason was to include E-waste components, spares, and consumables as part of the electrical and electronic equipment (EEE) which are to be covered under new rules ("Salient Features of E-Waste (Management) Rules, 2016 and its likely implication", 2016, p. 1). The Rules, 2016 has given a list of four Authorities namely:

- Central Pollution Control Board, Urban Local Bodies (Municipal Committee or Council or Corporation) Delhi.
- State Pollution Control Boards or Committees of Union territories.
- Urban Local Bodies (Municipal Committee or Council or Corporation).
- Port authority under the Indian Ports Act, 1908 (15 of 1908) and Customs Authority under the Customs Act, 1962 (52 of 1962) (E-Waste (Management) Rules, 2016, 2016, p. 23–24).

It is pertinent to note that these Rules, 2016 coming into effect after the introduction of the DIP in 2014 that had included Governmental Organizations as "'bulk consumer" to incorporate their role in managing E-wastes generated by their offices. The (E-Waste (Management) Rules, 2016, 2016) describe the bulk consumer as:

'Bulk consumer' means bulk users of electrical and electronic equipment such as the Central Government or State Government Departments, public sector undertakings, banks, educational institutions, multinational organisations, international agencies, partnership and public or private companies that are registered under the Factories Act, 1948 (63 of 1948) and the Companies Act, 2013 (18 of 2013) and health care facilities which have turnover of more than one crore or have more than twenty employees.(p.2)

Another milestone reform in the present Rules, 2016 is the incorporation of Extended Producer Responsibility (EPR). This implies that as per The (E-Waste (Management) Rules, 2016):

'Extended Producer Responsibility' means the responsibility of any producer of electrical or electronic equipment for channelization of e-waste to ensure environmentally sound management of such waste. Extended Producer Responsibility may comprise implementing the take-back system or setting up of collection centres or both and having agreed on arrangements with the authorized dismantler or recycler, either individually or collectively, through a Producer Responsibility Organisation

recognized by the producer or producers in their Extended Producer Responsibility—Authorisation (p. 3).

The very meaning and essence of EPR is that the consumers or bulk consumers of electrical and electronic equipment listed in Schedule I, which includes all the government offices, who are stakeholders in the DIP directly or indirectly are held responsible and will be accountable for managing their E-wastes legally under EPR (E-Waste (Management) Rules, 2016, 2016, p.8). They, as bulk consumers, shall ensure that, "e-waste generated by them is channelized through collection centre or dealer of the authorized producer or dismantler or recycler or through the designated take back service provider of the producer to the authorized dismantler or recycler" (E-Waste (Management) Rules, 2016, 2016, p.8). Hence, it is evident that the present Rules, 2016 do include the role of the government as the crucial stakeholder in managing E-wastes, but there remains very low implementation of such rules as there is low awareness among the officials regarding their responsibilities. The very basic policy framework of DIP must include the role of government offices to manage E-wastes which should be included in the matter of implementation guidelines. Here, the relevant department must fulfill its obligation under DIP and E-Kranti to manage E-wastes and allot required men and materials for its scientific disposal mechanism. What is present today is the less awareness of the E-waste issues and, consequently, non-implementation of Rules 2016 in the desired manner. An agency like CPCB or State PCB is not sufficient to monitor the implementation of EPR by the government departments. There should be a proper point of contact between each IT related government office which is implementing the mandate and broad vision of DIP, either directly or indirectly, with the concerned authorities mentioned in the Rules, 2016. This will ensure that all the government offices will work in synergy and streamline the process of EPR.

Then arises one genuine proposition and that is to make such arrangements for government departments only as a special case for the bulk consumer and not for other stakeholders who are generating E-wastes in more quantity. The point here is that in totality, all the government offices in India have a moral responsibility to be a game-changer and leader in ensuring that the rules formed by CPCB are implemented by the government officials themselves. Also, DIP being the prime policy enabler to increase ICT related transactions associated with the ICT developments, India should certainly have a responsible and sustained DIP. This would help to address the menace of growing E wastes in India.

The following flowchart explains the recommendations for making EPR as a success by adhering to simple, workable mechanisms for effective implementation of the E-Waste (Management) Rules, 2016.

The flowchart shows Bulk Consumers on left side (Part A) which is independent offices viz., Central Government or State Government Departments, public sector undertakings, banks, educational institutions, multinational organisations, international agencies, etc. These offices must liaison one nodal point of contact for e-waste related collection, storage and disposal at office level and to manage the e-waste by following the E-waste Rules, 2016, hereby, fulfilling their legal mandate. The offices will be connected to one or more stakeholders who are shown on the right side (Part B) to dispose their e-wastes to fulfill the legally mandated Extended Producer Responsibility.

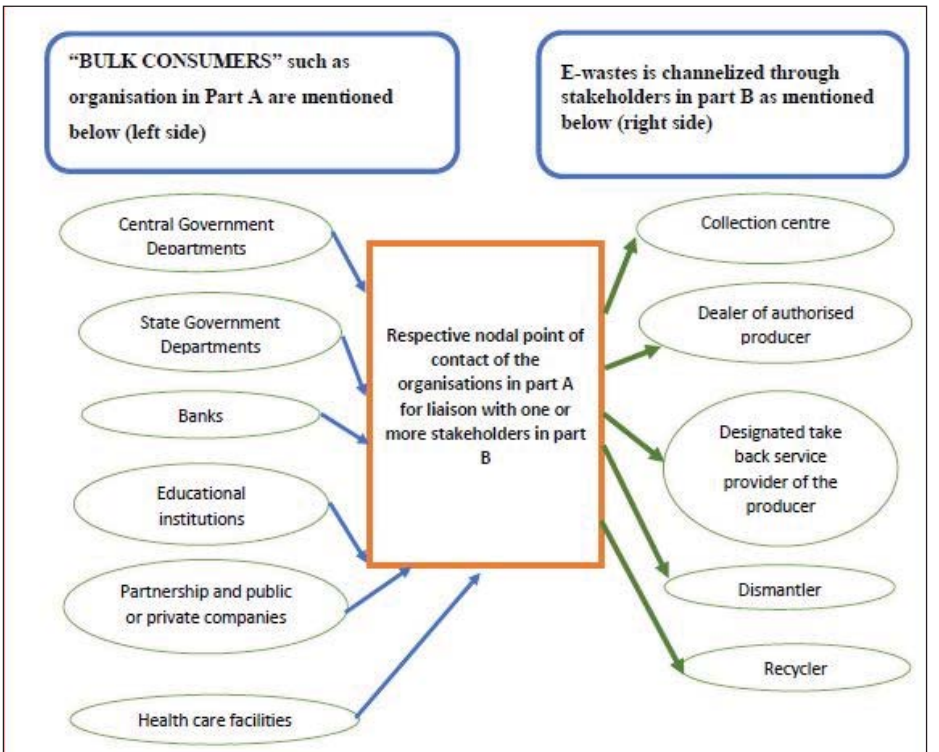

Figure 1.1: Flowchart of responsibilities to be shared among various stakeholders in the E-Waste (Management) Rules, 2016 with special focus on "Bulk Consumers of E-wastes"

Source: Made by author.

CONCLUSION

This paper concludes with recommendation and suggestion to include the above flowchart as a simple way to implement E-waste Management Rules, 2016. The DIP should make similar changes and modifications in its policies and implementation guidelines. The future of the governmental operations will be relying a lot on ICT based developments and E-governance related service delivery. Hence, the problem of e-wastes generated by creating the ICT Infrastructure should mandate that E-waste generated in due course will be managed effectively. There cannot be the case of reliance on ICT developments without looking ahead and creating safeguards to shield us and the ecosystem from the possible disaster and menace of E-waste in near future. Any policy on ICT and E-governance must be sustainable, which means ecofriendly and scientific disposal of e-wastes in the case of digitalisation in India. Along with that, this paper has attempted to correct and rectify the present bottlenecks in streamlining the much needed clarity on how DIP and its mandate can help achieve better management of E wastes in India. In a developing country like India, where economic growth and developmental objectives are focused on as the highest priority, the ecological and environmental friendly perspective should also go hand in hand with the economic growth objectives. As a small contribution of the literature on e-wastes, a workable and easy to implement model has been suggested. This can help to address the e-waste problem. This paper has endeavoured to connect various stakeholders among E-wastes rules, in general, to make DIP truly environmentally friendly and achieve the objective of channelization of E-wastes to the formal sector which is the main mandate of Rules, 2016. The model, if implemented, can certainly give support to the Circular Economy (CE) concept. In the CE concept, the products are designed in a way so that they can be optimized for a cycle of disassembly and reuse. CE attempts to replace the end-of-life concept with shifts restoration, towards the use of renewable energy and elimination of waste.

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Intellectual Property Rights and Digital India Initiative: Prospects and Challenges

Halima Sadia Rizvi[1] and Sara Kulsoom[2]

Abstract—*The development of a booming digital environment in India has lately increased the range of services to companies, firms, service providers and other consumers with the help of 'Digital India' initiative. It includes steps that are aimed at expanding e-commerce, setting up smart cities, promoting e-governance, e-literacy. Digital literacy will help people to benefit from the wider stretch of information array available on the internet. The free access to a wide range of information variety and at faster rates and cheaper cost are the most exciting features of digitalisation. However, this free access and lower information costs are having contrasting impacts on the IPR owners and the digital content users. The owners of intellectual products are finding it hard to attain what they are entitled to attain from their production of novel goods. This is the underlying challenge for the government regarding digitalisation, where there is a conflict of interest between the IP owners and the digital content users. This study will mainly employ explanatory and exploratory research methodology as well as the S.W.O.T. Analysis methodology to achieve the desired objectives. This paper is an attempt to critically analyse the prospects and challenges of the Digital India Initiative and its impact on the Intellectual Property (IP). This study will also attempt to explain how greater investment in the education sector can contribute in making this programme a big success in the long-run. Therefore, there tend to be two key factors—education and DRM that demands attention from the policymakers and the academicians to assess their role in the working of this programme. The main findings of the study tend to explain that the Digital India programme can play a significant role in promoting digital literacy in India, and enable people to get access to quality resources at cheaper and faster rates. The education sector, especially, can get highly benefitted from this programme. However, one cannot deny the threat that this programme poses to the IP in the absence of a sound DRM. This appears to be a major dilemma for the government regarding the implementation of Digital India Initiative.*

Keywords: *Intellectual property rights, Digital India, Economic development, Education, Law enforcement. JEL Classification: O00, O30, O31, K42*

INTRODUCTION

The development of a booming digital environment in India has lately increased the range of services to companies, firms, service providers and other consumers with the help of 'Digital India' initiative. This initiative has facilitated ease in almost all the everyday tasks of the consumers, also, Information and Communication Technology

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sector (ICT), education, Research and Development (R&D), the transaction of goods and services to a great extent. In short, the digital India initiative is targeted at providing a greater range of opportunities to all its users. The invention of broadband services especially facilitates its users to avail greater access to intellectual property (IP) which has not been possible earlier. An emerging digital environment is enabling greater diffusion of IP by allowing its users to experience cheaper connectivity and high transmission speeds; however, this also poses a potential threat to the IP.

Easy access to intellectual property is anyways quite beneficial for the economy, but if the creators of intellectual properties are not protected and compensated by the government, there will be a fall in the production of intellectual products. India is one of the fastest growing economies in the world. According to the International Monetary Fund (IMF), India's growth rate in 2018 is estimated to be 7.3 per cent and is expected to increase to 7.5 per cent in 2019, surpassing the growth rate of China (6 per cent in 2018 and 6.4 per cent in 2019).[1] India's ranking in the Global Innovation Index (GII) of the World Intellectual Property Organization (WIPO) improved from 81 in 2015 to 60 in 2017 among 130 countries.[2]

Intellectual property (IP) or intellectual products according to the World Trade Organisation (WTO) are the 'creations of the mind.' These creations can range from artistic expressions including logos, signs symbols, industrial designs as well as innovative products. Governments would provide grants for a certain time period. This allows the creators of IP products the right to negotiate payment with others while using it. The reason d'être for providing these grants/rights to creators by the government is to induce the production of such products and to make them available across the society for benefitting its people as a whole.

The digital environment is both beneficial and unfavourable for the intellectual property. As soon as there appears a digital content of the IP on the internet, there is a risk associated with it. The intellectual property rights will face violation until and unless there is a robust Digital Rights Management (DRM) mechanism that preserves the rights of the creators. DRM is generally interpreted as a copyrights protection and controller for piracy issues, however, it can also be construed as a technology which can be employed to classify, label, and disseminate contents on digital media. Technology representing the DRM appears to be costly and cannot be affordable to

[1]IMF (2018) "Less Even Expansion, Rising Trade Tensions", World Economic Outlook Update, https://www.imf.org/en/Publications/WEO/Issues/2018/07/02/world-economic-outlook-update-july-2018.
[2]Soumitra Dutta, Bruno Lanvin, and Sacha Wunsch-Vincent Sumitra (2018), "Energizing the World with Innovation", Global Innovation Index Report 2018. https://www.globalinnovationindex.org/analysis-indicator

different sections of the society. This can spur the misallocation of resources across the economy, and will further contribute to digital illiteracy in India.

Intellectual Property Protection and Digitalisation—A Theoretical Understanding

The concept of Intellectual property or intellectual product implies the possession of immaterial or intangible assets. It comprises diverse ideas, creative designs, signs or symbols, literary text. It also implies digital content including audio and video clippings, which are downloadable. Due to its intangible and immaterial nature, intellectual property is very often prone to get stolen. The theft of intellectual property is often hard to recognise and recover. With the fleeting digital advancement, it has become very easy to copy literary and media contents at a minimal rate, and it has removed the natural physical restriction to the unauthorised copying of various intellectual products. And, therefore, there is an increase for demand for protection of intellectual products (IP) by its owners. Protection is provided by certain laws that are given to the owners of IP, and this right is again something intangible or immaterial. These rights are aimed at preventing unauthorised data sharing, data integration as well as unethical data utilisation and unauthorised public disclosure, as the issue of piracy of IP has become a major concern in the age of digitalisation.[1]

There exist various issues related to the usage of digital content such as the matter of single and full articles, access to e-journals, user-friendly provisions, and incompatibility of software in various hardware devices, also issues of formatting, graphics, scholarly recognition, etc. With the creation of a product, the IP owner will exercise the legal right to exclusion and obtain economic gains with the creation of monopolies for their respective products. It often reduces the production or sale of substitute products (Dumont and Holmes, 2002). The rights will allow the IP owner to either exclude or include the public from accessing the product for a limited time framework.

On the one hand, where it is decisive to safeguard the rights of owners or publishers, then, on the other hand, one cannot ignore the needs and interests of the users. According to Chattopadhyay (2013), the digital setup makes it very difficult to set up boundary lines between what is considered as permissible and what is an infringement of IP. For instance, in various educational institutions and research agencies, the librarians are expected to facilitate a particular set of resources for its

[1]Chattopadhyay, Sougata (2013), "Intellectual Property Rights in Digital Environment," pp. 146–153.

readers. These resources are, to a great extent, in the form of the digital content or in the electronic form. However, very often the protection of copyrights and patents prevent users from using the resources for all the rightful and lawful purposes.

William D. Nordhaus (1969) and Angus Chu (2009) have advanced the importance of cost-benefit analysis of IPRs. They extend that in order to reach the optimal level of IPR, developing countries must analyse the benefits as well as the multiple distortionary effects of IPRs on socio-economic inequality alike. The motive of various Intellectual Property rights (IPRs) and their operationalization should be focused on promoting the greater flow of information, knowledge, and ideas, rather than creating obstacles in the use of information. IPRs have a very important role to play in the economy. IPRs are for not just safeguarding the interests of IP owners but also for encouraging a greater level of innovation and creativity as well as originality of works/products respectively. As the progress in technology took its pace, so was the increase in the growth of IPRs. Factors like globalisation, liberalisation, and digitalisation have largely changed the global environment, such as business patterns, educational framework, information flow, etc., across the world. And these changes play a crucial in influencing the direction of IPRs.

The industries that are largely facing the threat of theft or piracy of IP products include the computer software, media clips/videos, films, trends, fashion and luxury products, perfumes, literary items, watches, and medicine. The World Intellectual Property Organization (WIPO) contends that due to the factors like widening purchasing power gap amongst the consumers and emergence of new technologies, the process of theft and piracy is happening at a faster rate. Handa and Bhatt (2015) maintain that there is a need for a rapid enforcement mechanism for curbing increasing levels of piracy of IP products, which can be in the form of administrative task, civil and technological, etc. However, the problem also demands a more rigorous method for spreading awareness and strong political conviction regarding the IP product as well as their protection. This, to a great extent, can be decisive in reducing the levels of illegal copying and piracy and safeguard the interests of IP producers.[1]

According to Bomanwar (1998) with the emergence of the information society, there has been a tremendous shift towards the knowledge-based industries and intellectual products. This has increased the theft and piracy of IP, IT products and other related assets. Bomanwar (1998) also contended that where the developed economies are in favour of providing protection to IP against piracy, contrarily the developing

[1]Handa, S. and Bhatt, K. (2015). Intellectual Property Rights (IPRs) in digital environment: An overview in Indian digital environment. International Journal of Digital Library Services, Vol. 5, No. 2, pp. 117–123..

economies are seeking to allow a certain level of copying of IP, because they find protection as preventing entry of new firms/producers of IP as well as protection being seen as an obstacle in the free flow of information.[1] The main purpose of providing protection against unlawful copying of digital content is to encourage the flow and the usage of information. It prevents infringement of IP rights of the owners, support the producers and authors of various kinds of intellectual products.

Given this background, India has been focusing on following the path of innovation and development in the field of technology. India holds a massive workforce, and with appropriate training and skill development process it can reap huge benefits from the latest technologies such as Artificial Intelligence (AI), machine learning as well as the Internet of Things (IoT). Since the advent of economic reforms or the New Economic Policy (NEP) in the 1990s, the Indian economy has witnessed the emergence of various government-sponsored programmes for employment and education and training of its young population. Programmes like Digital India Initiative, Make in India Program, Skill India, and Startup India, etc., remain paramount. India has also become an investment hub following its reforms. There have been massive foreign investments in the country that are helping India to develop its economy.

Technological progress and development in the process of digitalisation have helped economies to enhance international and regional trades; it has been integrating the global economy more tightly than ever before. According to Guo (2016), the use of information and technological advancement plays an instrumental role in effectively increasing the total factor productivity of the entire economy. The government has an important role to play in boosting the competitive environment of national economies, by providing greater access to information and reducing barriers to producing various innovation networks.[2] These studies highlight that in order to unlock higher levels of development and experience innovation potential, India requires a more progressive information flow, wider spread of knowledge, information diffusion, greater levels of R&D investment as well as an increase in trade and FDI in the field of information and technology.

Investment in the field of ICT as well as technology-intensive sectors has been the maximum. According to various global studies, the ICT sector and intellectual products (IP) remain the driving forces for establishing an Innovation Economy.[3]

[1]Lakshmana Moorthy, A. and Karisiddappa, C.R. (1997), Copyright and Electronic Information. In Access to Electronic Information: Papers presented at the Sixteenth Annual Convention and Conference on Access to Electronic Information (pp. 25–29).

[2]*Ibid.*

[3]OECD (2000), "Science, Technology and Innovation in the New Economy", Organisation for Economic Cooperation and Development. http://www.oecd.org/science/sci-tech/1918259.pdf

The power to produce, innovate, distribute and utilise knowledge is a key regulator of economic functioning for a country. With the increasing digitalisation, the existing association or relationship between intellectual property and the internet has become even stronger, and their convergence is becoming more inevitable. According to the Gieschen Consultancy's Report, some 14 per cent of fake and piracy inspections consisting of transactions take place on the Internet. There is a wide range of copyrighted materials comprising media contents, videos, software, video games and so on. The Internet allows free usage and access of such materials without the user seeking permission of the author. This is what makes the provision of digitalisation quintessential.[1]

Apart from this, there is also the debate concerning the social impact of digitalisation and technology. It is often debated that the technological development in India has largely contributed to the benefits received by the already better off sections of the society.[2] There have been inequalities within digital literacy contexts which show the disparities regarding the access and external support for digital usage (Nedungadi *et al.*, 2018). The government doesn't find it an easy task to scale up schemes and programmes to influence all the segments of the Indian population alike. Also, the primary attitudinal and institutional transformation continues to remain an important issue.[3]

Recently, on 4th July 2018, India has adhered to attaining the WIPO Copyright Treaty and the WIPO Performances and Phonograms Treaty (the WIPO internet treaties). This has led to the harmonisation of India's IPR regime with the international standards. This attainment of WIPO treaties would allow India the ability to facilitate international copyright protections to domestic original content makers as well as suppliers.[4] A sound IPRs regime will enhance the economic and industrial growth by providing exclusive economic and publication rights to the owners in the digital spheres. It will safeguard the interests of the IP producers, local artists as well as the literary content producers and distributors by protecting them from digital piracy.

[1]Nikita Hemmige (2013), "Piracy in the Internet Age", Journal of Intellectual Property Rights, Vol. 18, pp. 457–464.

[2]Thomas, P.N. (2012), Digital India: Understanding Information, Communication and Social Change. SAGE Publications India.

[3]Walsham, G. (2010), "ICTs for the Broader Development of India: An Analysis of the Literature. The Electronic Journal of Information Systems in Developing Countries, Vol. 41, No. 1, pp. 1–20.

[4]Dezan Shira (2018), "India Approves WIPO Internet Treaties, IP Protections for Online Content Creators", India Briefing. https://www.india-briefing.com/news/india-ip-protection-internet-digital-content-creators-17355.html/

However, it will also restrict many users from free access to such IPR backed resources even for fair purposes. The tightening of IPR laws will tend to have diverse effects, both on different population sets as well as on the working of the digital platforms.

METHODOLOGY

In the context of the present paper and in order to explicate on particularities of the Digital India Initiative with respect to intellectual property rights (IPR), explanatory and exploratory research methodologies have been employed. The explanatory analysis has provided the background information regarding the past and the current status of digitalisation in India. It has also provided a detailed analysis relating to the launching and setting up of the Digital India program. This has helped in explaining the various features and characteristics of the program. The exploratory research methodology is also employed in order to provide critical insights into the program. It has provided decisive information about how the digital program has led to value addition to India's digital infrastructure. The exploratory research methodology has helped in studying the topic of Digital India program from various perspectives and facets. It has opened room for further contestation concerning the pros and cons of increasing digitalisation in the country and its impact on the intellectual property rights respectively.

Lastly, this paper, in order to provide a clear understanding of the issue of digitalisation-IPR nexus vis-à-vis Digital India Initiative, has employed S.W.O.T. analysis, i.e. Strength-Weakness-Opportunities-Threats analysis. A SWOT analysis is seen as an effective tool for designing a suitable business or economic strategy for companies as well as the economy as a whole. It comprises evaluation and measuring procedures for various aspects of the program, plan or strategy. A SWOT analysis is a strategic analytical technique which has been used to evaluate the associated strengths and weaknesses of the Digital India Initiative/program. It has also helped in locating various opportunities and threats that this program exhibits in the economy. In the present study, SWOT analysis has been employed to provide precise information about the efficacy of the program. Information regarding the opportunities and threats associated with the program remains decisive. This information can be used for further analysis and will be helpful in ascertaining ways that can make this program more effective in the future.

Analysing the Digital India Initiative with respect to Intellectual Property Rights

On 1st July 2015, the Indian government launched its Digital India Initiative for better connectivity services, especially in the rural areas, by providing higher-speed internet networks. This programme is aimed at promoting inclusive growth in the areas comprising various electronic goods and services, manufacturing and job opportunities. The Government of India has pledged some 1,13,000 crore rupees to be invested in the project for the knowledge-based transformation.[1] The programme has three important focus areas consisting of (i) Digital Infrastructure as a Utility to Every Citizen, (ii) Governance & Services on Demand and lastly (iii) Digital Empowerment of Citizens. It includes steps that are aimed at expanding e-commerce, setting up smart cities, promoting e-governance, e-literacy, and restructuring and strengthening of India's digital infrastructure.[2] Out of all the aforementioned objectives, the objective of promoting digital literacy in the Indian economy remains paramount.[3]

Strengths and Weaknesses

Digital Literacy will be increased. For increasing digital literacy, the programme is promoting various kinds of services through the digital or electronic platform. New concepts and functions are introduced that will be of great benefit to the people, such as cloud computing and various mobile applications that will stimulate economic growth and empower its citizen.[4] This programme has opened the gateway for foreign business giants to invest in India's digitalisation mission. With the improvements and investment in the digital infrastructure, India will easily attract greater levels of FDI and pave way for inclusive growth. And, also with this India will exhibit better levels of ease of doing business for various advanced economies and their business companies. All this will help India to become a digitally empowered and knowledge-based economy.[5] Digital literacy will help people to benefit from the wider stretch

[1]Nikita Hemmige (2013), "Piracy in the Internet Age", Journal of Intellectual Property Rights, Vol. 18, pp. 457–464.

[2]"Vision of Digital India", National e-Governance Division. http://digitalindia.gov.in/content/vision-and-vision-areas

[3]Sai Nidhi, (2015), "Here's what you need to know about the Digital India initiative", September 28, 2015. https://www.dnaindia.com/business/report-here-s-what-you-need-to-know-about-the-digital-india-initiative-212952

[4]Madan Chandra Boro (2017), "Digital India Concepts and Implications", International Journal of Creative Research Thoughts, Vol. 5, No. 4, pp. 922–927.

[5]"Vision of Digital India", National e-Governance Division. http://digitalindia.gov.in/content/vision-and-vision-areas

of information array available on the internet. The free access to a wide range of information variety and at faster rates and cheaper cost are the most exciting features of digitalisation.

However, this free and cheaper service of internet and information thus provided can be misused or mishandled. The circulation of fake news, for example, will be easier with low cost and high speed. Hacking of sites has already started to take place very often with the advancing digitalisation process. Apart from this, the digital India program needs to work much in the context of linguistic diversity of India. The digital platforms at best are demanding English friendly users. The linguistic diversity challenge highlights one of the biggest weaknesses of the program.

Secondly, this free access and lower information costs are having contrasting impacts on the IPR owners and the digital content users. The owners of intellectual products are finding it hard to attain what they are entitled to attain from their production of novel goods. This reflects the problems and the incapacities of the existing copyrights and patent laws as well as their implementation. The lack of public awareness regarding the importance of IPRs is also one of the key factors that have been adversely affecting the IP producers. Lastly, there is no separate unit for redressal of consumer grievances under the program.[1]

Opportunities and Threats

The Digital India programme will enable the formation of active, transparent and interactive governance that will respond to and help its people. The digital technology will enable better opportunities for intellectual property owners and fair users. It will boost the Indian IT sector, as well as increase the level of employment opportunities in the IT sector in the near future. It will enable greater connectivity in terms of transactions, job recruitment, encourage educational courses, and also promote the production of intellectual products, etc. Opportunities can be realised more with the help of proper electronic fencing measures. This will keep the free riders and cyber hackers in check as well as those infringing others' rights will be easily caught by the authorities. Strengthening of the digital infrastructure will also facilitate advanced systems for monitoring of copying and plagiarism which will impart a greater amount of transparency. This will encourage IPR innovators and encourage IP production.

[1]Midha, R. (2016). Digital India: Barriers & Remedies. In International Conference on Recent Innovations in Sciences, Management, Education and Technology (pp. 256–261).

However, fair use of digital content is contingent upon the proper implementation of electronic fencing technologies to prevent cybercrimes and rights infringements.

There are several associated threats arising from increasing digitalisation to the Intellectual property, such as Privacy Protection, Data Protection, Cyber Law, etc. Apart from the IPR, there are threats to E-Governance and E-Commerce as well. There are five ways due to which these IP owners continuously experience the threat of piracy. These consist of—(1) internet has made the task of widespread distribution of content quite easier and faster, (2) the content can be easily distributed to the public by any service provider, (3) it is hard to differentiate between the original and copied item, (4) there is a costless or very cheaper amount of distribution taking place, and lastly (5) it is easier for almost anyone to cheaply obtained the copyright materials from the internet. In the digitalised environment the IP owners are unable to enjoy their entitled benefits because of high levels of piracy and theft. The high speed and low-cost internet services provide enormous threats to the IP owners especially copyright and patent owners.

Outline from the SWOT Analysis

There is a need for reforming and tightening of the IP laws that do justice with their respective owners. But it will also be unfavourable if there are complete restrictions on the use of digital products especially literary works, media contents, computer software, and various e-learning programmes. With its unequal distributional of information due to severity in restrictions, stringent IPR norms can be detrimental for the poor sections of the society. This is so because the access to the information would demand a cost, and sometimes a hefty cost, which the poor people would not be able to pay. This can raise the level of socio-income inequality in the developing countries.

Secondly, attention needs to be given towards the linguistic diversity of India. Greater inclusion of the masses with the digital India program requires greater integration of a diverse set of languages with the digital platforms. This linguistic integration will also be helpful in raising awareness regarding the importance and use of IPR in different languages. Through this, in the case of weak cyber laws, the government can still minimise the IPR infringement, as users will be able to learn more about its importance in their respective languages. However, the importance of proper electronic monitoring and electronic fencing measures such as Digital Rights Management (DRM) remains decisive. And so is the importance of investment in education sector by the government.

IPR, Digital Rights Management and Role of Education

The development of technologies that provide easy access to users also allow IP owners to seek new methods to protect their rights as well as products from piracy. There are technologies that facilitate IP right holders to have control over the use and access to their copyrighted and patented products available on the digital platform. It also helps them to monitor and manage the use of the products after its access has been obtained by the users with the provision of various technological measures such as Digital Rights Management (DRM) mechanisms. The technological measures (TM) provide a kind of "electronic barrier" that prevents theft and piracy. It allows the IP owners to demand some fee charges for obtaining access to their intellectual products. This demand for payment is the legitimate right of the IP owners, which will set up new kinds of business models by facilitating the growth of electronic commerce.[1]

This protection barrier, though one side, is safeguarding the interest of the IP owners. However, it can be problematic if they allow absolute control of the intellectual products. It can restrain the users from using the required knowledge and information even for the rightful and fair purposes. The IP owners can levy restrictions on access and entirely overlook the statutory exceptions for the usage of these products. This will harm the flow of knowledge and information in society. The mechanism of DRM exhibits the way technology, supported by law, is capable of regulating the users' conduct.[2] Such mechanisms present no physical barriers as we witness in the real world, rather they establish technical restrictions in the digital realms.

The DRM technologies confirm controlling access to literary items and other digital contents with the help of an authorised payment procedure. It preserves the integrity of the intellectual products available in the digital spheres.[3] There is a set of user ID and password that these technologies make necessary for the use of IP. By doing so, these technologies forestall the unlawful users from obtaining copyrighted or patented materials. There exist various kinds of DRM technologies, like—Cryptography that tends to be the first such mechanism using encryption and was assigned for ensuring the protection of intellectual knowledge over digital platforms.

There are also other kinds of DRM measures that were developed after Cryptography, such as Digital Watermark Technology, Digital Signature Technology, Electronic

[1]Claudia Sorroco, "Intellectual Capital in the Information Society", International Telecommunication Union, https://www.itu.int/osg/spu/visions/free/ITUIntCapitalpaper.pdf.
[2]*Ibid*.
[3]Scaria, A.G. (2012), Does India Need Digital Rights Management Provisions or Better Digital Business Management Strategies?

Marking, and Security Features of Operating System.[1] A Digital Watermark Technology uses an indicator or design affixed into digital content, and a unique identifier is employed to identify the component. Then comes the Digital Signature Technology that comprises sender/receiver date identification or any distinctive code, such information can be further attached to digital components available on the internet. It involves the provision of assigning digitally signed fingerprints to literary items in order to protect their originality. Similarly, Electronic Marking is yet another protection measure that facilitates the creation of a unique signature which can be labeled to every copy of the literary component. Lastly, Security Features of Operating System allows the operating system including Windows 2000 Professional, Windows 2000 Server, MS-SQL Server to provide distinctive security and integrity elements for files and data protection.

There is a need to reform the existing legal system in a more efficient and appropriate manner so that it can suit well for the emerging technologies. It will be helpful in ensuring the maintenance of basic managing principles of various IP rights. The advancement in digital technology has led to a high-speed distribution and diffusion of information to a great extent. It has become very simple to distribute literary, media and scientific items to a huge number of digital technology users with the help of electronic platforms. There is a need to raise IPR related awareness regarding information, and knowledge has become even more crucial because the digital realms make it very difficult to identify and allocate the IPR violation and the time of its occurrence.

Therefore, the given scenario demands of the governments and also the private players to promote IPR awareness with the help of education. Intellectual property issues have a vast domain and with the ever advancing technological developments, the system of IPR also is changing. There is a need for a continuous flow of knowledge given to people regarding IPR, its importance, and rights infringement. But there are various obstacles in this path as the information about IPR is available only in few languages. Therefore, first it will require for translation of such information in widely spoken languages in India and then it can be given a framework or a module which can be taught to students in schools, colleges and universities. Alternatively, the government is required to provide grants and financial support to the schools and institution for organising seminars or workshops on IPRs on a regular basis.

[1]Liu, Q., Safavi-Naini, R. and Sheppard, N.P. (2003, January). Digital Rights Management for Content Distribution. In Proceedings of the Australasian Information Security Workshop Conference on ACSW Frontiers 2003, Vol. 21, (pp. 49–58). Australian Computer Society, Inc.

There are attempts made by the government to involve the educational institutions for taking constructive steps to spread IPR awareness which can contribute to a reduction in piracy and rights infringements. For this, the government has sought to seek help from the National Council of Educational Research & Training to include course material on IPR in schools syllabus.[1] Apart from this, the Department of Industrial Policy & Promotion (DIPP) has also initiated an awareness programme on Intellectual Property Rights (IPR) for schools. Structuring of an efficient system for awareness programmes is under process. It aims at organising around 3,500 awareness programmes to be conducted in schools, colleges, universities as well as industries across the country.[2] Also, the Cell for IPR Promotion and Management has formulated a joint initiative with the International Trademark Association for teaching school children the art of being innovative from the primary level. This programme is likely to develop respect for IPR amongst the children from the very beginning. The National IPR Policy is aimed at developing outreach and IPR promoting system in the economy. This can provide a conducive environment for encouraging creativity and innovation. Hence, with the help of investment in the education sector, the government can largely tackle the problem of IPR piracy and theft in the long-run. It will require a lot of funds to be channeled towards the cause of improvement in the education system. It will also help in leveling the standards/quality of educational institutions existing across the country.

CONCLUSION

The Digital India programme will enable the formation of active, transparent and interactive governance that will respond to and help its people. For increasing digital literacy, the programme is promoting various kinds of services through the digital or electronic platform. Now a wider range of information and knowledge resources can be extracted from the internet at low cost and high speed. Nonetheless, there exist various issues related to the usage of digital content such as the matter of single and full articles, access to e-journals, user-friendly provisions, and incompatibility of software in various hardware devices, also issues of formatting, graphics, scholarly recognition, etc. On the one hand, where it is decisive to safeguard the rights of owners

[1]"IPR protection: Government wants to engage schools to drive awareness", Financial Express, November 24, 2017. https://www.financialexpress.com/india-news/ipr-protection-government-wants-to-engage-schools-to-drive-awareness/946392/

[2]"DIPP kicks off intellectual property rights awareness campaign in schools", Business Line, April 25, 2017. https://www.thehindubusinessline.com/news/education/dipp-kicks-off-intellectual-property-rights-awareness-campaign-in-schools/article9663439.ece

or publishers, then, on the other hand, one cannot ignore the needs and interests of the users.

The digital environment is both beneficial and unfavourable for the intellectual property. As soon as there appears a digital content of the IP on the internet, there is a risk associated with it. The intellectual property rights will face violation until and unless there is a robust Digital Rights Management (DRM) mechanism that preserves the rights of the creators. But this protection barrier, though one side, is safeguarding the interest of the IP owners. But, it can be problematic if they allow absolute control over the intellectual products. It can restrain the users from using the required knowledge and information even for the rightful and fair purposes. The need to raise IPR related awareness regarding information and knowledge has become even more crucial. But there are various obstacles in this path as the information about IPR is available in few languages. Therefore, first it will require for translation of such information in widely spoken languages in India and then it can be given a framework or a module which can be taught to students in schools, colleges and universities. Also, financial support by the government for organising seminars/conferences on IPR can be equally beneficial.

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A Study of the Impact of Digital India Programme Among Students at Higher Educational Level

Richa Chaurasia[1]

Abstract—*The 'Digital India' programme is an initiative of the Honorable Prime Minister Mr. Narendra Modi. The motive behind the concept is to build participative, transparent and responsive system. It is a well known fact that digital India is the outcome of many innovations and technological advancements. These transform the lives of people in many ways and will empower the society in a better manner. The Digital India drive is a dream project of the Indian Government to remodel India into a knowledgeable economy and digitally empowered society. It aims at good governance for citizens by bringing synchronization and coordination in public accountability, digitally connecting and delivering the government programs and services to mobilize the capability of information technology across government departments. Today, every nation wants to be fully digitalized and this programme strives to provide equal benefit to the user and service provider. In this paper, an attempt has been made to understand the Digital India Programme—as a campaign where technologies and connectivity will come together to make an impact on aspects of higher education with special reference of students and improve the quality of teaching–learning.*

Keywords: *Digital India, Digital India Programme, Digital Technology, Digital Literacy, Digitization at Higher Educational level*

INTRODUCTION

The digital world that we live in today is that where all the citizens have a bright prospect to transform their lives in many ways that were hard to imagine just a couple of decades ago. It is the outcome of several innovations and technology advances. Today, every nation wants to be fully digitalized that will empower society in a better manner. The 'Digital India' programme, an initiative of the Honorable Prime Minister Mr. Narendra Modi, will enable new progressions in every sector and generate innovative endeavors for the next generation. The motive behind the concept is to build a participative, transparent and responsive system. All educational institutions and government services will soon be able to provide round the clock online services. Digital India Programme will provide all services electronically and promote digital literacy. Digital Technologies, which include the concept of cloud computing and mobile applications, have emerged as the catalysts for economic growth and citizen empowerment. This has also been witnessed in all higher educational institutions. Hence, an attempt has been made in this paper to understand Digital India

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Programme—as a campaign where technologies and connectivity will come together to make an impact on all aspects of higher education with special reference to female students and improve the quality of teaching-learning. Global investors like Sundar Pichai, Satya Nadella, Elon Musk have supported Modi's Digital India initiative.

Concept of Digitization and Digitalization

Both the term Digitization and Digitalization are different in meaning but it is seen that they are used as synonyms and are interchangeable. Digitization is the process of converting analog signals or information of any form into a digital format that can be read by computer systems or any electronic devices. Computers and electronic devices understand binary language or codes, i.e. composed in the combination of 0 and 1. The term digitization is related to converting information like text, images, voice, and sounds into binary codes. Digitized information is virtual in their existence and easier to store, access and transmit. This is the most basic concept of digitization.

Once the analog data has been digitized, there are enormous potential applications of that digital data to facilitate standard work practice. This is called "Digitalization". In simple terms, digitalization is the integration of digital technologies into everyday life by the digitization of everything that can be digitized. The idea of digitalization is based on the idea of development and technology dependent world where most of the domains of human life are restructured around digital communication and media infrastructure. Digitalization is not necessarily only about digital technology, but about the fact that technology which is digital and it allows people to solve their problems in an innovative and creative way rather than a traditional way. It simply enhances and supports traditional methods. In narrow sense, "Digitalization" may refer to the concept of "Going paperless".

Digital India Programme

The programme contains tasks that target to make sure that the government services are available to people digitally and people get advantage of the newest information and connections to the technological innovation. Gandhiji felt that 'India resides in its villages,' and technology will help the villages to grow and prosper. Digital libraries, online magazines, e-books can be made available for free which will further help in knowledge sharing. Prime Minister Shri Narendra Modi rightly said in his speech in San Jose, "*I see technology as a means to empower and as a tool that bridges the distance between hope and opportunity. Social media is reducing social barriers. It connects people on the strength of human values, not identities.*"

Technology is a bridge indeed, a bridge that connects the hope that India's villages will be educated and aware of the opportunity of internet and access to information from across the world. 'Digital India' is not just an initiative but a need for this country, where majority of the population still does not have access to the world of internet. The Digital India initiative seeks to lay emphasis on e-governance and transform India into a digitally empowered society. It is to ensure that the government services are available to citizens electronically. Digital India also aims to transform ease of doing business in the country. The Department of Electronics and Information Technology (deity) anticipates that this program will have a huge impact on the Ministry of Communication and IT. The program is projected at Rs 1,13,000 crore which will prepare the country for knowledge-based transformation. It will focus on providing high speed internet services to its citizens and make services available in real time for both online and mobile platform. The Government of India is focusing on providing broadband services, tele-medicine and mobile healthcare services in all the villages of the country and make the governance more participative.

Major Projects under the Initiative

Digital India comprises various initiatives under the single programme. Each endeavour is targeted at preparing India for becoming a knowledge economy and for bringing good governance to the citizens through synchronized and coordinated engagement of the entire Government. Nine projects have been undertaken. These are as follows:

- **Highways to have Broadband Services:** Government aims to lay National Optical Fibre network in all 2.5 lakh gram panchayats. Broadband for the rural areas will be laid by December 2016 and broadband for all the urban areas will mandate communication infrastructure in new urban development and buildings. By March 2017, the government aims to provide nationwide information infrastructure.

- **Easy Access to Mobile Connectivity:** The government is taking steps to ensure that all villages are covered through mobile connectivity by 2018. The aim is to increase network penetration and cover gaps in all 44,000 villages.

- **IT Training for Jobs:** This initiative seeks to train 10 million people in towns and villages for IT sector jobs in five years. It also aims to train 0.3 million agents to run viable businesses delivering IT services. Additionally, the project involves training of 0.5 million rural IT workforce in five years and setting up of BPOs in each North-Eastern state.

- **Manufacturing of Electronics:** The government is focusing on zero imports of electronics. In order to achieve this, the government aims to put up smart energy meters, micro ATMs and medical electronics.
- **Provide Public Access to Internet:** The government aims to provide internet services to 2.5 lakh villages and ensure one in every panchayat by March 2017 and 1.5 lakh post offices in the next two years. These post offices will become Multi-Service centres for the people.
- **E-Governance:** The government aims to improve processes and delivery of services through e-Governance with UIDAI, payment gateway, EDI and mobile platforms. School certificates, voter ID cards will be provided online. This aims for a faster examination of data.
- **E-Kranti:** This service aims to deliver electronic services to people which deals with health, education, farmers, justice, security and financial inclusion.
- **Global Information:** Hosting data online and engaging social media platforms for governance is the aim of the government. Information is also easily available for the citizens.
- **MyGov.in:** Is a website launched by the government for a 2-way communication between citizens and the government. People can send in their suggestions and comment on various issues raised by the government, like net neutrality.
- **Early Harvest Programs:** Government plans to set up Wi-Fi facilities in all the universities across the country. Email will be made the primary mode of communication. Aadhaar Enabled Biometric Attendance System will be deployed in all the central government offices where recording of attendance will be made online.

Initiatives under the Digital India Programme for Quality Education

- **Internet Connectivity to all Institutions:** The centre has joined with various telecom services providers as well as global technology firms to set up internet service in all educational institutions including the ones in remote areas.
- **Online Courses:** Online portal that provide study material to students free of cost and where courses are taught via digital classroom. Ex- SWAYAM scheme.
- **Educational Programme:** The government has launched various educational programmes like SWAYAM, SWAYAM Prabha, etc.
- **Digital Libraries:** The Government of India has started an online platform that hosts educational content from 148 institutions (40 of them are foreign) in more than 100 languages, i.e. National Digital Library of India.

- **Scheme for Girls Students:** The CBSE under the guidance of the Ministry of Human Resources Development launched "Udaan" scheme for enhancing education for girls and to address the challenge of lower girl enrolment rate in the Engineering Colleges.
- **Academic and Scholarship Repositories:** The government has started two online knowledge repositories, firstly the National Academic Depository, i.e. storage of all academic awards, certificates and mark sheets. Another is the National Scholarship Portal where information regarding all scholarship is available.

Is India Ready to be Digital

There is no doubt it is. India is ready for this. Immediately with the introduction of this campaign, many organizations came forward to lend their hands for helping India achieve the target of a digitally equipped country. Organizations like BSNL, Reliance Ltd. are coming forward to spread digitalization in the rural areas. And over 42000 villages all over India will be having seamless mobile connectivity by 2018. The *Internet Saathi* initiative aims to cover 4,500 villages over the next 18 months, starting with Gujarat, Rajasthan and Jharkhand. India is aiming to achieve universal digital literacy across the country. The prime importance is to make sure that every individual would be able to leverage the potential of Digital India. The focus is that at least one person in a household should be e-literate. This can be achieved by BBNL which is planning to connect 2,50,000 panchayats under the scheme. This will ensure the digitization and connectivity of local institutions like panchayats offices, schools, other government offices and libraries, etc. India is reforming its government through technology in the name of E-Governance with the advancement of technology and digitalization. Under the e-governance programme, out of 252 schemes planned, 222 services have been provided in short span of time. The nine pillars of Digital India programme clearly confirm that India as a nation is at its nascent stage. One can easily assure that India will be digitally ready in the next three years.

REVIEW OF RELATED LITERATURE

Though much research has been conducted in the field of digital technology, very few studies have been done on Digital India Programme, as far as the knowledge of the present researcher. The present study is concerned with the field of the impact of Digital India Programme on higher education. The purpose of this section is to provide a brief review of the researches done in the field.

Kumar, R. and Raur, A. (2005) In their study on, "Internet and its use in the Engineering College of Punjab, India: A case study", published in Webology Vol.-2, No.-4, analyzed the use of the internet and related issues among the teachers and students of Engineering College of Punjab. A well structured questionnaire was distributed among 960 teachers and students of the Engineering College of Punjab. The result of the survey also provides information about the benefits of the internet over conventional documents. It was found that internet had become a vital instrument for teaching research and learning process of these respondents.

Atakan, C. *et al.* (2008) In their study, "An evolution of the second survey on electronic database usage at Ankara University digital library", examined and compared the level of awareness of the academic staff of the digital library resources by the two surveys, questionnaires carried out in 2002 and 2005. The findings of the study were consistent and positive results have been observed in two studies conducted during 2002 and 2005.

Tikeka, A.C. (2009) In his study, "Towards 21st century Academic Libraries and Librarianship", published in Vision and roles of the academic libraries, ICAL, discussed the modernization of university and college libraries in India that has taken place during the latter half of the last century. It gives an account of the contribution of the University Grant Commission (UGC) in terms of reports, conduct of seminars, workshops and financial assistance for replenishing collections, constructing library building and upgrading the library services. The special features of the 21st century academic libraries like library software's retrospective conversion, digital library initiative are also discussed.

Okon, E. Ani. (2010) In her study, "Internet access and use: A study of undergraduate students in three Nigerian Universities", examined and investigated the extent and level of internet access and use by the undergraduate students in three Nigerian Universities as well as the electronic resource used by students. Questionnaires were distributed to the undergraduate students in three public universities in Nigeria. The findings revealed the need for effective user education on internet access and use in libraries in Nigeria for optimal utilization of electronic information sources.

Sasireka, G. & Balamurugan, S. *et al.* (2011) In their article, "Use of E-resource in digital environment among Engineering Institutes in Tamilnadu–An empirical study" of selected 275 respondent's opinions, found that 88.3% preferred online journals and 77.1% preferred e-journals. They conducted that online journals and e-journals are the most preferred digital resource of the respondents.

Balasubramanian, P.; John, P. and Yohannan, S. (2013) In their article, "A study on digital information and its utilization in Tamilnadu" mentioned the following major findings:

- The internet has more than 6 lakhs websites and statistics shows that the number is doubling every two months.
- The use of internet by individuals and firms has become very beneficial. Any information can be collected either free of cost or at a very low cost.
- Teachers coordinate projects with classroom all over the globe with the help of internet.
- The process of research has been made easy as the students do research from their home computer.
- Internet server act as a latest encyclopedia.

Gohel, B.M. & Parmar, R.D. (2013) In their article entitled "Information literacy competencies for higher learning and research: Information literacy and research literacy", summarized that gaining skills in information literacy and research literacy multiplies the opportunities for users' self-directed learning, as they become engaged in using a wide variety of information sources to extend their knowledge, ask informed questions and sharpen their critical thinking for still further self-directed learning. Information literacy is related to research literacy. Information literate individuals necessarily develop some technology skills. Increasingly, research literacy skills are interwoven with and support information literacy.

Narendra Modi (2015), "We want to have one mission and target: Take the nation forward- digitally and economically."

Ravi Shankar Prasad (2015), "Digitally it is more for the poor and underprivileged. It aims to bridge the gap between the digital haves and have-nots by using technology for citizens."

Sundar Pichai, Satya Nadella, Elon Musk (2016), Researched about Digital India Programme and its preparedness to create job opportunities in the information sector. They concluded that creating new jobs should be continued with shifting more workers into high productivity jobs in order to provide long term push to the technological sector in India.

Satya Nadella (2016), Intends to become India's partner in Digital India Programme. He said that his company will set up low cost broadband technology services to 5 lakhs villages across the country.

Chakravarti, B., Bhalla, A. & Chaturvedi, R.S. (2017), Have published in their article entitled "60 Countries- Digital Competitiveness" that digitally the most developing region in the world is Asia with China and Malaysia. We can expect to see plenty of investor and entrepreneurial interest in this region. And, as a result of that the political institutions are stable and supportive. In the Asian region, India has initiated many policy-led pushes for digitalization, including Digital India Campaign and endeavoured to give a boost to digital transactions. However, the level of evolution in the country is very low. More systematic changes are needed to boost digital evolution in this type of environment.

Nearly a decade ago, when India took part in the programme for International Student's Assessment—a test of students' scholastic performance in mathematics, science and reading at the school level **(Hindustan Times 2018).**

STATEMENT OF THE PROBLEM

The problem chosen for extensive and detailed study after the review of related literature, may be stated as, **"A Study of the Impact of Digital India Program among Students at Higher Educational Level."**

Operational Definition of the Terms used

Impact

A significant and strong influence over some phenomenons

Digital India Programme

The 'Digital India' programme is a flagship initiative of the Government of India with a vision to transform India into a digitally empowered society and knowledge country.

Higher Education

Higher education is an optional final stage of formal learning that takes place after secondary education. This is often delivered at universities, colleges, institutes of national importance and institutes of technology, etc., and award degrees or professional certifications.

OBJECTIVES

- To study the awareness of DIGITAL INDIA PROGRAMME among students at higher education level.
- To study the impact of DIGITAL INDIA PROGRAMME among students at higher education level.

HYPOTHESES

- There is no significant difference in awareness of DIGITAL INDIA PROGRAMME among students at higher education level.
- There is no significant difference in the impact of DIGITAL INDIA PROGRAMME among students at higher education level.

Data Collection

The primary data both in the form of qualitative and quantitative data have been used. For data collection, the researcher has developed an oppinionaire and conducted personal interview. The secondary data has been collected from various magazines and journals have also been used. Thus, the focus is to know more about the concept, its application and the impact on higher education via other parameters.

Research Design

The main objective of the study is to study the awareness, attitude and impact of Digital India Programme in higher education. Keeping in view the nature of study the researcher will use *descriptive survey method.*

Population

Population for the study was all the students of Undergraduate, Postgraduate and B.Ed. course of the University of Allahabad, Prayagraj city.

Sample

The researcher has selected the students of the Undergraduate, Postgraduate and B.Ed. course. The method of sample selection was "*Stratified random sampling*". The sample will consist of 60 persons (30 male and 30 female). The size of sample will be 60.

Total sample (N) = 60

Tool Description

The researcher has developed a tool entitled "Digital India Program Impact Scale for Students" for proper data collection and measurement of awareness and impact in the study in conditions of unavailability of tools.

Statistical Methods

The researcher has used chi square test and percentage analysis test to analyze the data.

Delimitations of the Study

- The study was limited to the students of Undergraduate, Postgraduate and B.Ed. course only.
- The study was limited to the students in Prayagraj (Allahabad) city only.
- The study was limited to the students of Undergraduate, Postgraduate and B.Ed. course of the University of Allahabad only.

Findings of the Study

- 82% of the students have knowledge about the DIGITAL INDIA PROGRAMME.
- 72% male and 63% female students have knowledge about major initiatives under the DIGITAL INDIA PROGRAMME.
- 67% male and 50% female students are aware about the digital practices and strategies.
- 62% male and 57% female students believe that the development and modernization must result due to digitization.
- 75% of the students blame non-digital and non-technology based educational sector to be the main cause for low growth and unemployment in India.
- 73% male and 30% female students believe that the use of digital technology is much higher in the urban areas than in the rural areas.
- 90% male and 75% female students agreed to adopt digital practices and strategies.
- 93% male and 86% female students demand more awareness and information related to the Digital India Programme.

Therefore, on the basis of above findings it can be said that most of the female students in higher education have knowledge and are aware about the digital India programme. But they are not familiar with the technical terms and strategies.

Educational Implications

Taking into consideration the findings of the results, certain educational implications can be drawn in order to develop a positive attitude in students about the DIGITAL INDIA PROGRAMME and digital technology. These would be:

- In order to improve the quality of teaching- learning process at higher educational level, digital technology should be introduced in the curriculum of teacher training education.
- In order to facilitate the development of students at higher educational level, information about digital technology should be enriched both in the school level and teacher training programmes.
- At the teacher training level, digital facilities must be used to organize various activities to get improved result.
- The teacher trainees should be given opportunities to prepare and use educational slides–as well as multimedia (including movie, animation, sound, etc.).
- Internet facilities and video conferencing facilities should be extended to all the B.Ed. colleges as well as other colleges and university campus. This will enable the teacher trainees and students to refer to the best resource materials and interact with their colleagues or educational experts.
- The curriculum should be revised and include various educational software developed in the field of education.
- Teacher trainees should be given opportunity for power point presentation or multimedia presentation with multimedia projector while practicing teaching skills.
- Online study materials should be provided to the students.
- To get the study material online, schools must strive for providing information and communication technology facilities and their active use in the campus.
- In order to attain important lectures of the specialist from the world, the use of digital technology is unavoidable. Hence, schools should promote the use of information and communication technology in the campus.

CONCLUSION

India's economy has witnessed a significant economic growth in the recent past by growing at 7.3 per cent in 2015 as against 6.9 per cent in 2014. The steps taken by the government in recent times have shown positive results as India's gross domestic product (GDP) at factor cost at constant (2011-12) prices 2014-15 is

Rs 106.4 trillion (US$ 1.596 trillion), as against Rs 99.21 trillion (US$ 1.488 trillion) in 2013-14, registering a growth rate of 7.3 per cent. This clearly shows that the Digital India initiative introduced by the Indian government has contributed a lot to boost the economy of the country. The Digital India project itself will create employment opportunities for 17 million people, directly or indirectly, which will help in fighting against unemployment problems in India. Government has planned to give IT training to 100 million students in smaller towns and villages as employment opportunity in IT sector is very high in India. In the next 5 years, India will emerge to be a leader in using IT in sectors like health, defenses, education, agriculture and banking. Also, the service sectors will be digitally empowered. In the field of education, it also assures broadband connectivity in all panchayats, schools, libraries and other public places.

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Effectiveness of ICT in Marketing Perishable Horticulture Produce: Experiences from West Bengal

Niladri Sekhar Bagchi[1], Pulak Mishra[2] and Bhagirath Behera[3]

Abstract—*The present study is an attempt to analyze the effectiveness of ICT tools and services in marketing performance by small and marginal farmers in the horticulture sector in West Bengal. Based on literature review and qualitative case studies, the study finds that although ICT plays a positive role in marketing horticulture produce, its effectiveness is lower due to intraday price fluctuation of vegetables, distress selling because of lack of storing capacity for perishable crops, weak institutional structure, and lack of policy intervention.*

Keywords: *ICT, Horticulture Marketing, Perishable Produce, West Bengal*

INTRODUCTION

Agricultural marketing is a matter of concern for smallholder farmers as presence of asymmetric and incomplete information leads to coordination failure among different stakeholders in an agricultural value chain. In addition to that the perishability and lack of storing capacity for horticulture crops make it more difficult to sell at optimum prices. In this context, the role of information and communication technology (ICT) may be crucial for bridging the information gap and thereby removing coordination failure. Evidence suggests that the effectiveness of ICT services in enhancing farmers' marketing performance in terms of higher returns is weak in case of horticulture produce compared to cereals; contrasting opinions still exist. As high value horticulture crops can fetch higher returns for farmers, it would, therefore, be interesting to understand the factors behind effectiveness of ICT tools and services in marketing horticulture produce by smallholders. In terms of horticulture production West Bengal holds the number one position in India, especially in terms of perishable vegetable production, and also about 90% farmers here are small and marginal farmers, which make it an ideal study area for the current study.

Given this backdrop, the present study is an attempt to analyze the effectiveness of ICT tools and services in marketing performance by small and marginal farmers in the

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horticulture sector in West Bengal. Such an attempt has important implications for policies and regulations as the existing literature mainly focuses on the role of ICT in overall agricultural marketing, focusing mainly on cereals. The present study is an attempt to address this gap.

The study is based on review of literature and four qualitative case studies in three backward districts of West Bengal, namely, Bankura, Alipurduar and Coochbehar where there are large percentage of small and marginal farmers engaged in the cultivation of horticulture crops mainly in the Rabi season.

LITERATURE REVIEW

Types of ICT Services in Agriculture

ICT services can be different types such as web portal, voice-based service, SMS-based service, self-support online community, interactive video conferencing service, mobile internet based service, etc. (Zhang *et al.*, 2016). But, the types of services suitable for small and marginal farmers with lower average level of education are the ones with low operating cost and feature phone-based (*i.e.*, SMS or voice call based) (Tadesse & Bahiigwa, 2015; Mittal, 2012).

Benefits of ICT Use in Agriculture

Use of ICT creates many benefits for farmers starting from pre-production, production to marketing of produce. ICT services positively impact the agricultural services, farmer's income and agricultural productivity (Zhang *et al*., 2016; Lio & Liu, 2006). Mobile phone use reduces searching cost for information, improves access to public information and timelines of necessary information (Aker & Ksoll, 2016). ICT increases usage of seed and fertiliser, land and labour productivity. But, it reduces the usage of labour (Ogutu *et al.*, 2014). Use of mobile phones may create better access to credit through mobile money services. It may lead to crop diversification and higher selling propensities. But it may not lead to noteworthy improvement in economic gains (Aker & Ksoll, 2016). It may also lead to empowerment of women (Aker & Ksoll, 2016; Bayes, 2001) and landless labourers (Rao, 2007).

Expansion of mobile phone network is a solution for problems like information asymmetry, market inefficiency and high consumer price (Tadesse & Bahiigwa, 2015). ICT is helpful in reducing consumer price, increasing production and may lead to efficient and sustainable agriculture (Salampasis & Theodoridis, 2013). ICT can connect traditional knowledge of farmers with modern knowledge systems through development of Traditional Knowledge and Digital Libraries (TKDL) (Shaik *et al*., 2004).

Use of mobile phones reduces transaction costs (Ogutu *et al*., 2014; Dixie & Jayaraman, 2011) and improves bargaining power of farmers (Lio & Liu, 2006) as well as traders and brokers (Minten *et al*., 2012). ICT helps in improving market access, and subsequently speeding up commercialisation of agriculture (Ogutu *et al*., 2014) and it is a crucial driver for innovation which helps in future competitiveness of agriculture (Warren, 2002).

Benefits of ICT use come with some preconditions. In order to create economic benefits through better decision making by using mobile phones, it is necessary that farmers have a reliable source of relevant information available on time and can afford the operating cost of it (Tadesse & Bahiigwa, 2015; Mittal, 2012). Knowledge of using mobile phones to garner gains from agricultural activities and marketing is more important than just having access to mobile phones (Aker & Ksoll, 2016). It is also important that information through ICT covers all nodes of value chain (Rao, 2007).

Drivers of ICT Use in Agriculture

Adoption of different types of ICT service models such as government supported, market driven and community self-support require considering varied local context like farmers' average education levels, existing ICT infrastructure, operating cost, farmers' information consuming behaviour and the local context above all. Market driven model may be more suitable for well-endowed and well educated farmers whereas the government supported and community supported models suit better for backward and for the skilled farmers (Zhang *et al*., 2016).

Human factors, for example, ICT knowledge of farmers, awareness and education level, ability to use ICT tools as well as the information obtained are key issues for successful ICT services (Zhang *et al*., 2016). The reason for higher adoption rate for ICT in richer countries and nearly double returns from ICT in agriculture in developed countries than that in developing countries is the absence of better electricity, transportation facilities and productive human capital (Lio & Lie, 2006). Farmer's education level is a key driver for making better decisions through use of ICT tools and knowledge (Ali & Kumar, 2011). Along with the human factors, other factors such as power, roads and electricity are crucial for success of ICT services (Aker, 2010). For higher benefits from ICT services, improving human capital is necessary, but training and awareness programmes on ICT need to be participatory and covering most of the numbers in a household or family (Warren, 2002). That is why ICT use can be expanded through motivation and awareness programmes by extension personnel (Aldosari *et al*., 2017).

Access to microfinance loans, membership in farmers' cooperatives, awareness programmes and wealth are possibly correlated with the likelihood of accessing market information through ICT tools, but distance from big markets negatively affects the likelihood of searching market information through ICT tools (Kiiza and Pederson, 2012).

ICT and Agricultural Marketing

Farmers need various types of information such as input use, management practices, weather forecasts, costs, price and markets. But all the information is not needed at a time, rather at different stages of cultivation (Dixie & Jayaraman, 2011). When it comes to agricultural marketing, it requires two types of information. One is immediate information such as prices, buyers, etc., and another is the long-term information such as trends and principles, etc. Using such information farmers can design their crop choice decision, quality attributes and other management decisions and grow better insights for future development. Farmers gain either by reducing transaction costs or increasing price by better negotiation (Dixie & Jayaraman, 2011).

ICT improves efficiency of market functioning through efficient arbitrage, lowered market power, better supply responses, lower transport cost and lower price fluctuations (Jensen, 2010). Electronic commerce strongly impacts structure and functioning of markets (Strzebicki, 2015). But mobile phones have no significant impact on farmer's market participation and arbitrage. Also, access to mobile phones has negligible impact on farmers' marketing decisions and prices of produce sold (Tadesse & Bahiigwa, 2015; Alene *et al*., 2008; Fafchamps & Minten, 2012; Muto & Yamano, 2009). However, there is no unanimous opinion on the effect of ICT use on prices of produce. Availability of market information through ICT tools may help in realising better price and income for farmers and in lowering consumer price as well as increasing profits for traders (Dixie and Jayaraman, 2011). But the impact of ICT use on prices counts on several factors such as effectiveness of the existing market information system, stability of the price structure, selling mechanism (i.e., negotiation vs. auction) and nature of produce (e.g., perishable vs. Storable) (Dixie & Jayaramam, 2011). However, ICT use may not lead to economic benefits for farmers if markets are well integrated, indicating lower transaction costs. This is also true if markets are not competitive or there is credit market failure (Aker & Ksoll, 2016).

Distance to markets is a factor for choosing markets for selling produce. Farmers in village areas access different markets such as village market, markets at nearby small towns, markets at distant big cities and regional markets where inter-regional and international trade takes place. Generally, low-value crops (maize, wheat, barley and local vegetables) are sold at nearest markets and high-value crops (teff, peas and beans) are sold at distant markets. Farmers go to distant markets instead of the nearest one if the later is not efficient for the crop they want to sell. In this regard, mobile phones help in disclosing the information on efficiency of markets and farmers can act accordingly (Tadesse & Bahiigwa, 2015). Launch of mobile phone service helps in contracting dispersion of grain price (Jensen, 2007; Aker, 2010) across market and the effect is

stronger for distant market having bad road connectivity (Aker, 2010). Use of mobile phones reduces the search cost and price fluctuation across market, thereby indirectly improving the welfare of traders and consumers as a whole (Aker, 2008).

Non-perishable vs. Semi-perishable vs. Perishable

Whether ICT is more effective in marketing for perishable crops or non-perishable crops or semi-perishable crops is not clear from the existing literature. Some studies show that expansion of mobile phone network reduces dispersion of producer prices for semi-perishable crops such as cowpeas; but has no impact on non-perishable crops such as millet and sorghum (Aker & Fafchamps, 2014). In contrast, some studies show that the effect of market information services on prices of high value, less perishable crops such as onions, potatoes and pulses is strong and that on prices of extremely perishable crops such as fruits and vegetables is weak (Dixie & Jayaramam, 2011). In some other case, mobile phone network expansion leads to higher sale of fruits and perishable such as banana and no effect on sale of non-perishable crops such as maize (Muto & Yamano, 2009).

ICT Initiatives in India

ITC's e-Choupal, iCommunity of Himachal Pradesh, iKishan.com, iVillages of Pondicherry, n-Lounge and Gyandoot are some private or government schemes for promoting ICT use in agricultural sector in India (Rao, 2007). The electronic marketplace called e-NAM is the latest initiative of the government of India towards agricultural marketing. Among the above initiatives, ITC's e-Choupal deserves special mention.

'e-Choupal' was launched by the Indian firm ITC in Andra Pradesh in the year 2000 and later expanded to many other states of India. It has become one of the largest private internet based agricultural information services in rural India (Behera *et al*., 2015). The objectives of 'e-Choupal' were to improve linkages, market access, and business process and crop diversity (Jamaluddin, 2013). Farmers who used e-Choupal showed better decision-making skill regarding production, post-harvest and marketing management (Ali & Kumar, 2011).

EXPERIENCES FROM WEST BENGAL

Focus group discussions were carried out with farmers at villages of Dhalaguri, Uttar Chakoakheti, Dakshin Niztaraf and Jhariakocha in 2017. Except Dakshin Niztaraf, all other villages witnessed some interventions by NGOs. In those villages, the FGDs were carried out among farmers who were the direct beneficiaries of those interventions.

A semi-structured interview method was used to capture context specific qualitative assessment of ICT use vis-à-vis agricultural marketing. The information gathered is presented in the following case studies.

Case Study I—Dhalaguri Village

Dhalaguri is located at Ambari gram panchayat in Cooch Behar district of West Bengal. Most of the farmers are small and marginal in terms of landholding size. They grow paddy in the kharif season and vegetables such as cabbage, cauliflower, potato, okra, spinach, etc., in the Rabi season. Earlier they did not use their mobile phones for accessing market information such as prices and different buyers. But after the intervention from an NGO, called Centre for Development of Human Initiatives (CDHI) through a project funded by Australian Centre for International Agricultural Research (ACIAR), farmers have started keeping contacts of traders and middlemen and accessing market information through voice calling. They also started getting advice on fertilizer, seed variety and pesticides use from extension staff, input suppliers and NGO personnel through voice calling. They did not use any sms-based information services. The selling price or selling mechanism of paddy have not improved after farmers started using mobile phones for getting market information, but the input use knowledge has improved. In case of perishable crops like vegetables, the ease of selling has improved due to informed decision making by farmers with market information through mobile phones.

So price and marketing did not improve for storable items such as cereals, but it improved for perishable items like vegetables and leaves. However, the improvement in price was not substantial in spite of better bargaining power of farmers than before. This is because the perishability of crops along with no storage facility is a major concern to farmers which induces them to distress selling. Another problem in this regard is non-availability of information to farmers on imports from other states and markets which traders do not reveal for their gain. Thus, farmers could not realize the best possible price for their perishable horticulture crops even after using mobile phone for accessing market information.

Another inefficiency of information access arises due to intraday price decline of perishable crops in markets. When a farmer starts from his home for the market, he may have the information of the current price, and by the time he reaches the market, the price may have fallen leading to lower than expected price realization. This effect is severe for farmers going to the market from distant places.

Case Study II—Uttar Chakoakheti Village

Uttar Chakoakheti village is located at Chakoakheti gram panchayat in Alipurduar district of West Bengal. Most of the farmers here are small and marginal landholders and belong to the tribal communities. Earlier they used to grow paddy in the kharif season only for self-consumption and did not cultivate in the Rabi season due to lack of irrigation facility. Now, with the intervention of CDHI through projects funded by ACIAR, they have started growing vegetables like potato, cabbage, cauliflower, etc., and cereals like maize and mustard in the Rabi season. They have a local market called Mathura Haat, about 2 km away, and they get most of the market information from the fellow villagers. They do not regularly use mobile phones for market information in order to sell their produce.

Here, the transaction cost (e.g., search cost) of marketing is too low to create incentive towards the use of mobile phones for accessing market information. In this case, even if the farmers have basic mobile phones, it is not effective in bringing forth marketing gain. Also, their scale of production is too low to generate enough surplus to sell in the distant bigger markets. If it happens in future that they produce enough for selling to bigger distant markets, they may depend more on mobile phones for accessing market information.

Case Study III—Dakshin Niztaraf Village

Dakshin Niztaraf village is located at Parmekhliganj gram panchayat in the district of Cooch Behar in West Bengal. Most of the farmers here are small farmers who grow paddy in the kharif and vegetables like tomato, potato, chilli, etc., in the rabi season. There is a well-developed and big regional market at Haldibari town about 6 km away and it is well connected with paved roads. Farmers here get better price for their perishable crops than those in the other case study areas due to the presence of the well-integrated market at Haldibari where inter-state trade takes place giving rise to enough demand for local crops. Here, even though farmers use basic mobile phones for accessing market information, they generally do not get any extra economic benefit in terms of higher prices out of that due to the already well-integrated structure and functioning of the market.

Case Study IV—Jhariakocha Village

Jariakocha village is situated at Gopalpur gram panchayat in Bankura district of West Bengal. Here, 15 Self-help Groups (SHG) including one male group and other

female groups are engaged in mango farming on about 50 acre land which is arranged on lease with the intervention of an NGO called Pradan. They started the mango orchard in 2008. Initially, they had no idea of marketing. They got support from Pradan personnel and also from BDO office for selling their mango at different agri-fairs in nearby towns of Khatra and Bankura. With the experience of selling mango with outside support for some initial years, they have developed their own network of traders and retailers who they communicate with over mobile phones. This has improved their bargaining power as well as confidence in taking marketing decisions. But as mango is highly perishable in nature and there is no storage facility available, they have faced lower than expected price in times of overall good supply in the market and market information could not help them avoid such situation. This implies that market information may not be helpful in case of oversupply of extremely perishable crops as lack of storage leads to distress selling with no scope for temporal arbitrage.

DISCUSSION AND FINDINGS

The effectiveness of ICT is higher when the transaction cost is higher. Again, transaction cost is higher where market structure is less competitive, institutional framework is weak and infrastructure is inadequate. Thus, in case of Dhalaguri and Jhariakocha village, where transaction cost was higher due to lack of infrastructure, the use of ICT has led to better marketing outcomes in terms of higher market participation, better bargaining power and higher confidence in taking marketing decision. But the effect of ICT on prices of horticulture produce was not substantial due to speculative and opportunistic behaviour of traders and middlemen which gave rise to intraday price decline in absence of storage facility.

In case of Uttar Chakoakheti, the transaction cost of marketing was too low to create enough incentive for farmers to use mobile phones for accessing market information. The small scale of their marketable output was also a reason for creating no necessity for information regarding bigger distant markets. On the other front, ICT use at Dakkshin Niztaraf village for marketing of perishable crops was not effective in creating extra economic benefit due to the presence of well-integrated regional market nearby.

The cereal market enjoys the benefits of government's minimum support price (MSP) programme and its storability enables the farmers for temporal arbitrage. Also the market for cereals like paddy is more competitive than that for perishable horticulture. That is why, use of ICT did not improve price of paddy at Dhalaguri.

Thus, although use of ICT has created benefits with the cost side of production by timely information regarding seed quality, pesticides and fertilizer and machine use, its potential effectiveness in realizing better market price could not be tapped by farmers due to various reasons such as intraday price fluctuation of perishable horticultural produce, distress selling in absence of storage facility, weak institutional structure and lack of required policy interventions.

CONCLUSION

Although the study is based on only qualitative assessment, it gives a direction for the response to the research question whether ICT is effective in creating economic gains for perishable horticulture produce vis-à-vis non-perishable crops such as cereals. Based on literature review and above qualitative case studies, the study finds that although ICT plays a positive role in marketing horticulture produce, its effectiveness is lower due to intraday price fluctuation of vegetables, distress selling because of lack of storing capacity for perishable crops, weak institutional structure, and lack of policy intervention. These findings suggest that ICT can play an effective role in creating social and economic benefits through better marketing outcome, given a proper competitive environment, required infrastructure like roads and electricity, strong institutional framework which can help in removing the barrier to information asymmetry such as deliberate attempt to hide crucial market information by traders and middlemen and dynamic policy interventions. Thus, proper policies and schemes should be undertaken by the government to create the above mentioned desirable conditions in rural marketplaces for development of agriculture and allied sector.

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The Breeding Grounds of Digital India: A Note on Schools

Dr. Geetika Nidhi[1] and Shruti Kirti Rastogi[2]

Abstract—*Progress is the rule of nature. Societies moving hand in hand with developing technologies touch greater heights. Schools are an instrument to bring about desired change in society. Schools are a vehicle of formulating and modifying the society. It creates the foundation for the learner through which he proceeds further in life towards progress. The students serve as human energy which is the resource for nation if guided and educated effectively for the adoption of newer trends and techniques. Thus, they play an important role in preparing a kind of citizen the nation wants. Digitization is the newest approach towards creating a developed society. Digitization is converting information into digital or computer readable format. The advantages of digitization being increased productivity, cost efficiency, easy access, enhanced security, greater information preservation, disaster recovery, save space and environment friendly. These are the basic causes behind the government trying to implement digitization at every level. Although efforts are being done in every sector to incorporate this approach, the authors believe that this should begin in the Indian schools and then it can automatically flow into all sectors of the country. It will make the future citizens aware of the importance of digitization and also make them an efficient user of it. The objective of this study is to know about the status of digitization of Indian schools, monitor the awareness of students at school about the concept of digitization and then propose the approaches which can be employed to prepare better learned citizen for the nation. The population of the study are the students going to school at secondary level in India, Sample comprises students of standard IX and X of Lucknow city. The method adopted is a descriptive study of survey as it involves the study of existing picture of digitization in schools. The data is collected through primary and secondary sources. The awareness of students is known through a questionnaire. The analysis of data reveals that the status of digitization in schools is just at the initial stage, although the students show a supportive attitude towards its use. Private schools are more active to its use than the government schools. It is also seen that students expect more appreciation and support from their teachers, parents and management for carrying forward the process of digitization. Thus, it can be concluded that we have a long way to go in implementing digitization in schools but it can become an easier path if the students are helped by the education system they follow in school.*

Keywords: *School, Education, Society, Digitization, Attitude*

INTRODUCTION

Progress is the rule of nature. Societies moving hand in hand with the developing technologies touch greater heights. Schools are an instrument to bring about the desired change in society. Schools are a vehicle of formulating and modifying the society. They create the foundation for the learner through which he proceeds further in life towards progress. The students serve as human energy which is the resource for

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nation. This young wealth being nurtured in schools needs to be guided and educated effectively for the adoption of newer trends and techniques to empower the nation. Thus, the schools play an important role in preparing a kind of citizen that the nation wants. Digitization is the newest approach towards creating a developed society. Digitization is converting information into digital or computer readable format. The advantages of digitization being: increased productivity, cost efficiency, easy access, enhanced security, greater information preservation, disaster recovery, save space and environment friendly. These are the basic causes behind the government trying to implement digitization at every level. Although efforts are being done in every sector to incorporate this approach, it should begin in Indian schools. Then, it can automatically flow into all sectors of the country. It will make the future citizens aware of the importance of digitization and also make them an efficient user of it.

Digitization

"Digitization is the process of transforming analog material into binary (digital) form especially for storage and use in a computer" (Pearce-Moses, 2005).

The process of digitization converts material into a format which can be read by machines, which include paper documents, photographs, sound recordings and motion pictures. It improves access to information, collects information and makes invisible visible. It helps students, administrators and information seekers to approach knowledge whenever required.

Digitization and its Benefits

The purpose of digitization is to make complete use of information and communication technology which is beneficial for the society. It preserves the information for future and disseminates it to others who do not have access to it. The wear and tear of resource can be minimised. The major benefits of digitization are any time access, easily approachable, save reference time of the teacher, improve and facilitate scholarship and also enhance the presentation of the document.

OBJECTIVE OF THE STUDY

1. To study about status of digitization of Secondary schools of Lucknow city.
2. To study the awareness of students at school about the concept of digitization.

Research Question

Are schools the breeding grounds of digital India?

METHODOLOGY

The method adopted is descriptive study of survey type as it involves the study of existing picture of digitization in schools. The data is collected through primary and secondary sources. The awareness of students is known through a questionnaire. The population of the study is the students going to school at secondary level in India. Sample comprises 250 students of standard IX and X of Lucknow city. The sample consists of 16 schools, 8 private and 8 government schools regarding the status of introduction of digitization in schools. 250 students were taken to get information about the awareness of students though a questionnaire.

ANALYSIS

This study encompasses the existing picture of the digitization in Indian schools. The data collected was objectively analysed to draw the conclusions regarding the infrastructure and availability of resources. A visit to school premises was conducted and conclusions were drawn accordingly, resulting in the following analysis enunciated as per the Objectives.

RESULT AND DISCUSSION

Objective 1: To study the status digitization of secondary schools of Lucknow city.

The abaove objective was analysed by observing the school premises and the interview of the teacher's conclusions were drawn as described below.

An observation of school premises and the interview of teachers and administrative staff were conducted to know the status of digitization of the schools. The sample for this objective was 16 schools. Among them, 8 were government schools and 8 were privately run schools. The 8 government schools comprised 4 Kendriya Vidhyalaya and 4 state government inter colleges. It was observed that all the Kendriya Vidhyalayas were well equipped with the digital tools. Nearly 70% of the classes had smart boards and the computer laboratory was easily accessible for the students. The teachers were also supportive in enhancing the digital approach. When the records were observed, it was found that all these efficiently utilized the digital resources to upgrade the

standard of education. This was easily visible in the performance and approach of the students. This observation showed that the status of digitization was better in the Kendriya Vidhyalas.

When the state government schools were observed, the status of digitization was not satisfactory. There were no provisions for smart boards, computers and the teachers were not well equipped with knowledge and benefits of digitization, although few of the teachers were supportive for it.

When the 8 privately run schools were observed it was found that the administration was very much interested in digitization of the schools. Nearly 75% of the schools were well equipped with digital resources. The teachers were vigilant and well informed about the knowledge of the importance and application of digitization. Student records, library resources, video films were supported by digitization which could be retrieved whenever required in the classes and activities. The effect was directly seen in the performance of the students. The number of students going to private schools was more and also the level of their knowledge was higher as the schools incorporated the concept of digitization and provided resources for it.

Objective 2: To study the awareness of students at school about the concept of digitization.

The awareness of the students plays an important role in adopting new technologies in schools. A questionnaire and interaction with students was used to know the awareness of students regarding digitization. Major percent (89%) of the students of Kendriya Vidhyalayas had an idea of what is digitization and how it can help them improve and preserve their knowledge. Though, some of the students reported that they have difficulty in its active use. They also said that their teachers always assist them to improvise in its use. While a very low (8%) of the government school students were only aware of the idea of digitization and its benefits, as most of them were from rural background. However, they were receptive to new approaches told to them. Majority (80%) of the students of the private schools was aware of the concept of digitization as the teachers and school were helping them gain information about it. Since the system was supportive, most of the students knew how to efficiently utilize the digital resources. This was clearly depicted in the enhanced performance of the learners.

DISCUSSION

The complete picture of the status of digitalisation shows us the way to implement and improve the situation. The study reveals that there are many improvisations in

terms of facilities that are required in the state government schools. It will help in the process because the government schools are exposed to more number of students. The private schools show interest in utilising the digital resources and also providing the infrastructure for the same. These schools appreciate and motivate the teachers to incorporate the new technologies in actual teaching learning. The awareness level is also an important factor for effectively utilizing the resources which is seen higher in the teachers of private institutions. Thus, we can say sincere efforts are required in schools regarding digiitalization and if the work is done sincerely, it will show far reaching results.

IMPLICATION OF THE STUDY

- This study brings about the status of digitization in secondary schools and shows that schools play an important role in propagation of an idea or technology.
- The implementation of the process of digitization depends upon an important factor the administration of school.
- Teachers support is important for the change of perspective of the learners.
- Those schools that incorporated digitization in learning produced better students.
- These learners can device newer methods and learn its benefits for further use.
- State government schools have to put in lot of efforts to mainstream digitization.
- Government teachers should be trained for the same.
- Digitization showed positive impact on the school, learner and teachers. So its use should be advocated.

CONCLUSION

The above study confirms that the schools are the breeding grounds of digitization. The findings of the study show that schools which effectively use digitization produce better students. The administration of the school which incorporates digitization shows a raise in the standard of students and the social acclaim of the school. These secondary school students will enter into the society in the near future. If at the school level they are made aware of the benefits of digitization, they will carry forward this idea in all realms of efforts. Schools, as breeding grounds, are and can be pivotal in paving the way for an enriched future generation that would stand to reap optimum benefits of digitization.

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Rapporteur`s Report

Second Annual Conference on Emerging Issues on Society, Economy and Governance with Reference to Digital India December 06–07, 2018

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Amity University, Lucknow

Jointly Organized by ASEDS and GIDS, Lucknow, India

The 2nd Annual Conference of ASEDS was organised at the Giri Institute of Development Studies, Lucknow on December 06-07, 2018. The Conference theme was "Emerging Issues on Society, Economy and Governance with reference to Digital India".

The guests were welcomed by the Director of the Institute Prof. B.K. Bajpai and the inaugural session commenced with the lighting of Lamp and the garlanding of Maa Saraswati statue by the guests. The session was chaired by Mr. Navin Chandra, Chairman, GIDS. Prof. N.M.P. Verma (Vice-Chancellor, BBA University, Lucknow), President of ASEDS, presented the vision, mission, objectives and the structure of the association. This was followed by the detail presentation of the conference theme by Prof. Alpana Srivastava (Professor, AMITY University), Vice President of ASEDS.

Conference President, Prof. Manoj Dixit, VC, RMLA University, Faizabad, gave an enlightened presentation on the effectiveness of e-governance. He emphasised on e-literacy as a path for transformation. He cited the examples related to government machinery, people, civil society that can bring efficiency and faster economic activities in the country and globe with the right use of digital technologies. At the same time, he expressed the view that these changes should be according to our culture, values and norms.

Thought-provoking words were rendered by Prof. Vinay Pathak, VC, AKTU, Lucknow, on technological revolution starting from the first one dimension technology to the

present era of five dimension technology. He further added that the automation, robots, cyber development have changed our life but as these technologies are quite expensive; hence, better inclusion policies are required so that it may percolate to the rural India and bottom of the pyramid population. Technology must bring convergence of the society, economy and governance, and this, according to him, is a great challenge for today.

Prof. M. Mirza, VC, KMCUAF University, Lucknow, was the Guest of Honour. According to him, low literacy level in the country is the major challenge along with infrastructure constraint. Further challenges are trust, resistance to change, digital divide, cost, privacy and security. To overcome these challenges, the government should implement transparency, accountability and participation at each level for real digital growth. The session ended with the vote of thanks delivered by Dr. Nomita P. Kumar.

The Panel discussion on "Challenges and Scope of Digitalization in India" was chaired by Prof. Yashvir Tyagi, Former Head, Dept. of Economics, Lucknow University. Prof. Manoj Agrawal, Dept. of Economics and Director of Centre for Excellence, Deen Dayal Upadhyaya Health Institute, Lucknow, was of the view that digitalisation had made life easier, services prompt leading to better governance but at the same time inter-generation gap has widened.

Prof. R.P. Mamgain, GIDS, Lucknow, one of the panellists said that technology is changing at a very fast pace and without awareness it's hard to cope with that pace. He also emphasised that before switching to modern technologies, we should think of the labour surplus existing in our country.

Prof. Dinesh Kumar, CCS University, Meerut, raised the questions that digitalisation is a goal or means. He opined that we need to use digitalisation as an instrument for the betterment of the society. Human capital cannot be developed without knowledge capital and technological capital.

Dr. C.S. Verma**,** GIDS, Lucknow, said that for the faster economic growth, technology advancement and use of IT is needed but there are some basic challenges such as hacking, cyber theft, data stolen, privacy, security, etc., which have to be reckoned in and overcome.

The conference was divided into six technical sessions and there were around 71 paper presenters who delivered in these sessions. Two parallel technical sessions were held post lunch on the first day of the conference.

The First Technical Session on "Modern Indian Society and Accomplishment of Digital India" was chaired by Dr. Sudhakar Shukla, Scientist, Remote Sensing, and Co-chaired by Dr. Rasi Krishna, Dr. Sakuntala Mishra University, Lucknow. Dr. Prashant Trivedi, GIDS, Lucknow was the discussant for this session and there were 13 presenters in all. Presenters delivered on the issues related to digital literacy and awareness levels on the use of ICT in school and university education. Problems of outsourcing in IT sector, e-governance and green marketing were some of the issues presented by the deliberators.

The Second Technical Session on "Role of IT in Socioeconomic Sectors of India" was chaired by Prof. A.K. Sengupta, Pro-VC, LU, and Co-chaired by Dr. Nimish Gupta, Amity University, Lucknow. Dr. Nomita P Kumar, GIDS, Lucknow, was the discussant for this session and 11 papers were presented. The wide basket of paper catered to the issues related to digitization of health, education, role of social media in the era of digitization. Also, gender and inequality issues were presented by the presenters in the light of digital India.

Day two started with the Third Technical Session on "Digital Penetration in Agriculture and Sectors" was chaired by Dr. Vinay Kumar Mishra, Head, Central Soil Salinity Research Institute, Lucknow, and Co-chaired by Dr. Himanshu Rastogi, Amity University, Lucknow. Dr. K. S. Rao, GIDS, Lucknow, was the discussant for this session and in all 11 papers were presented. A noteworthy presentation was made on the effectiveness of ICT in marketing of perishable Horticultural produce. Some other papers catered to the issues of role of digitization in agriculture marketing, water management, e-kranti, barriers in mobile payment mode and women livelihood issues due to ITC in MGNREGA.

The Fourth Technical Session on "Modernization of PRI Functionaries through Digitalisation" was chaired by Prof. B.K. Bajpai, Director, GIDS, Lucknow, and Co-chaired by Prof. Vinood Srivastava, Dr. RMLAU, Faizabad. Dr. Kavita Baliyan, GIDS, Lucknow, was the discussant for this session and in all 13 papers were presented. This interactive session catered to a wide variety of issues related to e-waste, e-governance, FDI in retail marketing, changes in HRM due to digital transformation, interactive advertisement and impact of internet advertisement. Also, a presentation was made on digital financial inclusion constraint in India.

The Fifth Technical Session—"Security, Privacy and Ethics in E-business/Industry/ Services" was jointly chaired by Prof. Sanjay Medhavi, IMS, Lucknow, and Prof. Sanatan Nayak, BBAU, Lucknow. Dr. Shilp Shikha Singh, GIDS, Lucknow, was the discussant for this session and in all 10 papers were presented. The deliberations in this session

focused upon the challenges of inflating NPAs, effect of digitization in education, grey areas of IT, challenges in dizitization of banking system in India along with cyber security, privacy and ethics in the era of digitization.

The Sixth Technical Session on "Challenges in E-Governance in India" was chaired by Dr. Seema Srivstava, Lucknow, Environment Expert, UP Tourism, Lucknow, and Co-chaired by Dr. Tosib Alam. Dr. Manzoor Ali, GIDS, Lucknow, was the discussant for this session and in all 13 papers were presented. The multifarious category of papers catered to the issues related to challenges faced by the economy in digitization process, mapping ICT landscape of SMEs, role of IT in path of economic development, future of e-governance in India, digitization and women empowerment, issues of sexual harassment due to IT development.

The Valedictory session was chaired by Prof. Muzammil, Former VC, Rohilkhand and Agra University. The Chief Guest of the programme was Prof. A.K. Singh, Former Director, GIDS, Lucknow, and Prof. Ashok Mittal (AMU). Dr. Lalit Verma (Additional Chief Secretary, Lucknow) was the Guest of Honour in this session.

Prof. Ashok Mittal explained the problems with digital technology and also the goodness of technology. Dr. Latit Verma expressed the effects of digitization in today's society and types of public policies to be implemented so that the fruits percolate to all sections of the society. Prof. Muzammil underscored the importance of the conference theme and its effect on society, economy and governance. He further added that transparency and ethics in implementation of IT should be maintained to mitigate corruption in society.

The illustrious R.K. Sinha "Best Paper Award" was conferred upon Ms. Sara Kulsoom, Ph.D. scholar, Jamia Milia Islamia University, Delhi, in the valedictory session.

The session concluded with the vote of thanks given by Dr. Kavita, Assistant Professor GIDS, Lucknow.

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